II. 3.4. Courses

Course	**(111) ECOLOGY**
Lecturer	**Ph.D. Mladen Kerovec, Full Professor**
Institution	Faculty of Science, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Odum, E.P.: **Fundamental of Ecology**. W.B.Saunders Comp., Philadelphia, London, Toronto, 1971.
2. Cooke, G.D., Welch, E.B., Peterson, S.A., Newroth, P.R.: **Restoration and Management of Lakes and Reservoirs**, Lewis Publishers, Boca Raton, New York, 1993.
3. Krebs, C.J.: **Ecology**, Harper & Row Publishers, New York, San Francisko, London, 1994.
4. Begon, M., Harper. J.L, Townsend, C.R.: **Ecology**, Blackwell Science, 1996.

Course content

Meaning, tasks and content of ecology. Division and methods of ecology and its relationship with other sciences. Ecological factors, arrangement in ecosystems, ecological valency, ecological niches. Populations (main features). Biocenosys. Relations and types of nutrition, nutritional chains, successions. Metabolism of ecosystems. Circulation of nutrition and flow of energy. Biogeochemical cycles. Organic production. Bioresurses management. Ecological features and life areas of terrestrial ecosystems. Biomes. Biocenological and ecological features of running waters, stagnant waters, underground waters, seas, oceans. Main areas of practical use of ecology. Main disturbances in ecosystems due to the impact of men.

Course	**(112) ECOTOXICOLOGY**
Lecturer	**Ph.D.Jasna Kniewald, Full Professor**
Institution	Faculty of Food Technology and Biotechnology, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. **Ecotoxicology: Problems & Approaches,** Eds.: Levin, S.A., Harwell, M.A., Kelly, J.R., Kimball, K.D., Springer Verlag, New York-Berlin, 1989.
2. Levin, M.A., Strauss, H.S.: **Risk Assessment in Genetic Engineering**, Mc Graw Hill, Inc., N.Y., 1991.
3. **Chemical Exposure Predictions**, Ed.: Calamari, D.,Lewis Publishers, Ann Arbor – London-Tokyo, 1992.
4. **Toxicology in Transition**, Eds.: Degen, G.H., Seiler, J.P., Bentley, P., Archives of Toxicology, Suppl.17, Springer-Verlag, New York-Berlin, 1995.
5. Walker, C.H., Hopkin, S.P., Sibly, R.M., Peakall, D.B.: **Principles of Ecotoxicology**, Taylor&Francis, London, 1997.

Course content

Principles of ecotoxicology. Pollutants and their fate in ecosystem. Major classes of pollutants (organic pollutants: PCBs, PCDDs, PCDFs, PBBs, OPs, carbamate and pyrethroid insecticides, phenoxy herbicides, detergents, organometallic compounds; radioactive isotopes; gaseous pollutants). Routes by which pollutants enter ecosystem. Long-range movements of pollutants in the environment. The fate of metals and radioactive isotopes in contaminated ecosystems. The fate of organic pollutants in individuals and in ecosystems. Toxicity testing and biochemical effects of pollutants. Physiological effects of pollutants: at the cellular level, at the organ level, at the whole organism level, on behaviour of aquatic animals. Interactive effects of pollutants. Biomarkers in ecotoxicology: classification, specificity, relationship to adverse effects, different examples. *In situ* biological monitoring (types 1 to 4) in terrestial, freshwater and marine ecosystems. Evaluation of resistance to pollution. Risk assessment in ecotoxicology. GM organisms and risk in the environment. Changes in communities and ecosystem. Biomarkers in population studies.

Course	**(113) ENVIRONMENTAL CHEMISTRY**
Lecturer	**Ph.D. Božena Ćosović, Senior Scientist**
Institution	Ruđer Bošković Institute, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Schwarzenbach, R.P., Gschwend, P.M., Imboden, D.M.: **Environmental Organic Chemistry**, John Wiley, New York 1993.
2. Bidoglio, G., Stumm, W.: **Chemistry of Aquatic Sysems**: Local and Global Perspectives, Kleuver Academic Publishers, Dordrecht 1994.
3. Schnoor, J.: **Environmental Modeling**, John Wiley, New York 1996.
4. Duursma, E.K., Carroll, J.: **Environmental Compartments**, Springer, Berlin 1996.
5. **Aquatic Chemistry 3rd**, Ed.: Stumm, W., Morgan, J.J., John Wiley, New York 1996.
6. **Environmental Chemodynamics 2nd**, Ed.: Thibodeaux, L.J., John Wiley, New York 1996.

Course content

Equilibria and processes between air, water, sediments and biological organisms. Fate and transport of pollutants in water, air and soil.
Introduction. Transport phenomena in the environment. Chemical reactions and equilibria. Toxic organic chemicals. Trace metals and radionuclides. Pollution in groundwaters. Atmospheric precipitations and biogeochemistry. Global changes and global cycles.

Course	**(114) ENVIRONMENTAL MICROBIOLOGY**
Lecturer	**Ph.D. Felicita Briški, Associate Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. McEldowney, S., Hardman, D.J., Waite, S., Pollution: **Ecology and Biotreatment**, Longman Scientific & Technical, Essex, 1993.
2. Prescott, L.M., Harley, J.P., Klein, D.A.: **Microbiology**, Wm.C. Brown Publishers, Boston, 1996.
3. Hurst, C.J.: **Manual of Environmental Microbiology**, ASM Press and Sinauer Associates, New York, 1997.

Course content

Microorganisms- microbial communities and nature of associations. Procaryotic and eucaryotic cell structure and function. Classification and taxonomy of microorganisms. Microbiology of natural and wastewaters. Drinking water – waterborne transmission of infectious agents. Detection of indicators of faecal contamination (*Escherichia coli*, *Salmonella*, *Pseudomonas*, *Streptococcus faecalis* and *Clostridium*) and viruses in source water, and water supply system. Influence of microorganisms on water quality in distribution system. Quality assurance, standards, monitoring. Groundwater – influence of iron bacteria (*Gallionella*, group *Sphaerotilus*/*Leptotrix*) on drinking water quality, pipes, pumps and well capacity, prevention of iron bacteria growth. Microbial removal on nitrates from groundwater (heterothrophic and chemolithotrophic denitrifiers). Surface water –microbial communities, primary and secondary productivities and producers. Selfpurification process. Microorganisms in the nitrogen, sulphur and phosphorus cycles. Eutrophication process. Wastewater –microorganisms of activated sludge and their role in treatment process, morphology of activated sludge flocs, influence of filamentous microorganisms on wastewater treatment. Detection of pathogenic bacteria in wastewater and in activated sludge. Soil microbial community and microorganisms of rhizosphere and phylosphere. Metabolic activity of microbes in soil. Disposal of solid waste (dump and sanitary landfill) – aerobic and anaerobic biodegradation of waste. Contamination of soil, surface water and groundwater by leachete. Composting of solid waste. Aerobiology. Sampling and analysis of airborne microorganisms. Fate and transport of pathogenic microorganisms in air (fungi, bacteria - *Legionellae*, *Mycobacterium* spp.- and viruses).

Course	**(115) ENVIRONMENTAL GEOCHEMISTRY**
Lecturer	**Ph.D. Ladislav Palinkaš, Full Professor**
Institution	Faculty of Science, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Fortescue,J.A.C.: **Environmental Geochemistry, a holistic approach**, Springer-Verlag, 1980.
2. O Neil, P.: **Environmental Chemistry**, George Allen & Unwin., London, 1985.
3. Anil Kumar De: **Environmental Chemistry**, Wiley E.L., New Delhi, 1987.
4. Berner, E.K., Berner, R.A.: **Global Environment, Water, Air and Geochemical Cycles**, Prentice Hall, 1996.
5. Park,C.: **The Environment**, Routledge, London, 1997.

Course content

Earth, composition and structure, geochemical spheres, Lithosphere, Astenosphere, Core, primary geochemical differentiation of elements, genesis ofigneous, sedimentary and metamorphic rocks, genesis of ore deposits, and natural environmental pollution, geochemical anomaly, volcanic activity and its influence on environment, impact of meteorites and possible influence on geological and biological evolution on Earth, historical and moder mining and mining industry and its influence on environmentalconditions.Atmosphere, structure, composition, origin of chemical components, natural sources,primary and secondary aerosols, antropogenic sources. Hydrosphere, theory of aqueous solutions, solubility of mineral in real solutions, Debye-Huckel and Davis formula, Eh-pH diagrams, structure and origin of clay minerals, weathering ofrocks, hydrological cycles, chemistry of terrestrial waters, pollution of underground waters, marine environments, estuaries, oceans, composition, conservative elements, residence time, ocean water as a buffer. Biosphere, biomass and its production, natural bioproducts and its transformation during burial, diagenesis, epigenesis, genesis of oil and gas, role of organic matter in the transport of metals in natural environment. Global changes, cycles of carbon, nitrogen, phosphorous and sulfur. Technogenesis, anthropogenic influence as a new geological environmental factor, mining, and agriculture, industry, urbanization and their influence on the natural environment.

Course	**(121)STATISTICS**
Lecturer	**Ph.D. Slavka Pfaff, Assistant Professor**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Pavlić, I.: **Statistička teorija i primjena**, Tehnička knjiga, Zagreb, 1970.
2. Pauše, Ž.: **Uvod u matematičku statistiku**, Školska knjiga, Zagreb, 1993.
3. Hoshmand, A.R.: **Statistical Methods for Environmental & Agricultural Sciences**, CRC Press, 1998.

Course content

Statistical approach in environmental research and monitoring. Gathering, summarizing and describing data for single or multiple statistical attribute. Parameters of the distribution, their meaning and properties. Random variable as mathematical model for statistical attribute analysis. Basic methods in the statistical inference theory. The use of statistical software packages in summarizing and analysing data. Valid conclusion procedures based on obtained results.

Course	**(122) MATHEMATICAL AND COMPUTER MODELING OF ECOLOGICAL SYSTEMS**
Lecturer	**Ph.D. Želimir Kurtanjek, Full Professor**
Institution	Faculty of Food Technology and Biotechnology, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Aris, R.: **Mathematical Modeling Technique**, Pitman Pub. Comp., San Francisko, 1979.
2. Snape, J.B, Dunn I.J., Ingham J., Prenosil J.E.: **Dynamics of Environmental Bioprocesses**, VCH Verlagsgesellschaft mbH, Weinheim, 1995.
3. Thibodeaux, J.: **Environmental Chemodynamics**, John Wiley & Sons, Inc., London, 1996.
4. Schnoor, J.L.: **Environmental Modeling**,, John Wiley & Sons, Inc., New York, 1999.
5. Intelligen Inc., **Environment Pro-Designer**, Scotch Plains, NJ, USA, 2002.

Course content

Fundamentals of modeling of dynamical systems and concept of a state space. The input-output concept of dynamic systems modeling. Mathematical methods of modeling distributed dynamical systems: orthogonal collocations, finite differences, finite elements, fuzzy logic based models and neural networks. Fundamentals of chemometric modeling. Basic forms of mass, energy and momentum balances under convective and diffusion conditions. Modeling of the balances with moving boundary conditions. Mass transfer mechanisms in gas, liquid and soil. Models of physical and chemical processes for polutant isolation and destruction. Models of biological processes of waste water treatment. Computer models of impact of industrial processes on environment.

Course	**(123) ECOLOGICAL PROCESS ENGINEERING**
Lecturer	**Ph.D. Đurđa Vasić-Rački, Full Professor**
	Ph.D. Bruno Zelić, Assistant Professor
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Moser, A.: **Ecological Process Engineering**, BFE 8, 644-649, 1991.
2. Valsaraj, K.T.: **Elements of Environmental Engineering**, CRC Press LLC, 2000.
3. Nazaroff, W.W., Alvarez-Cohen, L: **Environmental Engineering Science,** J.Wiley,2001.

Course content

Design-based course integrating conservation of mass and energy concepts into ecological process uncertainty.
Basic definition. Engineering analysis of eco-processes (mathematical representation of process, solution of the mathematical problem, interpretation of the significance of the result for the process). General material balance models (one-dimensional system, three-dimensional system). Applying the general material balance. Solving for species concentration. Transport phenomena. Reaction engineering aspects. Transport and transformation models. Case studies.

Course	**(124) BIOTECHNOLOGY IN ENVIRONMENT PROTECTION**
Lecturer	**Ph.D. Margareta Glancer-Šoljan, Full Professor**
Institution	Faculty of Food Technology and Biotechnology, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Miller, F.C.: **Biological Degradation of Wastes**, Martin, A.M. (Ed.) Elsevier Applied Science, London, New York, 1991.
2. Snape, J.B., Dunn, I.J., Ingham, J., Přenosil, J.E.: **Dynamics of Environmental Bioprocesses. Modelig and Simulation**, Sora, K., Gardiner, J. (Eds.) VCH Verlagsgesellcschaft mbH, Weinheim, VCH Publishers Inc., New York, 1995.
3. Rehm, H.J., Reed, G., Stadler, P.: **Biotechnology. Special Topics: Environmental processes**, Winter, J. (Ed.) VCH Verlag, Weinheim, 1999.

Course content

The role of biotechnology in environment protection, possibilities and perspectives. Development of environmental protection in our country and in the world. Basic principles of biotechnological processes: biological wastewater treatment (aerobic, microaerofilic, anaerobic) for removal of organic compounds, compounds with nitrogen, phosphorus and sulphur; biological treatment of sludge (aerobic stabilisation, anaerobic degradation-digestion); composting of biodegradable organic materials; biological treatment of industrial gases; biological treatment of crude waste materials origin from deponia and landfill leachate; the use of cultivated microorganisms in environmental protection (bioaugmentation) with the aim of improvement biological processes; detoxification of novel chemically synthesised compounds (eutrofication and interaction between natural community of microorganisms and flora and fauna - biomonitoring); applied novel methods in biomonitoring environmental pollution. Possible risk of using genetically engineered microorganisms in environmental protection; the use of biological processes instead of chemical processes in environmental protection. Biotechnological methods for protection in agricultural production. Energy from agriculture waste materials. Soil bioremediation.

Course	**(125) ENVIRONMENTAL PROTECTION IN CONSTRUCTION**
Lecturer	**Ph.D. Stanislav Tedeschi, Professor Emeritus**
Institution	Faculty of Civil Engineering, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Jörgensen, S.E., Johnsen, J.: **Principles of Environmental Science and Technology**, Elsevier Science Publischers B.V., Amsterdam, 1989.
2. Chiras, D.D.: **Environmental Science-Action for a Sustainable Future**, The Benjamin/Cunmings Publishing Company Inc., Redwood City, California, 1991.
3. Keating,M.: **Skup o Zemlji**. Program za promjenu. Ministarstvo graditeljstva i zaštite okoliša, Zagreb, 1994.

Course content

Introduction. Interaction between physical plans – land usage and environmental protection. Changes in biosphere. Testing environmental sensitivity. Impact of construction on the environment. Disturbances in natural habitats during construction. Disturbances from usage of structures: housing communities, transportation routes, hydrotechnical systems. Environmental protection measures and procedures.

Course	**(126) ENVIRONMENTAL PROTECTION AT EXPLOITATION OF MINERAL RAW MATERIALS**
Lecturer	**Ph.D. Branko Salopek, Full Professor**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Salomons,W:, Förstner,U.: **Environmental Management of Solid Waste**, Springer-Verlag, 1988.
2. LaGrega, M.D., Buckingham, L.P., Evans, J.C.: **Hazardous Waste Management**, McGraw-Hill, Inc, 1994.
3. Ciccu, R.: **Environmental Issues and Waste Management in Energy and Mineral Production**, SWEMP '96, Cagliari, 1996.

Course content

Pollution sources, types and effect on the environment. Waste water, gases and particulate matter from mining facilities. Air and water purification devices and methods in nonmetallic mineral (stone, gravel, and sand) processing. Waste dumps and stockpiles. Adaptation and application of excavated spaces.

Course	**(127) POWER SYSTEMS AND THE ENVIRONMENT**
Lecturer	**Ph.D. Danilo Feretić, Professor Emeritus**
Institution	Faculty of Electrical Engineering and Computing, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Feretić,D.: **Uvod u nuklearnu energetiku**, Školska knjiga, Zagreb 1992.
2. Seinfeld, J. H., Pandis, S. N.: **Atmospheric Chemistry and Physics**, J. Willey, New York 1997.
3. Extern, E.: **Externalities of Energy**, vol I-VIII; European Comission EUR 16523 EN, DG XII, Brussels, 1995.-1998.
4. Feretić, D., Tomšić, Ž., Škanata,D., Čavlina, N., Subašić,D.: **Elektrane i okoliš**, Element, Zagreb, 2000.
5. James, A.F., Golomb,D.: **Energy and the Environment** (The Oxford Series on Advanced Manufacturing), Oxford University Press, 2002.

Course content

Long-term energy production development, environment protection requirements, present and future energy sources. Energy technologies of the future, advanced electricity generation technologies, renewable energy sources. Physical and chemical processes in the atmosphere. Impact of power plant emissions on the atmospheric processes. Mathematical models for pollution dispersion in the atmosphere. Global warming and ozone problems. Greenhouse gases emissions associated with the construction and operation of power plants. Methods for environmental impact assessment of power generation. Energy chains for electricity generation, environmental impact valuation, environmental regulations and standards, international environment protection protocols. Solid and liquid waste from thermal power plants, external costs associated with electricity generation fuel chains. Abatement technologies for reduction of SO_2, NO_x, particulate matter and CO_2 emissions. Power system expansion planning and environment protection. Planning methods and software tools for comparative assessment of environmental impact of different technologies and fuel chains for electricity production. Criteria and indicators of sustainable energy development. Environmental impact of nuclear power plants. Impact of radiation, radiation in nuclear power plants, radiation protection, radioactive waste. Environmental protection and development of electric power system in the liberalized electricity market conditions.

Course	**(128) ENVIRONMENTAL ENGINEERING**
Lecturer	**Ph.D. Natalija Koprivanac, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Henry, J.G., Heinke, G.W.: **Environmental Science and Eggineering**, Prentice Hall, New Yersey, 1996.
2. Liu, D.H.F., Liptak, B.G., Bouis, P.A.: **Environmental Engineers' Handbook**, Lewis Publishers, New York, 1996.
3. Allen, D.T., Rosselot, K.S.: **Pollution Prevention for Chemical Processes**, John Wiley, New York, 1997.
4. Corbitt, R.A.: **Standard Handbook of Environmental Engineering**, McGraw-Hill, New York, 1999.
5. Wickramanayake, G.B., Gavaskar, A.R.: **Physical and Thermal Technology**, Batteelle Press, Columbus, Ohio, 2000.

Course content

Environmental impact assessment. Techniques for impact prediction. Environmental monitoring. Pollution prevention. Methodology and techniques. Life Cycle Assessment (LCA). Cleaner production and sustainable processes. Reactor engineering. Separation and recycling systems. Process modification and integration. Value engineering. Minimisation and reduction of air pollution. Dry and wet collectors. Thermal destruction. Biofiltration. Odour control strategy. Noise pollution. Wastewater disposal. Wastewater treatment and minimisation. Advanced oxidation processes (AOPs) for wastewater pollutions minimisation and mineralisation. Industrial sewer design. Storm waster management. Common drainage systems and their alternatives. Ground water cleanup and remediation. Solid waste. Reduction, separation and recycling. Treatment and disposal. Waste – to – energy incinerators. Pyrolisis of solid waste. Hazardous waste. Waste destruction technology. Biological treatment. Solidification and stabilisation technologies. Underground storage tanks and methods of waste management.

Course	**(129) PROCESSES AND TECHNOLOGIES FOR ENVIRONMENTAL PROTECTION**
Lecturer	**Ph.D. Nikola Ružinski, Full Professor**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb
ECTS	10
Course type	Basis
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Heinsohn, R.J.: **Sources and Control of Air Pollution**, Prentice Hall, 1999.
2. VanLoon, G.W. , Duffy, S.J.: **Environmental Chemistry**, Oxford University Press, 2000.
3. Hinrichs, R.A., Kleinbach, M.: **Energy – Its Use and the Environment**, Harcourt College Publishers, 2002.

Course content

Environmental impact of energy transformation - Technologies for environmental protection
Energy and climate – Production and use of energy; Traffic; Atmosphere – Greenhouse Effect, Global worming, CFC; Ozone layer; Waste from industry and energy production: Flue gases; Waste waters; Ash, Thermal pollution (cooling water);
Impact to the environment through flue gases – Desulphuration, Waste water from desulphuration; Denox processes;
Motor vehicles and environmental impact – catalytic converters for exhaust gases

Course	**(2010) ENVIRONMENTAL IMPACT ASSESSMENT (EIA)**
Lecturer	**Ph.D. Nenad Mikulić, Assistant Professor** **Ph.D. Ante Barić, Associate Professor**
Institution	Ministry of Environmental Protection, Physical Planning and Construction, Zagreb Institute of Oceanography and Fisheries Split
ECTS	10
Course type	Basic course for Doctoral study and recommended for Specialistic study
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Zakon o potvrđivanju konvencije o procjeni utjecaja na okoliš preko državnih granica, Narodne novine – međunarodni ugovori, I/6, 0224-0259, 1996.
2. Ortolano, L.: Environmental Regulation and Impact Assessment, International edition, John Wiley & Sons, 1997.
3. Zakon o zaštiti okoliša, Narodne novine 82, 1999.
4. Zakon o zaštiti okoliša, izmjene i dopune, Narodne novine, 128, 1999.
5. Pravilnik o procjeni utjecaja na okoliš, Narodne novine, 59, 2000.
6. Lee, N.:**Environmental Impact Assessment**, A Training Guide, EIA Centre, Department of Planning and Landscape, University of Manchester, 1989.
7. **WHO-CEMP: Environmental and Health Impact Assessment of Development Projects,** A Handbook for Practioners, Elsevier Applied Science, London, 1992.
8. Canter, L.W.: **Environmental Impact Assessment**, McGraw-Hill Book Co. Singapure, 1996.

Course content

Sustainable Development Principles. Environmental Impact Assessment - Environment Protection Instrument. Environmental Impact Assessment of projects. Environmental Impact Assessment of programmes, plans and legislation (Strategic Environmental Assessment). Legal basis in the Republic of Croatia and the European Community. International Conventions. Methods of elaboration and assessment procedures of Environmental Impact Studies.

Introduction and Overview of Environmental Impact Assessment (EIA). Historical development, importance and role of EIA in planning and decision-making. Main steps in EIA application: Screening, Scoping, Assessing, Mitigation and Impact Management, Reporting, Reviewing, Decision-making, Monitoring, Implementing and Auditing, Project Management. Strategic Environmental Assessment (SEA).

Course	**(211) MECHANICAL SEPARATION PROCESSES**
Lecturer	**Ph.D. Marin Hraste, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Weiss,S.,et al: **Verfahrenstechnische Berechnungs Methoden**, Vol.3, VCH, Winheim, 1985.
2. Purchas,D., Wakeman, R.: **Solid/Liquid Equipment Scale up**, Uplands Press, London, 1986.
3. Svarovsky,L.: **Solid - Liquid Separation**, Butterworths, London, 1990.
4. Hraste, M.: **Mehaničke operacije/Inženjerstvo disperznih sustava**, Sveučilišna naklada, Zagreb, 1990.

Course content

Principles and theoretical aspects in solid-liquid separation: Flow through compressible porous bed; Structure of particulate beds; Darcy-Shirato equations and force balance. Particulate structure equatioins. Empirical structure equations. Selection of solid-liquid separation equipment. Application of general theoretical approach and criterion which define equipment selection in the case of thickening, planar and centrifugal filtration etc.

Course	**(212) ECOPROCESSES OF DRYING**
Lecturer	**Ph.D. Srećko Tomas, Associate Professor**
Institution	Faculty of Food Technology, Osijek
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Bošnjaković, F.: **Nauka o toplini II**, Tehnička knjiga, Zagreb, 1976.
2. Mujumdar, A.: **Handbook of Industrial Drying**, Second Ed., Marcel Dekker, Inc., New York, 1995.
3. Švigon, J.: **Thermodinamic Analysis of Various Dehumidifying Dryers for Wood**, Drying Technology, 14(2) 271 – 288, 1996.
4. Okazaki, M.: **Theoretical Fundamentals of Drying Operation**, Marcel Dekker, Inc., New York, Special issue of drying technology, 14 (1), 0-194, 1996.
5. Jones, W.P.: **Air Conditoning Engineering**, Fifth Ed., Buttermorth Heinemann, Oxford, 2001.

Course content

Introduction to ecologically acceptable drying processes. Basic properties of moist air and materials. Balance in the system moist material-moist air. Exchange of heat in drying processes. Heat exchangers in processes of heating, cooling and condensation. Recupration of waste-heat during drying processes. Heat exchangers and driers efficiancy. Drying processes modelling.

Course	**(213) ENVIRONMENTAL PROCESS DESIGN**
Lecturer	**Ph.D. Ljubica Matijašević, Assistant Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Allen, D. T., Rosselot, K. S..: **Pollution Prevention for Chemical Processes**, John Wiley & Sons, Inc., 1997.
2. Allen, D. T., Shonnard, D. R.: **Green Engineering: Environmentally Conscious Design of Chemical Processes**, Prentice Hall, 2001.
3. Turton, R., Bailie, R. C., Whiting, W.B.: **Analysis, Synthesis and Design of Chemical Processes**, Prentice Hall, 2002.

Course content

The course describe environmentally preferable to the design and development of processes and product. The following topics will be covered: the basic introduction to environmental issues, cleaner production, risk concepts (risk analysis, risk assessment) and environmental regulations, approaches for evaluating emissions and hazard of chemicals and processes, evaluating environmental performance during process synthesis (tools for assessing and improving), unit operations and flowsheet analysis for pollution prevention, heat and mass exchange network synthesis, environmental cost accounting, waste reduction, case studies.

Course	**(214) ENVIRONMENTAL CATALYSIS**
Lecturer	**Ph.D. Stanka Zrnčević, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. **Handbook of Heterogeneous Catalysis**, Eds. Ertl, G., Knozinger,H., Weitkamp,J., VCH, Veinheim, 1997.
2. **Environmental Catalysis**,Eds.Ertl, G., Knozinger, H., Weitkamp, J.,VCH, Veinheim, 1999.
3. **Catalysis: An Integrated Approach**, Eds. Van Santen, R.A., Van Leeuwen, P.W.N.M., Moulijin, J.A., Averil, B.A., Elsevier, Amsterdam, 2000.

Course content

Introduction. Principles of heterogeneous catalysis. Activity, selectivity, stability. Deactivation and regeneration. Elementary steps and mechanisms. Kinetic and transport processes. Diagnostic criteria and experimental methods for estimating the influence of heat and mass transfer on reaction rate. Preparation of solid catalysts (catalysts supports, deposition of active components, shaping of catalysts and supports). Environmental catalysis and its technological application (cleaning of wastewaters, purification of exhaust gases from stationary and mobile sources, hazardous waste incineration).

Course	**(221) CHEMISTRY OF WATER**
Lecturer	**Ph.D. Štefica Cerjan-Stefanović, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Pinta, M: **Modern Methods for Trace Elements Analysis**, Ann Arbor Science Publishers, Collingwood, 1978.
2. Grasshoff, K., Etrhardt, M., Kremling, K.: **Methods of Seawater Analysis**, Second, Revised and Extended Edition, Verlag Chemie GmbH, Weinheim, 1983.
3. Werner, S.: **Aquatic Surface Chemistry**, Chemical Process at the Particle - WaterInterface, John Wiley & Sons, Inc., New York,1987.

Course content

Water molecule. Structure and properties of water. Hydrogen bound theory, hydratation, hydrolysis. Interaction in water solutions. Acidity and alcality of water. Dissociation CO_3^{2-} /HCO_3^-. Puffer systems. Mineral components of water. Diagram of condition. Theory of solubility of oxides and hydroxides of primary constituents of water (Ca^{2+}, Mg^{2+}, Na^+, Cl^-, SO_4^{2-}), organic carbon, secondary constituents (NH_4^+, Fe^{3+}, K^+, NO_3^-, F^-). Perticipation and dissolution of solid phase. Metal complex. Principe of coagulation, flocculation and perticipation in water treatment. Dissolution of gases. Monitoring of sulphur, nitrogen and phosphor cycles. Division of water in term of chemical properties. General properties of drinking water, industrial water and waste water. Pollutants in water. Sea water. Diagrams of dissolution in sea water. Sampling, analysis of water and data handling. Metal complexes in heterogeneous systems. Automatic and on – line analysis: selection of analizators, analytical sensors cells. Laboratory data bases for analysis of water of different categories.

Course	**(222) OXIDATION PROCESSES FOR TREATING INDUSTRIAL WASTEWATERS**
Lecturer	**Ph.D. Janez Levec, Full Professor**
Institution	Faculty of Chemistry and Chemical Technology, Ljubljana
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. **Standard Handbook of Hazardous Waste Treatment and Disposal**, Ed.: Freeman,H.M., McGraw-Hill, New York, NY, 1989.
2. Jackman, A.P., Powell,L.: **Hazardous Waste Treatment Technologies: Biological Treatment, Wet air Oxidation, Chemical Tixation Chemical Oxidation** , Noyes Publication, Park Ridge, NJ, 1991.
3. **Photooxidation Purification and Treatment of Water and Air**, Eds.: Ollis,D.F., Al-Ekabi, Elsevier, Amsterdam, 1993.

Course content

Depending on the conditions at which high energy intermediates responsible for the destruction of organic compounds in water are generated, oxidation processes may be classified into two main types: (1) thermal liquid-phase or wet oxidation processes and (2) advanced oxidation processes. In thermal processes these intermediates (free radicals) are formed by thermal reactions at high temperatures and pressures. In the advanced oxidation processes the generation of active oxygen species, such as hydroxyl radical, tekes place at near ambient temperature and pressure.
Thermal Processes. subcritical wet oxidation(WO), catalytic wet oxidation (CWO), supercritical water oxidation (SCWO). Advanced oxidation processes (AOPs): ozonation, ozonation with hydrogen peroxide, photooxidation, photocatalysis and recently non-thermal plasma technologies. Advantages and disadvantages of each process. The oxidation kinetics. The reactor design (mathematical modeling). The integrated (chemical and biological) treatment processes.

Course	**(223) WATER QUALITY MANAGEMENT**
Lecturer	**Ph.D. Stanislav Tedeschi, Professor Emeritus**
Institution	Faculty of Civil Engineering, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Metealf, Eddy, Inc.: **Wastewater Engineering, Treatment Disposal, Reuse**, McGraw-Hill Book Company, New York, 1991.
2. Tedeschi, S.: **Zaštita voda**, Croatian Society of Civil Engineers, 1997,(in Croatian).

Course content

Introduction. Changes in water quality. Sources of pollution. Water self-treatment processes. Disturbances in water ecosystems. Water quality management measures and procedures: sociological approach, legislative measures,space management, financial measures, scientific approach, technological procedures, institutional measures, water protection programs and plans. Water reuse parameters. Wastewater discharge into water courses, lakes and the sea. Final sludge disposal.

Course	**(224) BIOLOGICAL WASTEWATER TREATMENT PROCESSES**
Lecturer	**Ph.D. Margareta Glancer-Šoljan, Full Professor**
Institution	Faculty of Food Technology and Biotechnology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Snape, J.B., Dunn, I.J., Ingham, J., Přenosil, J.E.: **Dynamics of Environmental Bioprocesses. Modelig and Simulation**, Sora, K., Gardiner, J. (Eds.) VCH Verlagsgesellcschaft mbH, Weinheim, VCH Publishers Inc., New York, 1995.
2. Manual of Practice: **Operation of Municipal Wastewater Treatment Plants**, 5th edition: Water Environment Federation, USA, 1996.
3. Tedeschi, S.: **Zaštita voda**, Simović, V. (Ed.), HDGI, Zagreb, 1997.

Course content

The role of microorganisms in biodegradation of organic compounds in wastewater different origin: chemical, pharmaceutical, fermentative and food industry. The role of mixed microbial culture in the process of biooxidation, nitrification and denitrification. Characterization of aerobic and anaerobic mixed microbial cultures. Biotests of wastewater treatment. Growth kinetics of mixed microbial cultures (aerobic and anaerobic) with consumption of carbon, nitrogen and phosphorus compounds. Environmental parameters (pH, dissolved oxygen, temperature, biomass concentration, organic compounds concentration, redox potential and partial gas pressure) for biological processes efficiency. Bioaugmentation. Monitoring and use of computer models in biological processes. Reactors in biotreatment of wastewater. Technology of activated sludge and activated sludge technology with injection (bioaugmentaton) of suitable mixed microbial cultures in biotreatment of industrial wastewater, landfill leachate and mixed municipal and industrial wastewater. Bilances of materials. Methanogenic processes in treatment of wastewater with high concentration of organic compounds origin from fermentative and pharmaceutical industry. Two-stage processes: ANAMET (anaerobic-aerobic) process for wastewater treatment from food industry and nitrification with denitrification process for wastewater treatment from chemical, fermentative and pharmaceutical industry and landfill leachate. Biological processes for sulphur removal. Biofilm processes and membranic processes. Sludge treatment origin from wastewater treatment.

Course	**(225) URBAN AND INDUSTRIAL WASTEWATER TREATMENT AND DISPOSAL**
Lecturer	**Ph.D. Laszlo Sipos, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Peavy, H.S., Rowe, D.R., Tchbanoglous, G.: **Environmental Engineering**, McGraw-Hill, Singapoore, 1987.
2. Stumm, W., Morgan, J.J.: **Aquatic Chemistry**, Willey Interscience, Third Edition, New York, 1996.
3. **Advanced Wastewater Treatment. Nutrient Removal and Anaerobic Processes**, Ed.: Mulder.A., Pergamon Press, London, 1997.
4. Eckenfelder, W.W., Jr.: **Industrial Water Pollution Control**, 3rd ed., McGraw-Hill, Singapore, 2000.

Course content

Wastewater quality parameters: definitions, characteristics. Wastewater collection systems. Wastewater treatment: physical, physic-chemical, chemical and biological processes. Advanced wastewater treatment: removal of nitrogen and phosphorus. Sludge treatment and disposal. Elements of wastewater treatment process design. Collection of design parameters: laboratory and field investigations. Pilot-plant studies and scale-up procedures. Investigation and evaluation of the treatment plant operation efficiencies. Wastewater disposal into the sea. Wastewater reuse.

Course	**(226) WATER TREATMENT**
Lecturer	**Ph.D. Davor Malus, Associate Professor**
Institution	Faculty of Civil Engineering, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Degremont: **Water treatment handbook**, Halsted Press, a division of John Wiley & Sons, 1979.
2. Metaclf & Eddy Inc: **Wastewater engineering, treatment, disposal, reuse**, Mc Graw-Hill Book Company, New York, 1991.

Course content

Clarification of potable water. Waste water treatment. Industrial wastewater treatment. Sanitary wastewater treatment. Physical and chemical treatment of wastewater. Biological treatment: aerobic and anaerobic. Advanced wastewater treatment. Criteria for technology selection, design and construction. Unit processes design. Hydraulic of treatment facilities. Sludge treatment and disposal. Energy analyses of sludge treatment. Regulations for design and construction. Environmental impact of constructed facilities. Cost – benefit analyses of wastewater treatment. Relations between theory and investigations and practice.

Course	**(227) GROUNDWATER PROTECTION**
Lecturer	**Ph.D. Darko Mayer, Full professor**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Fried, J.J.: Groundwater Pollution, Elsevier Scient.Pulp.Comp., Amsterdam, 1975.
2. Miletić,P., Heinrich-Miletić, M.: **Uvod u kvantitativnu hidrogeologiju**, Studij geotehnike, Varaždin, 1981.
3. Mayer, D.: **Kvaliteta i zaštita podzemnih voda**, Hrvatsko društvo za zaštitu voda i mora, Zagreb, 1993.
4. Almeida, C., Biondić, B., et al.: **Hydrogeological Aspects of Groundwater Protection in Karstic Areas**. Final report of COST 65 Action, Bruxelles, 1995.
5. Levačić, E.: **Osnove geokemije vode za geotehničare**, Geotehnički fakultet, Varaždin, 1997.

Course content

Groundwater resorces and groundwater qualiti; Endangering of groundwater resorces; Groundwater pollution (Definition of pollution, Origins of groundwater pollution, Types of pollutants, Physical characterisics of grounwater pollution); The theory of dispersion in porous media (Description of dispersion, Mecchanisms of dispesion, Characteristics parametars of dispersion, Dispesion equation); Determination of groundwater pollutions parameters (Explicit formulas for the estimate of dispersion coefficients, Field methods for the determination of dispersion coefficients); The methodology of technical studies of groundwater pollution (The scale problem, Choosing of method); Characteristics of different types of gruondwater pollutions (Agriculture, Industry, community and municipal services, Special sources of of gruondwater pollutions), Groundwater monitoring (Planning and execution); Gruondwater protection (Regional protection of aquiofers, Protection of pump sites, Protection of production wells and springs, Legislative regulations).

Course	**(228) KARST AQUIFERS PROTECTION**
Lecturer	**Ph.D. Božidar Biondić, Full Professor**
Institution	Geotechnical Faculty, Varazdin
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Zekster, I.S.: **Groundwater and the Environment - Aplications for the Global Comunity**, Lewis Publishers, Washington, 2000.
2. Moor, E.J.: **Field Hydrogeology - A Guide for Site Investigatins and Report Preparation**, Lewis Publishers, Washington, 2002.
3. Biondić, B., Bakalowicz, M. et all: **Karst Groundwater Protection - Final Report**, COST 65 action, Luxemburg, 1995.
4. Zwahlen, F. et all: **Vulnerability and Risk Mapping for the Protection of Carbonate (Karst) Aquifers**, Luxemburg, 2004.

Course content

Introduction. Basic geologic characteristics of karst areas. Basic characteristics of karst aquifers. Research methods of the aquifers in the function of protection. Management of coastal karst aquifers. Experiences of EU countries in the protection of karst aquifers. Croatian approach to the protection – criterias. Physical planning and karst aquifers protection.

Course	**(231) AIR CHEMISTRY**
Lecturer	**Ph.D. Tomislav Cvitaš, Full Profesor**
Institution	Faculty of Science, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Jacobs,M.B.: **The Chemical Analysis of Air Pollutants**, Interscience Publishers Ltd., London.
2. Leithe,W.: **The Analysis of Air**, Pollutants.
3. Perry,R. and Young,R.: **Handbook of Air Pollution Analysis**, Chapman and Hall, London, 1977.

Course content

Air pollution in settlements, at work, and wherever people spend their time. Basic pollution indicators. Analytical methods for establishing air pollution with respect to the type and concentration of pollutant. Air sampling methods. Establishing general (SO_2 and smoke) and specific pollution indicators (No_x, smoke, airborne particles, and heavy metals on airborne particles).

Course	**(232) AIR QUALITY**
Lecturer	**Ph.D. Vladimira Vađić, Scientific Adviser**
Institution	Institute for Medical Research and Occupational Health, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Stern,A.C.: **Air Pollution**-Volume I-V.
2. Benarie,M.M.: **Atmospheric Pollution**.
3. Penzar, B.: Meteorologija za korisnike, Školska knjiga, 1996.
4. **Air Quality Guidelines for Europe**, WHO, Geneva, 2000.

Course content

Air pollution sources and their relationship with the development and use of fuels. The behaviour of pollutants in the air, their physical and chemical transformation, cyclic changes (daily, weekly, yearly cycles). Air quality surveillance, approach, sampling, measuring, processing. Interpretation of findings with respect to limit values. Evaluation of air quality and categorisation according to regulations. Air protection and improvement strategies.

Course	**(233) METEOROLOGICAL ASPECTS OF ATMOSPHERIC POLLUTION**
Lecturer	**Ph.D. Zvjezdana Bencetić Klaić, Assistant Professor**
Institution	Faculty of Science, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Gelo, B.: **Opća i prometna meteorologija**, Školska knjiga, Zagreb, 1994.
2. Penzar, B. i sur.: **Meteorologija za korisnike**, Školska knjiga, Zagreb, 1996.

Course content

Types and sources of atmospheric pollution. Processes affecting atmospheric pollutants. Dispersion of air pollutants depending on spatio-temporal variability of the airflow and atmospheric stability. Optimal planning regarding the local characteristics of atmospheric boundary layer. Calculation of trajectories. Theoretical models of transport and dispersion of airborne pollutants and background pollution. Long-range transport of pollutants (“acid rain”). Tropospheric and statospheric ozone 8”photochemical smog”, “ozone holes”). Aspects of anthropogenic global warming (“greenhouse effect”).

Course	**(234) SOLID-GAS SEPARATIONS OR LIQUID DROPS-GAS SEPARATIONS**
Lecturer	**Ph.D. Branko Tripalo, Full Professor**
Institution	Faculty of Food Technology and Biotechnology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Denn,M.M.: **Process Fluid Mechanics**, Prentice-Hall, Englewood Cliffs, 1980.
2. Perry, R.H., Chilton, C.H.: **Chemical Engineers' Handbook**, Tokyo, 1989.
3. Spurny, K., Spurny, K.R.: **Advances in Aerosol Filtration**, Amazon, 1998.
4. Spurny, K., Spurny, K.R.: **Analytical Chemistry of Aerosols**, Amazon, 1999.

Course content

Relative equilibrium, Pressure distribution in a liquid subject to horizontal acceleration, Effect of vertical acceleration, General expression for pressure in a fluid in relative equilibrium, Forced vortex, Radial flow, Vortex motion, Kutto-Jankowski low. Incompressible flow round a body., Compressible flow round a body, Effects of compressibility, Shock waves, Oblique shock waves, Supersonic expansion and compression, Mschanics of particles motion through fluids, Drag coefficients, Terminal velocity, Separation of particulates, Wall effects, Beds of particules, Porosity, fluidized beds. Two-phase gas-liquid flow. The degree of cleaning of gas. Gas cleaning equipment, Gravity separators, Inertial or momentum separators, Gas Filtration, Microbiotical filtration, Liquid waching, Ultrasonic gas cleaning, Calculation procedure, Economics of gas cleaning equipment, Control process.

Course	**(235) CLEANING OF AIR AND WASTE GASES**
Lecturer	**Ph.D. Branko Salopek, Full Professor**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Suess, M.J., Grefen, K., Reinisch, D.W.: **Ambient Air Pollutants from Industrial Sources**, Elsevier, 1985.
2. Loffler, F., Dietrich, H., Flatt, W.: **Dust Collection with Bag Filters and Envelope Filters**, Friedr. Vieweg & Sons, 1988.
3. Dullien, F.A.: **Introduction to Industrial Gas Cleaning**, Academic Press, 1989.

Course content

Sources, types and features of air pollutants. Pollutants generated by thermo-electric power plants and heating plants, mining, metallurgical and chemical plants, traffic and incineration of different waste types. Particle dinamics. Gravity settling chambers, inertial and centrifugal air cleaners. Electrostatic precipitators, fabric filters and scrubbers. Dedusting, desulphuration and denitrification.

Course	**(236) CHEMICAL ENGINEERING FOR AIR POLLUTION CONTROL**
Lecturer	**Ph.D. Vesna Tomašić, Assistant Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Brauer, H., Varma, Y.B.G.: **Air Polution Control Equipment**, Springer Verlag, Berlin, 1981.
2. De Nevers, N.: **Air Pollution Control Engineering**, McGraw-Hill, N.Y., 1995.
3. Ertl, G., Knözinger, H., Weitkamp, J.: **Handbook of Heterogeneous Catalysis**, Vol. 4, Wiley-VCH, Weinheim, 1997.
4. Santen, R.A., Van Leeuwen, P.W.N.M., Moulijn, J.A., Averil, B.A.: **Catalysis-An Integrated Approach**, 2nd Ed., Studies in Surface Science and Catalysis, Vol. 123, Elsevier, Amsterdam, 1998.
5. Cybulski, A., Moulijn, J.A.: **Structured Catalysts and Reactors**, Marcel Dekker, N.Y. , 1998.

Course content

Problems in air protection and methods of solution. Main sources of air pollution. Mechanisms of pollutants formation during fuel combustion. Technical processes and equipments for cleaning of the exhaust gasses. Control of emission from mobile and stationary sources. Removal of particulate pollutants. Application of catalytic processes in air pollution control: control of NO_x and SO_x, removal of VOCs, catalytic destruction of CFCs, reducing N_2O emissions, application of catalytic filters. Design and operation of equipment for biological treatment of the waste gas. Advanced technologies for reducing atmospheric emissions. Monolith structures in air pollution control. Preventive methods of air protection. Exercises, seminars and consultations.

Course	**(241) SOIL CHEMISTRY**
Lecturer	**Ph.D. Željko Vidaček, Full Professor**
Institution	Faculty of Agriculture, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. JDPZ: Priručnik za ispitivanje zemljišta. Knjiga 1. **Kemijske metode za ispitivanje zemljišta**, Beograd, 1966.
2. Racz, Z.: **Meliorativna pedologija I i II dio**, Geodetski fakultet, Zagreb, 1980. i 1981.
3. Page, A.L., Miller, R.H., Keeney, D.R.: **Method of Soil Analysis**, Part 2-Chemical and Microbiological Properties, Second Edition, Madison Wiskonsin, USA, 1982.
4. Škorić, A.: **Priručnik za pedološka istraživanja**, Fakultet poljoprivrednih znanosti, Zagreb, 1982.
5. Alloway, B.J., Ayres, D.C.: **Chemical Principles of Environmental Pollution**, Blackie Academic and Professional, London, 1994.
6. Bohn, H.L., McNeal, B.L., Conor, G.A.: **Soil Chemistry**, John Wiley and Sons, New York, 3rd edition, 2001.

Course content

Chemical composition. Mineral and organic matter. Colloids. Ab and/or adsorption. Soil solution. Acidity. Alkalinity. Redox processes. Pollutants. Basic principles of chemical amelioratioin.

Course	**(242) SOIL MICROBIOLOGY AND BIOCHEMISTRY**
Lecturer	**Ph.D. Sulejman Redžepović, Full Professor**
	Ph.D. Sanja Sikora, Associate professor
Institution	Faculty of Agriculture, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Paul, E.A., Clark, F.E.: **Siol Microbiology and Biochemistry**, Academic Press, New York, 1989.
2. Mitchell, R.: **Environmental Microbiology**, Wiley-Liss, New York, 1993.
3. Metting, F.B.: **Siol Microbial Ecology**, Marcel Dekker, New York, 1993.
4. Tate, R.L.: **Soil Microbiology**, John Wiley & Sons, New York, 1995.
5. Van Elsas, J.D., Trevors, J.T., Wellington, E.M.H.: **Modern Soil Microbiology**, Marcel Dekker, New York, 1997.

Course content

Main aim of this course is to introduce modern scientific concepts regarding soil microorganisms and related processes to postgraduate students which will enable interdisciplinary connection with pedophysics and pedochemistry of soil. Regarding the fact that soil microbiology and biochemistry cover wide and different incestigation areas, it is important to pay attention to functional aspects and interactions in order to ensure informations and ideas for specialists related to this study. Knowledge concerning with carbon mineralization, nitrification and other processes have been accumulated and therefore emerged need for integrated approach for problem solving in agriculture, forestry and ecology. Basic approach in this study is oriented towards certain processes in order to enable insight to unique pespective of circle of elements and fundamental processes in soil which are under direct influence of soil microorganisms.

Course	**(243) SOIL PROTECTION**
Lecturer	**Ph.D. Zoltan Racz, Full Professor**
Institution	Faculty of Agriculture, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Van Lyden, G.W.J.: **European Soil Resources-Current Status of Soil Degradation, Causes, Impact and Need for Action**, Council of Europe, Strasbourg Cedex, 1995.
2. Martinović, J.: **Tloznanstvo u zaštiti okoliša**, Državna uprava za zaštitu okoliša, Zagreb, 1997.
3. CRA/PPA: **Smjernice za kartiranje i mjerenje procesa erozije tla prouzročenih kišom u mediteranskim obalnim područjima**, Split, 1998.
4. Znaor, D., Bošnjaković,B.: **Ekološka poljoprivreda kao model održive poljoprivrede u zemljama s gospodarstvima u tranziciji**, Hrvatske vode, **24**,215-232,1998.
5. Racz, Z., Marušić, J., Gereš, D., Hak, N.: **Aktualna pitanja integralnog gospodarenja i zaštite tla i voda u poljoprivrednoj proizvodnji Hrvatske**, Hrvatske vode, **38**,1-22,2002.

Course content

Scientific, professional and legislative problems of the improvement and protection of soil and environment. Land resources and problems of chemical contamination and physical impairment of soils worldwide and in this country. Regional diversity and specific requirements of soil protection in Croatia. The role of soil science within the multidisciplinary approach to solving these problems.

Course	**(244) SUSTAINABLE LAND MANAGEMENT-SLM**
Lecturer	**Ph.D. Ferdo Bašić, Full Professor**
Institution	Faculty of Agriculture, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Bašić,F.: **Održiva poljoprivreda** – Nova "Zelena revolucija", knjiga: Hrvatska i održivi razvitak, Gospodarstvo–stanje i mogućnosti, Ministarstvo obnove i razvitka, Zagreb, 83-103, 1998.
2. Blume, H.P., Eger,H., Fleischhauer,E., Hebel,A., Reij,C., Steiner,K.G.:**Towards Sustainable Land Use**, Volume I, Volume II, International Society of Soil Science, 1998.
3. Greenland,D.J., Nye, P.H.: **Land resources – Edge of the Malthusian Precipice**, CAB International, The Royal Society, 1998.
4. Butorac,A.: **Opća agronomija**, Školska knjiga, Zagreb 1999.
5. Selected published papers of Department of General Agronomy, related with Land management.

Course content

Theoretical basic of Sustainable Agriculture – place and role of Sustainable Land Management (SLM). Definition of the term SLM. Economical and Environmental acceptable practices in SLM within Sustainable agriculture. Soil tillage practices in SLM. Ecological limits of mechanical practices in soil. Soil tillage in intensive plant growing. Energetic aspects of soil tillage. Conservation tillage on land of high risk of wind and water erosion. State and prospects of tillage reduction in European agroecological conditions. Soil fertilization as a part of agricultural practices. Economy with humus in agricultural soils with respect on organic fertilization – farmyard manure, compost. Relation of quantity of used fertilizers and mass of tilled soil. Relations of fertilizers and pesticides. Nitrogen in agroecosystem. Land management on ecological sensitive areas – water protected areas, national parks and protected areas.

Course	**(251) WASTE IN CHEMICAL INDUSTRY**
Lecturer	**Ph.D. Željko Knez, Full Professor**
Institution	Faculty of Chemistry and Chemical Technology, Maribor
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Corbitt, R.A.: **Standard Handbook of Environmental Engineering**, Second Edition, McGraw-Hill, New York, 1998.

Course content

Types of waste and their source, normatives and legislation for emissions in Europa.Collecting, selecting and undertaking waste. Modification of existing technologies with aims to minimize the waste formation. Alternative processes. Recycling. Treatment of gases and vapor from chemical industry. Chemical and biochemical treatment of waste water. Treatment of solid waste. Incineration of solid waste. Designing the equipment for incineration. Treatment of fumes from incineration equipment, on line analytic of exhaust gases from combustion equimpent. New alternative technologies for waste treatment.

Course	**(252) RECYCLING AND DISPOSAL OF WASTE**
Lecturer	**Ph.D. Branko Salopek, Full Professor**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Bilitewski, B.,Härdtle, G., Marek, K.: **Abfallwirtschaft**, Springer-Verlag, 1991.
2. LaGrega, M.D., Buckingham, L.P., Evans, J.C.: **Hazardous Waste Management**, McGraw-Hill, Inc., 1994.
3. Gaballah, I., Hager, J., Solozabal,R.: **Global Symposium on Recycling, Waste Treatment and Clean Technology**, REWAS '99, San Sebastian, 1999.

Course content

Classification of waste based on its origin, type, physico-mechanical and chemical characteristics. Waste recycling principles and technology (for individual types of waste). Comminution, classification, sorting, concentration and agglomeration. Utilization of separated products. Utilization of abandoned open pit and underground mines for waste disposal. Site selection criteria for waste disposal. Construction of waste disposal. Pre-disposal treatment of individual waste types. Post-operating activities concerning waste disposal.

Course	**(253) POLYMER WASTE AND MANAGEMENT**
Lecturer	**Ph.D. Zlata Hrnjak-Murgić, Associate Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Hamilton, J.D., Sutcliffe,R.: **Ecological Assessment Polymers: Strategies for Products Stewardship and Regulatory Programs**, J.Wiley & Sons, New York, 1996.
2. Allen, D.T., Rosselot, K.S.: **Pollution Prevention for Chemical Processes**, J.Wiley & Sons, New York, 1997.
3. Scheirs,J.: **Polymer Recycling: Science, Technology and Applications**, J.Wiley & Sons, Brisbane, 1998.
4. Andrady, A. L.: **Plastics and the Enviroment**, J.Wiley & Sons, Hoboken, New Jersey, 2003.
5. Azapagic, A.and al.: **Polymers, the Enviromental and Sustanible Development** J. Wiley & Sons, N.Y. 2003.

Course content

A lifecycle inventory of industrial liquid and solid waste and waste management.Fraction of the polymer waste in general waste and in municipal. Categories of polymer waste: common plastic packaging plastics in agriculture coating textile fibers and polymers in automobile. Polymers and sustainability. Basic principles of polymer chemistry. Impact of the environment on polymers and degradation processes: bio-, thermo- and photo-degradation, and their application in polymer recycling. Waste management of used polymer material: collection identification and sorting, incineration, disposal, biodegradation and recycling. Recycling processes: chemical, mechanical, energy recover. Recycling of packaging materials, plastic and plastic films in agriculture, recycling of textile waste and. Recyclingof PET and PE. Economic effects of recycling.

Course	**(254) MANAGEMENT OF INDUSTRIAL / TECHNOLOGICAL WASTE**
Lecturer	**Ph.D. Savka Kučar-Dragičević**
Institution	Croatian Environment Agency, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Manahan, S.E.: **Environmental Chemistry**, 6th Ed.: Lewis Publishers, 1994.
2. **Europe's Environment**, The Dobris Assessment European Environment Agency, Ed.: Stanners, D., Bourdeau, P., Cophenhagen, 1995.
3. Higgins, T.E.: **Pollution Prevention Handbook**, Lewis Publishers, Boca Raton, London, 1995.
4. Blackman, W.C.: **Basic Hazardous Wase Management**, 2nd Ed.: Lewis Publishers, Boca Raton, New York, 1996.
5. Ciambrone, D.F.: **Waste Minimization as a Strategic Weapon**, CRC, Lewis Publishers, 1996.

Course content

Waste/ environment/ sustainable development (waste as basic environmental problem as well as development indicator); Definitions; Waste management in Croatia (legislation/ framework/practice); Development /evolution of the waste management principles & strategies; Importance of the engineering approach, Modern waste management systems (reduction, recycling, recovery); Measures and activities for waste reduction; Waste treatment methods and technologies; Incineration as specific treatment technology; Final disposal.

Course	**(255) SANITARY LANDFILLS**
Lecturer	**Ph.D. Davorin Kovačić, Associate Professor**
Institution	Geotechnical Faculty, Varazdin
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

Course content

Course	**(261) BIODEGRADABLE POLYMER MATERIALS**
Lecturer	**Ph.D. Helena Jasna Mencer, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. **Chem Systems International Ltd., Biodegradable Plastics: Future Trends in Western Europe and The USA, N.R.L.O.** – report 89-34, 1989.
2. Doi, Y.: **Microbial Polyesters**, VCH Publishers, New York, 1990.
3. Griffin, G.J.L.: **Chemistry and Technology of Biodegradable Polymers**, Chapman & Hall, 1994.

Course content

Biodegradable polymers. Biodegradable fillers. Blends of biodegradable polymers. Mechanisms and kinetics of biodegradation. Effects of temperature, humidity and pH on the degradation rate. Influence of photodegradation on the biodegradation rate. Application of biodegradable polymeric materials. Methods of biodegradable plastic waste management. Recycling of biodegradable plastics. Test methods and standards for biodegradable plastics.

Course	**(262) MODIFICATION OF POLYMER MATERIALS IN PURPOSE OF BETTER DEGRADABILITY**
Lecturer	**Ph.D. Jasenka Jelenčić, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Rabek, J.F.: **Fotostabilization of Polymers***,* Elsvire, London, 1990.
2. Mark, H.F., Bikales, N.M., Overberger, C.G., Menges, G.: **Encyclopedia of Polymer Science and Engineering**, John Wiley, 1986-1989.
3. Hall, C.: **Polymer Materials**, John Wiley, New York, 1991.
4. Chan, C.M.: **Polymer Surface Modification and Characterization**, Hanser Publishers, Munchen, 1993.

Course content

Technical synthesis and modification of polymers. The purpose of modification and changes of physical forms, dissolving, decrease of combustibility, mechanical properties, degrability and ecological suitability. Modification with chemical reactions, physical methods-regeneration, esterification, hydrolysis, bromification, chloration, graft copolymerization. Modification with inorganic fillers. Natural modificated polymers: cellulose and natural rubber. Modificated polymers of ethylene, acrylates, epoxy resins, synthetic rubbers, styrene-SAN, ABS and SBR. Conditions of degradation.

Course	**(263) DEGRADATION OF POLYMERIC MATERIAL**
Lecturer	**Ph.D. Vesna Rek, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Hall, C.: **Polymer Materials**, John Willey, New York, 1990.
2. Griffin, G.J.: **Chemical and Technology of Biodegradabile Polymers**, Blackie Academic and Profesional, London, 1994.
3. Hamid, S.H.: **Polymer Degradation Handbook**, M. Dekker, New York, 1998.
4. F. P. La Mantia: **Recycling of Plastic Materials**,Chem Tec Publishing, Toronto, 1993.
5. W. Brostow: **Performance of Plastics**, Carl Hanser Verlag, Munich 2001.

Course content

Polymer materials and the phases of technological process in polymer artefact production. The types of polymers. Thermoplastics, thermosets and elastomers. The multiphases polymer systems. The degradation of polymeric material. The degradation agents. The types of degradations: thermal, photo, oxidative, chemical, mechanical and biological. Ageing. Chemical and physical process in polymer ageing. The degradation as function of polymer composition and structure. Technologies and ecological aspects of degradation in the particular phases of polymer technology and in use. The influence of the environmental on the polymer products. Polymer waste recycling. Technologies and ecologically acceptable polymer waste degradation. Programmed degradation of specific polymer materials. Photodegradation and biodegradation control. Multiphases polymer materials, waste quality, designed and control. Stabilisers and sensibilizers; additive and reactive types. Life cycle of polymeric material. The evaluation of durability. The correlation of polymer degradation in polymer technology phases, in use and in reprocessing. The influence on products and waste quality.

Course	**(264) RECYCLING OF POLYMERS**
Lecturer	**Ph.D. Mladen Šercer, Full Professor**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Ehring, R.J.: **Plastics Recycling**, Carl Hanser Verlag, München, Wien, 1992.
2. Menges, G., Michaeli,W., Bittner, M.: **Recycling von Kunststoffen**, Carl Hanser Verlag, München, Wien, 1992.
3. Braudrup, J. et al.: **Die Wiederwertung von Kunststoffen**, Carl Hanser Verlag, München, Wien, 1995.
4. Šercer, M.: **Proizvodnja gumenih tvorevina**, Društvo plastičara i gumaraca, Zagreb, 1997.
5. Šercer, M., Opsenica, D., Barić, G.: **Oporaba plastike i gume**, Topgraf, Zagreb, 2000.

Course content

Introduction. Recycling as the final item of production. Polymers and the environment. Integrated approach to waste disposal. Share of polymers in the waste. Polymer recycling procedures. Material recycling: melting per types of separated pure thermoplastics (WUR procedure, converter, ART procedure, reverser, Revive-System), mechanical fragmentation of elastomers, mechanical fragmentation of thermosets. Energy recovery: incineration of plastic waste, incineration of municipal waste with energy recovery, incineration in cement furnace, fluidised bed. Feedstock recycling: pyrolysis, hydrolysis, hydrating, blast furnace, solvent recycling, biodegradable plastics. Economic frameworks of recycling. Recycling capacities and equipment in Croatia.

Course	**(265) RECYCLING OF MATERIALS**
Lecturer	**Ph.D. Tomislav Filetin, Full Professor**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Hornbogen, E., Bode, R., Donner, P.: **Recycling - Materialwissenschafftliche Aspekte**, Springer Verlag, Berlin, 1993.
2. Časopisi: **Conservation & Recycling**, Konstruktion,, VDI 2243.
3. Nickel, W.: **Recycling Handbuch**, VDI Verlag, Dusseldorf, 1996.
4. Zbornici radova sa znanstveno-stručnih savjetovanja/ Proceedings from the Conferences
5. Internet web stranice: disertacije itd./web sites: Ph-D Theses etc.

Course content

The technological, economical, organisational and social aspects of recycling. The resources and reserves of raw materials and life cycle of materials. Analysis of ecological criteria and recyclability in materials selection. The trends in development of recycling materials. The rules, requirements and recommendations in development and design of the ecological products (design for recycling) and selection of recycable ("green") materials. The quantitative methods for evaluation of product in whole life cycle (life cycle analysis) – energy consumption, quantity of waste and emissions. The principles of disassembling, renovation and remanufacturing of industrial products in and after exploitation (consuming) – the examples for vehicles (cars) and domestic appliances, electronics etc. The technologies, processes, equipment for recycling of different materials – steel and cast iron, aluminium, copper, and other alloys, polymers, wood, paper, glass and other material. Organisation and the processes for collecting, identification, testing, disassembling, renovation and remanufacturing of recycled products and materials. The problems, taxes, expenses and effects of recycling.

Course	**(266) BUILDING ECO MATERIALS**
Lecturer	**Ph.D. Tomislav Matusinović, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Ramachandran, V.S.: **Concrete Admixtures Handbook**, Noyes Publications, New Jersey, 1984.
2. Mehta, P.K.: **Concrete Structure, Properties and Materials**, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1986.
3. Knöfel,D., Diamant,R.M.E.: **Corrosion of Building Materials**, van Nostrand Reinhold Company, New York, 1992.
4. Illston,J.M.: **Construction Materials**, E. & FN Spon, London, 1994.
5. Diamant, R.M.E.: **The Chemistry of Building Materials**, Business book, London, 1995.

Course content

Construction materials. Concrete. Constituent materials of concrete. Cement. Hydration of cement. Hydration products. Mechanisms of hydration. Models of hydrated gel. Admixtures. Accelerators. Retarders. Plasticizers. Superplasticizers. Air entraining admixtures. Mineral admixtures. Antifreezing admixtures. Effect of admixtures on the hydration of cement. Mechanisms of hydration in presence of admixtures. Crystal structures and reactivity. The kinetics of hardening. Special properties of cement materials.

Course	**(267) QUALITY ASSURANCE FOR STRUCTURE MATERIALS**
Lecturer	**Ph.D. Dunja Mikulić, Full Professor**
Institution	Faculty of Civil Engineering, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Hicks, C.R.: **Fundamental Concepts in the Design of Experiments**, Holt, Reinhart and Winston, Inc., 1973.
2. Juran, J. M.: **Quality Control Handbook**, Mc Graw-Hill, Inc., 1988.
3. Gitlow, H., Gitlow, S., Oppenheim, A., Oppenheim, R.: **Tools and Methods for the Improvement of Quality**, Richard D. Irwin, Inc., 1989.
4. Pauše, Ž.: **Uvod u matematičku statistiku**, Školska knjiga, Zagreb, 1993.
5. Mikulić, D.: **Teorijski model osiguranja kvalitete betona**, Disertacija, Građevinski fakultet Sveučilišta u Zagrebu, Zagreb, 1993.
6. Weed, R. M.: **Quality Assurance Software for the Personal Computer, Quality Management,** FHWA-SA-96-026, New Jersey, 1996.

Course content

QC-Quality Control basic principles, quality assurance, and total quality menagment: steps, facts, processes; Information systems; Structure of laboratories and companies according to the European Standardization and International Organization of Standardization for quality - HRN (EN 45000 - ISO 17250) and (HRN ISO 9000-2000);Fundamental concepts in the design and analysis of experiments; Computer quality assurance; Application of artificial intelligence: mathematical models; expert systems; neural networks; fuzzy systems; Scientific information.

Course	**(268) CONSTRUCTION WASTE MANAGEMENT**
Lecturer	**Ph.D. Mladen Radujković, Full Professor**
	Ph.D. Anita Cerić, Assistant Professor
Institution	Faculty of Civil Engineering, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Hiersche E.U.: **Baustoff Recycling** , Stein Verlag 1995.
2. **Zbrinjavanje i prerada materijala iz ruševina u Republici Hrvatskoj**, više autora, IGH, Zagreb, 1995.

Course content

Construction process and products. Construction materials. Construction projects Life-cycle. The world's waste management practices. Construction demolition. Demolition methods and selection of recoverable materials. Technical, legal, economical and ecological aspects of construction waste recycling. Recoverable construction waste. Recycling of recoverable waste. Waste technology. Recycling construction waste materials products.

Course	**(281) FOREST ECOLOGY**
Lecturer	**Ph.D. Zvonko Seletković, Full Professor**
Institution	Faculty of Forestry, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Matić, S., Prpić, B: **Pošumljavanje**, Savez inženjera i tehničara šumarstva i drvne industrije Hrvatske, Zagreb, 1983.
2. Prpić, B., Seletković, Z.: **Ekologija šuma**, Skripta.
3. Rauš, Đ.: **Šume u Hrvatskoj–Forests of Croatia**, Šumarski fakultet Sveučilišta u Zagrebu i "Hrvatske šume" p. o. Zagreb, Zagreb, 1992.
4. Spurr, S. H., Barnes, B.V.: **Forest Ecology**, ISBN 0-471-04732-5, Third Edition.
5. Šumarska enciklopedija, JLZ I, II, III, članci iz ekologije šuma.

Course content

Definition of Forest Ecology. The Role of Forest as an Ecological Foothold in Space. Forests in Relation to Other Forms of Vegetation. Growth, Distribution and Silvicultural Significance of Some More Important Forms of Forest Ecosystems. Forest Ecosystem Management. Basic Forest Types ande Structures. Forest as a Renewable Resource. Diversity and Stability of Forest Ecosystems. Interaction between Forests and Indirect Ecological Factors (Climate, Geological Substrate, Soil, Relief and Biotic Impacts). Impacts of Direct Ecological Factors (Light, Temperature, Water, Chemical and Mechanical Factors) on Forests. Biomass of Forest Ecosystems. Developmental Dynamics of Aboveground and Belowground Parts of Forest Trees. Virgin Forest, Protected Forest Ecosystems and their Role. Impacts of Changed Chemical Climate on Trees and Forests. Forest as a Regulator of Water Relations. Multiple Forest Functions.

Course	**(282) FOREST PROTECTION**
Lecturer	**Ph.D. Milan Glavaš, Full Professor**
Institution	Faculty of Forestry, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Kovačević, Ž.: **Primjenjena entomologija**, III knjiga, Šumski štetnici, Poljoprivredni nakladni Zavod Zagreb, 1956.
2. Vajda, Z.: **Nauka o zaštiti šuma**, Školska knjiga Zagreb, 1974.
3. Vajda, Z.: **Integralna zaštita šuma**, Školska knjiga Zagreb, 1983.
4. Grupa autora,: **Osnove zaštite šuma od požara**, Centar za informacije i publicitet Zagreb, 1983.
5. Glavaš, M.: **Gljivične bolesti šumskoga drveća**, Šumarski fakultet, Zagreb, 1999.
6. Suvremeni znanstveni, stručni i popularni članci u domaćim i stručnim časopisima.

Course content

Definition and tasks of forest protection. Forest biocenosis and its structure. Harmful influences of atmospheric forces on the forest. Stand area and the role of the forest protection layer. Maintaining forest health condition in resistance to damaging influences of atmospheric forces. Forest management works which decrease damages from extreme temperatures, stormy winds and precipitation. Weeds in forests and nurseries, kinds, harmfulness, mechanical and biological killing. Damages caused by insects, mushrooms, small rodents, game and domestic cattle and protection measures (biological, biotechnical, mechanical). Forest fires. Causes, types and damages. Types of forests and combustible material. Evaluation of danger from forest fires. Work on prevention of forest fires. Legal regulations, fire-prevention roads, prevention equipment, organization of observance and informing. Improvement of burnt trees and areas affected by fire.

Course	**(283) SUSTAINABLE FOREST MANAGEMENT**
Lecturer	**Ph.D. Slavko Matić, Full Professor**
Institution	Faculty of Forestry, Zagreb
ECTS	10
Course type	Orientation
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Vajda, Z.: **Osnove šumarstva**, Sveučilište u Zagrebu, Zagreb,1962.
2. Matić, S., Prpić, B.: **Pošumljavanje**, Savez inženjera i tehničara šumarstva i drvne industrije Hrvatske, Zagreb,1983.
3. Rauš, Đ.: **Šume u Hrvatskoj–Forests of Croatia**, Šumarski fakultet Sveučilišta u Zagrebu i "Hrvatske šume" p. o. Zagreb, Zagreb, 1992.
4. Chadwick, D. O., Larson, B.C.: **Forest Stand Dynamics**, John Wiley and Sons, New York-Chichester-Brisbane-Toronto-Singapore,1996.
5. Matić, S.: **Uzgojni radovi na obnovi i njezi sastojina hrasta lužnjaka**, HAZU i "Hrvatske šume" p. o. Zagreb, 167–212, Zagreb,1996.
6. Matthews, D. J.: **Silvicultural Systems**, Oxford Science Publications, Oxford,1994.
7. Prpić, B.: **Obična jela u Hrvatskoj–Silver fir in Croatia**, Akademija šumarskih znanosti, Zagreb, 2001.

Course content

Forest Morphology and Structure. Forest Ecosystem. Origin, Development and Dynamics of Natural Forests. Forest Geography and Statistics in Croatia. Fundamentals of Dendrology of Indigenous Forest Tree and Shrub Species. Biological Diversity of Forests. Man - Forest Relationship with Elements of History of Forests and Forestry in Croatia. Sustainable Forest Management. Structure, Stability, Production and Multiple Functions of Virgin Forests and Natural Commercial Forests. Sustainable Forest Management in Croatia. Forest Regeneration. Forest Tending. Principles of Management with Even-Aged Stands. Principles of Management with Selection Stands. Principles of Management with Special Purpose Forests. Understanding the Causes and Trends in Forest Degradation. Silvicultural Practices in Coppices and Degraded Stands. Afforestation and Artificial Forests. Forest Dieback and Degradation: Causes, Effects, Biological Improvement. Stand Reconstruction and Conversion. Applying the Principles of Sustainability.

Course	**(2710) SUSTAINABLE DEVELOPMENT**
Lecturer	**Ph.D. Nenad Starc, Senior Research Fellow**
Institution	The Institute of Economics, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Glasson, J., Therivel, R., Chadwick, A: **Introduction to Environmental Impact Assessment**, University College London Press, 1994.
2. Therivel, R., Wilson, E., Thompson, S., Heany, D., Pritchard, D.: **Strategic Environmental Assessment**, Earthscan Publications, Ltd., London, 1995.
3. **Our Common Future**, Oxford University Press, 1987.

Course content

Growth and Development: disciplinary and interdisciplinary notions and definitions.
Ecosystems: production and consumption, flows of elements, ecosystem growth, climax ecosystem, darwinism. Human economy: extraction of raw materials, production, consumption and transport, economic growth vs. economic development.
Human society: homo oeconomicus, faber, duplex, colossus, individual, group and public interest. Disharmony of ecosystems and human economic and social systems: exhaustion of nonrenewable resources, contamination and pollution, health hazards, extinction of species, degradation of natural and antropogeneous environment, deterioration of natural and cultural heritage, trends, prognosis. Harmonization proposals: tehno-optimism, thesis on exterminism, "small is beautiful", 0-growth. Harmonization proposals (cont.): sustainable development, concept and its development, definition of. Ecological, technological, economic, and social sustainability, comparison of harmonization proposals, recent elaboration of the concept. Sustainability in economic theory: resource economics, environmental economics, ecological economics. Growth and development management: pros and cons, investment appraisal, cash flow analysis, benefit-cost analysis. Theoretical concept, and estimation procedures of benefit-cost analysis, usual criticism. Planning: central, national, regional, local. Planning concept "bottom up - top down." Strategic planning and operational plans. Role of the state: spatial planning, protection of natural and cultural heritage, sustainability vs. conservation, environmental impact assessment , strategic environmental assessment. Recent proposals of sustainable development management, concept of sustainable development regional units, sustainable development indicators. Croatian example of sustainable development planning: island sustainable development programs. Conclusion on "sustainability of sustainable development"

Course	**(2711) ENVIRONMENTAL LAW-CIVIL LAW ASPECT**
Lecturer	**Ph.D. Olivera Lončarić-Horvat, Full Professor** **Ph.D. Tatjana Josipović, Full Professor**
Institution	Faculty of Law, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Kloepfer,M.: **Umweltrecht**, Verlag Beck, München, 1989.
2. Krebs, C., Reiche, D., Rocholl, M.: **Die Okologische Steuerreform**, Basel, 1998.
3. Lončarić-Horvat, O., Cvitanović, L., Gliha, I., Josipović, T., Medvedović, D., Omejec, J., Serčić, M.: **Osnove prava okoliša**, Organizator, Zagreb, 1998.
4. Jobs, A.T.: **Steuern auf Energie als Element einer Okologischen Steuerreform**, Baden-Baden, 1999.
5. Wolf,J.: Umweltrecht, Verlag, Beck, München, 2002.
6. Seršić, M.: međunarodno-pravna zaštita morskog okoliša, Zagreb, 2003.

Course content

Legal sources. Constitutional provisions. Law on environmental protection. Other special laws. Provision on obligation law and real propertly law. Civil law protection as an instrument of prevention. Principle of the prevention of environmental protection. Actio negatoria. Protection of possession. “Ecological” action. Civil law responsibility for the environmental damages. Environmental damage. Conditions of responsibility. Other obligations.

Course	**(2712) ENVIRONMENT AND HEALTH**
Lecturer	**Ph.D. Fedor Valić, Professor Emeritus**
Institution	Faculty of Medicine, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. **Environmental and Occupational Medicine**, Ed.: Rom, W.N., Toronto, London: Little, Brown and Co., 1992.
2. **Encyclopedia of Occupational Health and Safety**, Ed.: Stellman, J.M., International Labour Organization, Geneva, 1998.
3. Valić, F. i sur.: **Zdravstvena ekologija**, Medicinska naklada, Zagreb, 2000., u tisku.

Course content

Principles of quantitative assessment of environmental factors influencing health. Time-weighted exposures. Direct and indirect assessment of daily intake in the organism. Environmental, personal and biological monitoring. Assessment of environmental factors and their effects. Thermal environment, changes of atmospheric pressure, nonionizing and ionizing radiation. Measurement and analysis of noise, auditive and extraauditive effects. Effects of vibration. Determination and assessment of effects of chemical pollutants: metals with systemic toxic effects; irritant and asphyxant gases, narcotics; inorganic and organic aerosols. Problems of airborne fibres. Materials influencing reproduction and/or foetal development. Mutagens, carcinogens and teratogens. Models of quantitative relation between exposure/dose and magnitude/frequency of health effects. Exposure limits as a function of acceptable effect on the human organism. Mono- and multimedia exposures. Specificity of exposure limits for specific segments of population (gravidae, children, healthy adults, elderly, chronic patients). Extrapolation of experimental and epidemiological data, toxicity and predicted daily intake to acceptable intake and exposure limits. Low-dose extrapolation, linear and nonlinear extrapolations. Attribution of partial proportional acceptable intake from every environmental medium in multimedia exposures. Global environmental health problems: reduction of ozone layer, global warming, transborder air pollution.

Course	**(2713) SOCIAL ECOLOGY**
Lecturer	**Ph.D. Ivan Cifrić, Full Professor**
Institution	Faculty of Philosophy, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Beck, U.: **Risikogesellschaft**, Suhrkamp, Frankfurt, 1986.
2. Armstrong, S.J.: **Environmental Ethics**., Ed.: Botzler,R., McGraw-Hill, Inc., New York, 1993.
3. Cifrić, I.: **Socijalna ekologija (Social Ecology),** Globus, Zagreb, 1994.
4. Sachs, W. /ed/.: **Global Ecology**, Zed Books, London & New Jersey, 1995.
5. Rifkin, J.: **Biotehnološko stoljeće (The Biotech Century)**, Jesenski & Turk, Zagreb, 1998.
6. Weizsacker, U.E. von: **Das Jahrhundert der Umwelt**, Campus, Frankfurt/New York, 1999.

Course content

Culture and environment. Man, nature and technology. Globalisation, environment and sustainable development. Visions of the future. Environmental awareness and social values. Modern society and environmental ethos (world ethos, environmental ethics). Evaluation of the landscape. Social and environmental metabolism.

Course	**(2714) ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT**
Lecturer	**Ph.D. Natalija Koprivanac, Full Professor** **Ph.D. Roko Andričević, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb Civil and Architectural Engineering Faculty, Split
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Sutter: **Ecological Risk Assessment**, Lewis Publishers, 1993.
2. Berthouex and Brown: **Statistics for Environmental Engineering**, Lewis Publishers, 1994.
3. Louvar and Lovuar: **Health and Environmental Risk Analysis**, Prentice Hall, 1998.
4. Crosby: **Environmental Toxicology and Chemistry**, 1998.

Course content

Risk Assessment Methodology, which includes industrial on-site Collection, hazard identification Selection of Critical Scenarios. Risk assessment probability of unwanted event. The basic concept of Hazard and Operability study (HAZOP) includes a full description of the chemical or similar process and to question every part of to discover what deviations from the intention of the design can occur and what their consequences may be. The knowledge of design and implement risk reduction and management plans for Environmental Health and Safety related activities. Computer models which have been developed to show dispersion patterns of pollutants in air, water and soil will be presented in order to prevent and quantifying these effects. “Fault tree” construction and analysis with wide signification for Risk Assessment Management and Reduction.

Course	**(2715) SYSTEMS OF ENVIRONMENTAL MANAGEMENT**
Lecturer	**Ph.D. Natalija Koprivanac, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. McCreary, J.H.: **ISO 14000: A Framework for Co-ordinating Existing Environmental Management Responsibilities**, Dewars & Doyle, UK, 1995.
2. Gregori.S.: **Introduction to ISO 14001 Standard**, De Montfort University, London, 1996.
3. Sheldon,C.: **ISO 14000 and Beyond, Environmental management Systems in the real World**, Greenleaf Publishing, UK, 1997.
4. Moeller, D.W.: **Environmental Health**, Press Harvard University , London, UK, 1997.
5. Lund,H.F.: **Industrial Pollution Control Handbook**, McGraw-Hill, Inc., New York, 1997.

Course content

Orientation for the sustainable development and concept. Basic principles of Environmental management systems (EMS). Compliance to law, regulation and directives. Important management tools undertaken for different business organization. Implementation of international standards such as: EMS ISO 14001; Quality Management Systems, ISO 9000; Eco – Management and Audit Scheme (EMAS); Occupational Health and Safety Management Systems – OHSAS –18001. Compliance with legislation. Definition and history of ISO as a body which has typically produced technical standards for industry at other organization. Decision-Making ISO. ISO 14001 structure and methodology and comparison with other standards. Identification of links of broad technical correspondence between ISO 9001 and ISO 14001. Life Cycle Assessment – 14040. Background and implementation EMAS. Bridging ISO 14001 and EMAS. EVABAT (economically viable application of best available technology) concept and continual and improvement. OHSAS 18001 principles and methodology. Cleaner production methodology and Eco-efficiency. The role of ecoengineers in systems of environmental management.

Course	**(2716) QUALITY CONTROL OF ENVIRONMENT**
Lecturer	**Ph.D. Marija Kaštelan-Macan, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Eckschlager,K., Danzer,K.: **Information Theory in Analytical Chemistry**, JohnWiley &Sons, New York 1994.
2. Fifield, F.W., Haines, P.J.: **Environmental Analytical Chemistry**, Blackie Academic and Professional, London, 1995.
3. Garfield, F.M.: **Quality Assurance Principles**, AOAC, New York, 1995.

Course content

Environmental science and chemical analysis. Multidiciplinary approach to chemical analysis. Analytical system: appropriate model, impeccable plan, adequate sample, convenient methodology, suitable calibration, chemometric evaluation and interpretation of data. Quality assurance of analytical system. Validation of sample, method and data.
Collection and treatment of environmental samples. Separation techniques and instrumental methods in environmental chemical analysis.
Specific applications. Importance and methods of speciation analysis. Environmental trace analysis. Industrial contaminations and methods of soil, sediment, water, and athmosphere analysis.
Information on quality of environment and suggestions for its improvement.

Course	**(2717) CHEMISTRY AND TECHNOLOGY OF ZEOLITES**
Lecturer	**Ph.D. Štefica Cerjan-Stefanović, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Treacy, M.M.J., Higgins, J.B.: Collection of Simulated XRD Powder Patterns for Zeolites, Elsevier, 2001.
2. Baerlocher, Ch., Meir, W.M., Olson, D.H.: Atlas of Zeolite Franework Types, Elsevier, 2001.

Course content

Brief historical background. Form Cronstedta to zeolite A. Definition of zeolite. Chemical and structural properties of zeolite. Primary, secondary and tertiary units in structure of zeolite and their bonding (Lowenstein rule.). Hydrate competitive cations, isomorphic substitution of silica and aluminum. Chemical and structural characteristics of commercial most interesting tips of zeolite (A, X, Y, mordenit, ZSM-5, silikalit-1). Exploitation of synthetic zeolite (chemical and structural properties). Basic principles of hydrothermal synthesis of zeolite. Preparation of ammonium gel. Manipulation with gel prior christalization. Hydrothermal transformation of gel in zeolite (christalization). Products of christalization and their properties. Analysis of christalization process and models of christalization. Solid state christalization. Solution maintained christalization, empirical models of christalization, engineering models of christalization, fundamental models of chrislalization. Critical processes of christalization of zeolite. Influence of physical and chemical factors on gel preparation and its chemical and structural properties Mechanism and kinetic of dissolution of gel by using alkali solutions. Mechanism and kinetic of nucleation and christale growth of zeolite. Influence of chemical and structural properties of gel on dissolution, nucleation and christale growth of zeolite. Synthesis of high – silicate types of zeolite. Influence of zeolite types and cations on desorption of "zeolite water". Influence of zeolite type, cations, and transformation parameters (temperature, time) on product of transformation. Conservation of particles properties during transformation. Monitoring of "amorfic christals". Unusual behavior of products of thermal transformation during treatment in hot alkali solutions. Prospective. New trends in synthesis, posytsintetic preparation and use of zeolites.

Course	**(2718) DATABASES**
Lecturer	**Ph.D. Damir Kalpić, Full Professor**
Institution	Faculty of Electrical Engineering and Computing, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Varga,M. : **Baze podataka**.
2. Tkalec,S.: **Relacijski model podataka**.
3. Date,C.J. : **An Introduction to Database Systems**.

Course content

Data modelling. Entities, attributes, domains. Functional dependencies. Simple and composite keys. Primary key, secondary key, foreign key. Incomplete information and NULL values. Selection, projection, joins. Normalisation to the first, second and the third normal form. Entity-relationship data modelling. Transformation of the E-R model into the relational model. Database protection: integrity, parallel access control, security, recovery. User interface. Distributed systems. Spatial data. Data warehousing principles.

Course	**(2719) ION EXCHANGERS IN ENVIRONMENTAL ANALYSIS**
Lecturer	**Ph.D. Štefica Cerjan-Stefanović, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Pinta, M.: **Modern Methods for Trace Elements Analisys**, Ann Arbor Science Publishers, Collingwood, 1978.
2. Grasshoff, K., Etrhardt, M., Kremling, K.: **Methods of Seawater Analisys,** Second, Revised and Extended Edition, Verlag Chemie GmbH, Weinheim, 1983.
3. Werner, S.: **Aquatic Surface Chemistry, Chemical Process at the Particle - WaterInterface**, John Wiley & Sons, Inc., New York,1987.

Course content

Structure of natural and structure and synthesis of synthetic ion exchangers. Static and dynamic balance of ion exchange. Determination of ions, selective sorption and selective elution. Isothermal ion exchange process. Ion exchange reaction kinetic. Width of chromatographic peak. Mechanism of separation. Stationary phases in column. Mass transfer related calculations. Ion exchange chromatography. Characteristics of chromatogram: retention time, column capacity, selectivity for ions. Different kinds of ion exchange resins. Standardisation. Concuctometric and UV / VIS detection. Monitoring of nitrogen cycles by ion chromatography. Alkali and earth alkali metals in waters. Toxic metals in ground and water. Organic acids in waters. New stationary phases.

Course	**(2720) ION EXCHANGERS PROCESSES IN INDUSTRY**
Lecturer	**Ph.D. Štefica Cerjan-Stefanović, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Small,H.: **Ion Chromatographic Analysis of Environmental Pollution**, Ann Arbor, Michigen, 1978.
2. Benefield,L.D., Judkins,J.F., Weared,B.L.: **Process Chemistry for Water and Wastewater Treatment**, Prentice Hall, Inc., New Jersey, 1982.
3. Williams,P.A., Hudson,M.J.: **Recent Developments in Ion Exchange**, Elsevier Applied Science, London, 1987.
4. Techobanoglous,Q., Burton,L.F.; **Wastewater Engineering**, Mezcalf and Eddy, New York, 1991.

Course content

Balance of ion exchange process. Donnan theory. Kinetic of ion exchange. Ion exchange in column. Types of column. Dependence of separation on column stationary phases. Influence of eluens composition on ion exchange column behaviour. Selection and preparation of ion exchangers. Simple ion exchange in water treatment. Preparation of ultra pure water. Wastewater treatment and recycling of water in metallurgy. Monitoring and control of ion exchange process. Combine filters and multy layer filters. Regeneration. Theory of ion exchange in inorganic materials, synthesis and application. Development of new sorbents for ammonium and nitrate removal. Macroporosious ion exchangers. Selectivity of active zeolites.

Course	**(2721) METAL CORROSION AND PROTECTION – CAUSE OF ENVIRONMENTAL PROBLEMS**
Lecturer	**Ph.D. Ema Stupnišek-Lisac, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. NACE Group Committee: **Corrosion Control in Petroleum Production,** National Association of Corrosion Engineers, Houston, Texas, 1979.
2. Naughton, K.J.: **Controling Corrosion in Proces Equipment**, McGraw-Hill Book Comp., New York, 1980.
3. Kalman,E.: **Routes to the Developments of Low Toxicity Corrosion Inhibitors in Corrosion Inhibitors.** Ed.: The Institute of Materials, London, 1994.
4. Voigt,C., et al.: **Vorlesungen ber Korrosion and Korrosionsschutz von Werkstoffen**, TAW-Verlag, Wuppertal 1996.
5. Kuznetsov, Y.I.: **Organic Inhibitors of Corrosion of Metals**, Plenum Press, New York, 1996.

Course content

Metal corrosion: causes, mechanism, kinetics and types of corrosion processes. Environmental effects of corrosion: Distresses caused by metal corrosion and environmental effects. Influence of corrosion products on natural environment (water, soil). Method for the protection of metal against corrosion with a particular emphasis on protection techniques which negatively affect environmental systems: metal protection by treatment of corrosion medium, environmental suitability of metal corrosion inhibitors (problem of toxic inhibitors), vapor phase inhibitors (VPI) (harmful effects on human health). Electrochemical methods: cathodic protection (problem of soluble anodes). Protective plating: metal platings (highly toxic baths for electroplating), organic coatings (toxic additions to protective coatings: heavy metal pigments). Environmental problems of corrosion and metal protection in water supply, power plants, oil industry, processing industry (waste water problem) etc. Analyzing possibilities of replacing toxic corrosion protection substances with new more favorable methods and means of protection.

Course	**(2722) CORROSION AND PROTECTION OF CIVIL ENGINEERING STRUCTURES**
Lecturer	**Ph.D. Dubravka Bjegović, Associate Professor**
Institution	Faculty of Civil Engineering, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Gräfen, H., Rahmel, A.: **Korrosion Verstehen – Korrosionsschäden Vermeiden**, Verlag Irene Kuron, Bnon, 1994.
2. Doran, D.K.: **Construction Materials Reference Book**, Butterworth-Heinemann Ltd, Oxford, 1995.
3. Cammerer, W.F.: **Wärme und Kälteschutz im Bauwesen und un der Industrie**, Springer, Berlin, 1995.
4. Nürnberger, U.: **Korrosion und Korrosionschutz im Bauwesen**, Bauferlag Gmbh, Wiesbaden und Berlin, 1995.
5. Roberge R.P.: **Handbook of Corrosion Engineering**, Mc Graw-Hill, New York, 2000.

Course content

Civil engineering structures can be divided in groups according to their function, construction system and materials from which they are built. During service life of the structures environmental influences are starting deterioration processes in the structural materials, which can lead to serious damages, even threatening structural stability. Deterioration process can lead to the ecological problem, depending of the structure's application and damage level.
For the appropriate engineering evaluation of damaged structures, a great knowledge is necessary, from different fields such as: division of the civil engineering structures, outer influences on the structure: temperature, fire, moisture, chemical and electrochemical influences, processes developing in the materials caused by the outside parameters, correlation between the structural system and materials' performances, mechanism of the transition processes, mechanism of the corrosion process, numerical modeling of the structure fire resistance, transition processes, corrosion process, deterioration processes, expert systems for deterioration modeling, defects influence on material's and structure's properties, systems for protection from environmental influences. Through seminars students will solve different examples from daily practice, by means of experimental data and by usage of available computer programs.

Course	**(2723) DISASSEMBLY**
Lecturer	**Ph.D. Božo Vranješ, Full Professor**
	Ph.D. Zoran Kunica, Assistant Professor
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Chow, W.M.: **Assembly Line Design: Methodology and Applications**, Marcel Dekker, 1990.
2. **Intelligent Assembly Systems**, World Scientific Publishing Company Inc., 1995.
3. **Die Montage in flexiblen Produktionsbetrieb,** Ed.:Warnecke, H.J., Springer Verlag, Berlin, 1996.
4. Riley, F.J.: **Assembly Automation**, Industrial Press, 1996.
5. Nof, S.Y., Wilhelm, W.E., Warnecke,H.J.: **Industrial Assembly**, Chapman & Hall, London, 1997.

Course content

Industrial production and care of environment protection: basic terms and historical development. Deconstruction of an industrial plant. Disassembly of a product. Product analysis: structure, design features, tolerances. Design for assembly and disassembly. Complete and incomplete changeability. Chains of dimensions and tolerances. Techniques of disassembly, handling and inspection. Special techniques. Manual disassembly: process plans, organisational schemes. Disassembly automation: processes and equipment. Examples of disassembly systems. Legislature. Economical feasibility.

Course	**(2724) AEROSOLS**
Lecturer	**Ph.D. Krešimir Šega, Senior Scientist**
Institution	Institute for Medical Research and Occupational Health, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Fuchs,N.A.: **The Mechanics of Aerosols**. Pergamon Press Oxford, London, Edinburgh, New York, Paris, Frankfurt, 1964.
2. Hidy,G.M., Brock,J.R.: **The Dynamics of Aerocolloidal Systems**, Pergamon Press, Oxford, New York, Toronto, Sydney, Braunschweig,1970.
3. Yoshida,T., Kousaka,Y., Okuyama,K.: **Aerosol Science for Engineers**. Power Co. Ltd. Tokyo, Japan, 1979.
4. Zakon o zaštiti zraka, NN 48/1995.
5. Uredba o preporučenim i graničnim vrijednostima kakvoće zraka, NN 101/1996.
6. Uredba o graničnim vrijednostima emisije onečišćujućih tvari u zrak iz stacioniranih izvora, NN 140/1997.

Course content

General characteristics. Aerosol mechanics. Air pollution by aerosols. Aerosol sampling and analysis. Presentation of the monitoring results and their evaluation with the respect to the air quality guideline values.

Course	**(2725) BIOTRANSFORMATION PROCESSES AND ENVIRONMENTAL POLLUTION**
Lecturer	**Ph.D. Dubravka Hršak**
Institution	Ruđer Bošković Institute, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. **Microbial Transformation and Degradation of Toxic Organic Chemicals**, Eds.: Young, L. Y., Cerniglia, C. E., John Wiley and Sons Inc. New York, 1995.
2. **Biodegradation and Bioremediation**, 2nd ed., Ed.: Alexander, M., Academic Press, Inc. 1999.
3. **Wastewater Microbiology**, 2nd , Ed.:Bitton, G., John Wiley and Sons Inc. New York, 1999.
4. **Environmental Microbiology**, Eds.: Varman, A.H., Evans, M.G., Manson Publishing Ltd, London, 2000.

Course content

Role of microorganisms in cycling of elements in the biosphere. Evolution and the nature of microbial communities. Interactions within microbial communities. Importance of microbial communities in the transformation of complex organic compounds (xenobiotics). Persistent organic compounds. Mutagenic, teratogenic and carcinogenic effects of chemicals. Microbial processes in the transformation of xenobiotic pollutants (aerobic and anaerobic processes, co-metabolism). Microbial degradation of some pollutants (oil, pesticides and herbicides). Biodegradation of halogenated aliphatic and aromatic hydrocarbons. Bioengineering approch to *in situ* remediation of contaminated soils and groundwater. Trends in biological treatment of municipal and industrial wastewaters.

Course	**(2726) ENVIRONMENTAL PROTECTION IN MINERAL RESOURCES EXPLOITATION**
Lecturer	**Ph.D. Boris Muvrin, Associate Professor**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Calvert, S., Englund, H.M.: **Handbook of Air Polution Technology,** (Book 1&2) J.Wiley & Sons, N.York, 1987.
2. Prohić, E.: **Geokemija**, Targa, Zagreb, 1988.
3. Nordstrom, D.K., Munoz, J.L.: **Geochemical Thermodynamics,** The Benjamin/ Cummings Pub. Co., Inc., Menlo Park, California- Reading, Massachusetts Don Mils, Ontario- Wokingham, U.K.
4. **Europe's Environment, The Dobris Assessment EEA**, Eds.: Stanners,D., Bordeau,P. Copenhagen,1995.
5. Martinović, J.:**Tloznanstvo u zaštiti okoliša**, Državna uprava za zaštitu okoliša, Zagreb,1997.

Course content

Source and type of pollutants and their impacts on the environment. Oil industry technological processes waste, methods of cleansing and storing. Uncontrolled oil and ground water leakage- (eruption), safety measures. Gas purification methods in production processes, transport systems. H_2S, SO_2, CO_2, NO_x and Hg impacts on the environment produced from oil industry technological processes, safety measures and treatment methods in accidental situations. Waste waters from technological processes. Environmental impact of exploiting geothermal water, safety measures. Oil exploring and production offshore activities and their impact on the environment- safety measures. Soil pollution and treatment methods.

Course	**(2727) ENERGY AND ENVIRONMENT**
Lecturer	**Ph.D. Rajka Budin, Full Professor**
Institution	Faculty of Chemical Engineering and Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Papin, A.A.: **Ekologičeskie problemi energetiki**, Nauka, Novosibirsk, 1989.
2. Požar,H.: **Osnove energetike** 1, 2, 3, Školska knjiga, Zagreb, 1992.
3. Förstner,U.: **Umweltschutz Technik**, Springer Verlag, Heidelberg, 1993.
4. Ochta,T.:**Energy Technology**, Pergamon, Oxford, 1994.
5. Eastop, T.D., Croft, D.R.: **Energy Efficiency, Longman**, Essex, 1995.
6. **Industrial Energy Conservation**,Compiled by C.M.Gottschalk, J.Willey&Sons,West Sussex,1996.
7. **Energy Technologies for the 21st Century**, OECD/IEA, Paris, 1997.
8. Kreith, F., West, R.: **Energy Efficiency**, CRC Press, New York, 1997.
9. **Environmental Engineering and Renewable Energy,** Eds.: Gavasci, R., Zandarya, S., Pergamon Press, 1998.
10. J.de Beer,**Potential for Industrial Energy-Efficiency Improvement in the Long Term**, Kluver Acadenic Publishers,Dordrecht,2000.
11. D.Feretić at al, Elektrane i okoliš,Element Zagreb,2000.
12. B.Udovičić, **Energetika i okoliš u globalizaciji**, Kika-graf, Zagreb,2002.

Course content

Energy in industry:application in energy-intensive process industries (chemical, paper, textile,wood, metallurgical etc.).Kinds of resources and energy utilization operations. Impact of energy production and consumption on environment.Energy systems evaluation and comparison.Consumers kinds and particularities.Energy system triple principle:production, energy economy and environmental protection. Primary resources: nonrenewable and renewable, water as energy product, availability,economy environmental impact. Energy sources selection in regard to users demands. Conversion: thermodynamically, economy and environmental basis, energy and ecology optimization. Energy supply in industrial processes, quality and quantity, projected and operating conditions, comparison of energy,economy and ecology characteristics. Process optimization:energy consumption and losses determination, waste heats, quality, quantity and temperature level, chemical and thermal environmental impact. Existing technologies,introduction and implementation of new heat recovery technologies. Resources conservation and substitution: secondary and renewable sources, availability, substitution criteria, equipments,technical utilization, energy economy.Analisys of integrated systems: energy intensive processes and unit operations, energy supply, recovery grid, results comparison.

Course	**(2728) ELECTROMAGNETIC FIELDS IN THE ENVIRONMENT**
Lecturer	**Ph.D. Borivoj Modlic, Full Profesor**
Institution	Faculty of Electrical Engineering and Computing, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. **Environmental Health Criteria 69, Magnetic Fields,** World Health Organization, Geneva, 1984.
2. **Environmental Health Criteria 35, Extremely Low Frequency (ELF) Fields,** World Health Organization, Geneva, 1984 (1992)
3. **RF Radiation Safetly Handbook**, Butterworth-Heinemann, 1993.
4. **Environmental Health Criteria 137**, Elektromagnetic Fields (300 Hz to 300 GHz), World Health Organization, Geneva, 1993.
5. Haznadar, Z., Štih, Ž.: **Elektromagnetizam I i II**, Školska knjiga, Zagreb, 1997.

Course content

Basic parameters of electromagnetic fields (frequency, power density, polarization, modulation). Types and characteristics of electromagnetic field sources (communications, industry, science, medicine). Types and characteristics of environmental fields (work environment, home environment, free space). Electromagnetic spectrum (planning, regulation, control). Electromagnetic compatibility (electromagnetic field effect on electrical and non-electrical systems). Electromagnetic field interaction with biological materials (thermal effects, non-thermal effects, ELF and RF fields effects). Human exposure to electromagnetic fields (field amplitude, distance from field source, secondary sources, short-term and long-term exposure). Standards and regulations for human protection from electromagnetic fields (nonionizing radiation) and their application (measurement methods, calculation methods, dosimetry). Protection measures. Review of ongoing research worldwide, in Europe and in Croatia.

Course	**(2729) RADIOACTIVITY IN THE ENVIRONMENT**
Lecturer	**Ph.D. Vladivoj Valković, Full Professor**
Institution	Ruđer Bošković Institute, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Valković,V.: **Determination of Radionuclides in Environmental Samples**, in Environmental Analysis, Ed.: Barcelo, D., Elsevier, Amsterdam, 1993.
2. Valković,V.: **Radioactivity in the Environment**, Elsevier Science, B.V., Amsterdam, 1999.

Course content

Radioactive nuclides in nature. Technologically modified exposure to natural radiation. Man-made radioactivity. Measurements of radioactivity. radiation safety. The nuclear fuel cycle. Monitoring of the accidentally released radionuclides in the environment. The bomb. Bomb test sites. International safeguards. Environmental monitoring for safeguards. Comprenhensive test ban treaty.

Course	**(2730) NOISE AND VIBRATION**
Lecturer	**Ph.D. Bojan Ivančević, Full Professor**
Institution	Faculty of Electrical Engineering and Computing, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Jelaković: **Zvuk, sluh, arhitektonska akustika**, Školska knjiga, Zagreb, 1970.
2. Hussal, J.R., Zaveri, K.: **Acoustics Noise Measurements**, Brükl & Kjaer, 1979.

Course content

Physical principles of acoustica. Sound, vibration. The nature of the sound wave, the speed of sound wave propagation. Sound pressure level, vibration speed and the shift of the particle, sound intensity, sound energy density, sound power. Decibel. Apsorption and reflection of sound, difraction and refraction of the sound wave. Transmission of sound through the stiff material. The ear and the hearing mechanism. Minimum audible field. Methods of loudness determination. Room acoustics. Reverberation, echo. Absorption materials and absorption constructions. Porous, membranous and resonant absorbers. Noise. Noise source in the environment. Hazardous exposure. Measurement and analysis of noise. The noise transfer through the differente partition-wall. Computing of the sound insulation. Protection against noise. Standards and recommendations. Vibrations. Measurement and analysis of vibrations. Protection against vibration. Mechanical model of the human body. Hazardous exposure of man.

Course	**(2731) PROTECTION OF THE ADRIATIC SEA FROM THE POLLUTION**
Lecturer	**Ph.D. Ante Barić, Associate Professor**
Institution	Institute of Oceanography and Fisheries, Split
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Laws,E.A.: **Aquatic Pollution**, J. Wiley & Sons, Inc., 1993.
2. Manjahan,S.E.: **Environmental Chemistry**, CRS Press, 1994.
3. Clark, R.B.: **Marine Pollution.**Clarendon Press, Oxford, 1997.

Course content

Introduction. Chemical composition of the sea water. Basic physical, chemical and biological processes in the marine environment. Physical, chemical and biological characteristics of the Adriatic. Pollution of the marine environment, main sources and substances. Persistence, toxicity, bioacumulation and biotransformation of waste material in the marine environment. Urban wastewaters and their treatment, industrial wastewaters and their treatment, pesticide and chlorinated hydrocarbons, heavy metals, crude oil and derivatives, radioactive substances, solid waste. International and national activities in order to protect the marine environment from various sources of pollution:conventions, protocols, Strategic Action Programmes. Integrated coastal zones management.

Course	**(2732) WASTE DISPOSAL**
Lecturer	**Ph.D. Božena Tušar, Assistant Professor**
Institution	Geotechnical Faculty, Varazdin
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Tušar B: **Kućna kanalizacija**, Sveučilište u Zagrebu, Građevinski fakultet, mtg - topgraf, Velika Gorica, Zagreb, 2001.
2. Milanović Z: **Deponij trajno odlaganje otpada**, ZGO, Zagreb, 1992,
3. Zbornici Međunarodnih simpozija gospodarenje otpadom, Zagreb, `92, `94, `96, `98, 2000 i 2002.

Course content

Definition of waste. Quantity, composition, origin of waste. Sanitary engineering and problems related to waste. Waste collecting and transport. Reduction of volume. Separation of harmful and hazardous substances. Dewatering. Using of waste as secondary rau material. Utilization of energy potential. Strateg, goals of waste monnagement policy: separation, evakuation and safe disposal. Selection of locations for fnal disposal of waste, economie, environmental health and social criteria. Planing, construction and maintenance of sanitary landfils.

Course	**(2733) WATER SUPPLY AND SEWERAGE**
Lecturer	**Ph.D. Davor Malus, Associate Professor**
Institution	Faculty of Civil Engineering, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Metcalf & Eddy: **Wastewater Engineering, Collection and Pumping of Wastewater**, McGraw -Hill Inc., New York, 1981.
2. Terence,J., McGhee: **Water Supply and Sewerage**, McGraw -Hill, New York, 1991.
3. Tedeschi,S.: **Vodoopskrba i odvodnja**, Skripta u pripremi.

Course content

Water resources for water supplying: quantities, quality, and accessibility. Water demand for communal purposes and industry. Price of water. Local and regional water supply planning. Water supply systems. Water supply facilities. Technical and economical analyses of water supply systems. Water resources protection.
Quantity and quality of wastewaters. Runoff. Wastewater system selection: collection, treatment and disposal. Sewerage appurtenances. Economical and ecological aspects of sewerage. Waste water impact on human health and environment.

Course	**(2734) TECHNOLOGY ASSESSMENT**
Lecturer	**Ph.D. Igor Čatić, Full Professor**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Turner,F.:**Beyond the Disciplines, Design for a New Academy**, Pregled USIC, Beograd, 1987.
2. Čatić,I.: **Vrednovanje tehnike pri razvoju proizvoda**, Polimeri, **11**(9-12),229-234, 1990.
3. Spengler, O.: **Čovjek i tehnika**, Laus, Split, 1991.
4. VDI**-Bewertung der Technik**, VDI-Verlag Duesseldorf, 1991.
5. VDI **3780 Hauptgruppe der Ingenieur in Beruf und Gesellschaft**: Technikbewertung-Begriffe und Grundlagen, VDI, Duesseldorf, 1991.
6. VDI:Report 15: **Technikbewertung – Begriffe und Grundlagen**, Erläuterungen und Hinweise zur Richlinie 3 780, VDI, Duesseldorf, 1991.
7. VDI: **Ethische Grundsätze des Ingenieurberufs**, VDI, Düsseldorf, 2002.
8. Maduro,R.A., Schauerhammer,R.: **Ozonloch, das missbrauchte Naturwunder**, Dr. Boettinger Verlags, GmBH, Wiesbaden, 1992.
9. **The World Book Encyclopedia**, **19**, World Book, Inc., Chicago, London, Sidney, Toronto, 1994.
10. Čatić,I.: **Vođenje tehnike**, Vjesnik, od 28.10.1999. do 12.11.1999.

Course content

Introduction. Fractal past and future of the general Technology. The technology of non-living foundation and the oldest component of culture. Stimuli to considering technology as part of culture. Technics and technology components of Culturology peak science in Turner's supplemented educational pyramid of knowledge. Connectivity of layers in the Turner's pyramid. Interweaving of biotechnology and technology of the non-living basis of human technics of tomorrow. Culturological approach to technology management. Values in technical activities. Technical criteria of evaluating, functionality. Economic criteria, economic management, social criteria of evaluating technology, sociological management: safety, health, quality of the environment, personality development, and quality of the Society. Ethics. Relationships among values in technical activities.

Course	**(2735) FOREST VEGETATION OF CROATIA**
Lecturer	**Ph.D. Joso Vukelić, Full Professor**
Institution	Faculty of Forestry, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Horvat, I. i sur.: **Priručnik za tipološko istraživanje i kartiranje vegetacije**, Ministarstvo šumarstva FNRJ, 1950.
2. Rauš, Đ. i sur.: **Biljni svijet hrvatskih šuma. Šume u Hrvatskoj**, Šumarski fakultet Sveučilišta u Zagrebu i J.P. Hrvatske šume, 1992.
3. Dierschke, H.: **Pflanzensoziologie**, Ulmer, Stuttgart, 1994.
4. Glavač, V.: **Vegetationsökologie - Grundfragen, Aufgaben, Methoden**, Gustav Fischer, Jena, Stuttgart, 1996.
5. Vukelić, J.,Rauš, Đ.: **Šumarska fitocenologija i šumske zajednice u Hrvatskoj**, Šumarski fakultet Sveučilišta u Zagrebu, 1998.

Course content

Definition and task of phytocoenology. The development of science on vegetation in Europe and in Croatia. The forest as a phytocoenosis or a biocoenosis. The concept of biogeocoenosis or ecosystem. Synmorphology. Method of work. Analytical processing and synthetic analysis. Synecology, or the interaction of forest communities and climate, soil, relief and biotic factors. Syndynamics. Progressive and regressive succession. Developmental phases and stages. Degraded stages. Synchronology and Synchorology. Distribution ranges of forest communities in Croatia. Spatial arrangement and zonation of plant communities. Forest vegetation mapping. Systematics. Phytogeographic classification of forest vegetation. The description of forest communities of lowland, hilly, montane and alpine areas. Mediterranean and sub-Mediterranean forest communities.

Course	**(2736) PHYSICAL PLANNING**
Lecturer	**Ph.D. Oleg Grgurević, Full Professor**
Institution	Faculty of Architecture, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Vresk, M.: **Osnove urbane geografije**, Školska knjiga, Zagreb, 1977.
2. Marinović-Uzelac, A.: **Naselja, gradovi, prostori**, Tehnička knjiga, Zagreb,1986.
3. Marinović-Uzelac, A.: **Prostorno planiranje**, Zagreb, 2001.

Course content

Definition of physical planning. Methods and technology of physical plan production. Man and the environment. Primary and secondary urbanization. Geographical conditions of town locations and development. Locations conditioned by traffic communication and geography. Urban functions of a town. Urban agglomeration, conurbation and a megalopolis. Basic elements involved in generating contemporary space structure. Rural area. Environmental protection. Landscape design and space identity. Examples of physical plans.

Course	**(2737) ECOLOGICAL BUILDING CONSTRUCTION**
Lecturer	**Ph.D. Jasenka Bertol-Vrček, Associate Professor**
Institution	Faculty of Architecture, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Lutz, & al.: **Lehrbuch der Bauphysik**. B.G. Teubner, Stuttgart, 1997.
2. Šimetin, V.: **Građevinska fizika**. Fakultet građevinskih znanosti, Zagreb, 1983.
3. Egan, M.D.: **Arhictectural Acoustics**. McGraw-Hill Book Co., 1988.

Course content

Building energy saving: National energy programs; types of buildings relative to energy consumption. Building physics: Basic terms of thermal protection; climate; design recommendations (building position within the environment, building interrelation and orientation, building materials, heating and cooling systems, solar energy application). Basic conception of the noise protection; noise protection inside the building; noise protection from outside sources; traffic noise (noise level in relation to road type and distance from buildings, settlement planning and constructions for noise protection).

Course	**(2738) METALLURGICAL SCRAP MANAGEMENT**
Lecturer	**Ph.D. Alenka Rastovčan-Mioč, Assistant Professor**
Institution	Faculty of Metallurgy, Sisak
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Mahant, P., et al.: **Resource Conservation and Environmental Technologies in Metallurgical Industries**, Metallurgical Society, Montreal, 1994.
2. Petruk, W.: **Waste Characterization and Treatment,** Society for Mining Metallurgy & Exploration, Monteral, 1998.
3. UN, **Iron and steel scrap: its significance and influence on further development in the iron and steel industries**, Economic Commission for Europe, Geneva, 1999.

Course content

Metallurgical scrap:type, generation, volume reduction, recycling, disposing, legal regulations – in general. Steel scrap: properties of steel scrap as raw material for steel production. Slag: properties, environmental impact, application. Electric arc furnace dust: properties, environmental impact, new recycling methods. Foundry sand: properties, recycling, disposing of non-recycled volumes and their impact on the environment. Writing a seminar paper.

Course	**(2739) RECYCLING OF METALLIC MATERIALS**
Lecturer	**Ph.D. Mirko Gojić, Assistant Professor**
Institution	Faculty of Metallurgy, Sisak
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. Fruehan, R.J.: **The Making, Shaping and Treating of Steel**, AISE Pittsburgh, PA, USA, 1998.
2. Filetin,T.: **Izbor materijala pri razvoju proizvoda**, FSB, Zagreb, 2000.

Course content

Techniques of recycling of metallic materials. Measures for the improvement of level of the recycling of metallic materials. Systems for the collection, discerning and preparing of metallic materials before recycling. Economic, energetic and ecology aspects of recycling metallic materials. Modern and alternative techniques for the production of metallic materials. Technique for the production of light metals from nusproducts. Metallurgy-research-development projects in the field recycling of metallic materials into EU.

Course	**(2740) RECYCLING OF PAPER**
Lecturer	**Ph.D. Zdenka Bolanča, Full Professor**
Institution	Faculty of Graphic Technology, Zagreb
ECTS	5
Course type	Optional
Name of study	Ecological Engineering
Study	Specialists, Doctoral study
Lecture type	Lectures, seminars
Knowledge verification	Writing exam, oral exam

Literature necessary for course

1. M. Springer, (Ed), Industrial Environmental Control, Pulp and Paper Industry, 3rd edition, TAPPI Press, Atlanta, 2000
2. L. Göttsching, H. Pakarinen, (Eds), Recycled Fiber and Deinking, FPEA and TAPPI, Helsinki, 2000

Course content

Conceptions of ecology. Life cycles of conventional and digital prints. Theoretical propositions of deinking in the function of prints from different printing techniques. Influence of the conventional printing ink composition on the efficiency of deinking of prints. Specific composition of toner and dyes for digital printing techniques and the mechanism of deinking of prints. Theory of flotation and influential variables. Disjoining film rupture model. Influence of print ageing on characteristics of the recycled fibers. Methods for quality valorization of the recycled fibers. Recycling of paper and CO_2 balance. Heavy metals and chloro-organic compounds from the production process and the printing substrates for processing. Waste from paper recycling process. Basic aspects of water circle closing in the paper production – development. Theoretical propositions of new technologies for processing the used prints: enzymatic deinking, magnetic deinking and ultrasound deinking. Nanotechnology and production of the recycled paper.

II. 3.5. Rhythm of studying and students` obligations

At the doctoral study, the student has the obligation to pass 6 exams with the fund of 180 hours/60 credits or 4 exams with the fund of 120 hours/40 credits and he must collect 20 credits from the additional credit group. 3 exams are obligatory from the basic (general) courses of the first credit group. Doctoral thesis is evaluated by 120 credits, from which 250 hours/10 credits present consultations with the mentor of the doctoral thesis who is elected by the student after the 1st year of study.
Before defending his doctoral thesis the students must publish one scientific work in CC magazine.

II. 3.6. System of leading through the study

The study Ecoengineering has the leaderof the study, the Committee of the study and Professional Council of the study. At the registration the leader of the study suggests to each student the mentor who directs the students into the choice of courses and monitors their work. The mentor for particular student is named by the Professional Council of the study on the suggestion of the leader of the postgraduate study. As a rule, the mentor is the lecturer at the Faculty, on which the student finished his Master's course.
The mentor of the study and the mentor of doctoral thesis need not be the same lecturer.

II. 3.7. List of subjects from other postgraduate stiudies

Students of Ecoengineering can sign up for courses from any postgraduate specialist and doctoral study at the University in Zagreb, in the Republic of Croatia and abroad, but mostly 10 ECTS credits (which means 15%).

II. 3.8. List of subjects that can be taught in foreign language

All the mentioned courses can be taught in English.

II.3.9. Criteria and conditions for transfer of ECTS credits

If the student signs up for courses from other postgraduate specialist and doctoral studies at the University in Zagreb, in the Republic of Croatia and abroad these subjects bring him the same quantity of credits as the elective subjects, that is 5 ECTS credits.

II.3.10. The way of finishing the study and conditions for recording the doctoral thesis theme

During the study, no later than the end of 1st year of the doctoral study, the student is obliged to suggest the theme and explanation of his doctoral thesis in accordance with the mentor for doctoral thesis; he must present the theme in public in front of the Commission for evaluation the thesis which is elected by the Professional Council of the study.
The theme with the explanation is accepted by the Professional Council of the study and it is confirmed by the University Senate in Zagreb. Before defending the doctoral theme the student must publish one scientific work from the field which is comprised in the doctoral theme. Doctoral theme which is not defended in the course of 6 years from the day of the theme acceptance is subjected to the renewed acceptance process. Doctoral theme is defended in front of the Commission consisting of three members (exceptionally five members) and one

member as the substitute in the scientific- teaching profession and in the field and area connected with the doctoral theme. Student's mentor cannot be the president for evaluating and defending the theme. Defending of doctoral thesis is open to public and must be announced on the bulletin board of the faculty at least eight days before the presentation. The Commission composes and signs the record of theme defending.

II. 3.11. Conditions under which the students who interrupted their study or who lost right to study at one courses can continue their study

The book of rules will solve all the conditions of transition and possibilities of continuation the study.

II. 3.12. Conditions under which the attendant gets the right on confirmation about becoming elligible for the part of the doctoral study as the part of the whole-life education

The book of rules of studying will determine these conditions.

II. 3.14. Maximal length of studying from the beginning to the end

The doctoral study lasts for three years, and the maximal studying length from the beginning up to the end is six years.

II.4. CONDITIONS OF STUDY PERFORMANCE

II. 4.1. Places of the study program performance

The programs are performed in the lecture-rooms, laboratories and computer rooms at the Faculty of Chemical Engineering and Technology and other faculties which signed the Agreement with the Faculty of Chemical Engineering and Technology about the performance of the University interdisciplinary postgraduate scientific study Ecoengineering in 2004.

4.2 Data about the facilities and equipment foreseen for course performing

The Faculty has at its disposal:

a) lecture-rooms:

Big lecture-room at Marulićev trg (Marulić square) 20	120 places
Big lecture-room at Marulićev trg (Marulić square) 19	180 places
Small lecture-room at Marulićev trg (Marulić square) 20	70 places
Small lecture-room at Marulićev trg (Marulić square) 19	50 places
Big lecture-room in Savska cesta (Savska street) 16	80 places
Small lecture-room in Savska cesta (Savska street) 16	30 places
3 lecture-rooms of the Department each having	10 places

b) laboratories:

Marulićev trg 20

Students` laboratory	160 working places
Research laboratory	55 working places

Marulićev trg 19

Students` laboratory	62 working places
Research laboratory	19 working places
Vukotinovićeva cesta 2	
Students` laboratory	10 working places
Research laboratory	6 working places
Savska cesta 16	
Students` laboratory	78 working places
Research laboratory	21 working places

c) computer class-room Marulićev trg 20 — 8 working places
computer class-room Savska cesta 16 — 16 working places

Faculy has over 300 computers networked over servers marie and pierre and placed on Marulićev trg 20 and in Savska cesta 16.

d) offices of Faculty teachers and cooperators are on Marulićev trg 20, Marulićev trg 19, Savska cesta 16, Ilica 36, Ilica 53 and Vukotinovićeva 2.

e) library information center (LIC)
Library with its book totals covers the area of Chemical Engineering, Chemistry, Physics, Mathematics and Science of Environment.
Periodicals (about 330 titles, 75 of which are in LIC) while monographs (about 22000) from the specialized areas of computer sciences are processed in placed in the corresponding Departments at the Faculty.

INSTRUMENTS

Potentiostat/galvanostat, Solartron SI 1287
Fequency analyzer, Solartron SI 1260
Electrochemical crystal nanoquartz balance
Potentiostat/galvanostat, Elchema PS-205B
Potentiostat/galvanostat, Ametek 273A
Potentiostat/galvanostat, Ametek 263A
Fequency analyzer, Ametek FRD 1025
Optical microscope Olympus SZH10
Potentiostat/galvanostat, EG&G PAR model 273
Fequency analyzer, EG&G PAR model 5301 "lock-in" amplifier
Bipotentiostat/galvanostat, Elektrolab BPG-200
Rotating ring-disc electrode, Tachyprocesseur Radiometer Analytical
Differential Scanning Calorimeter
Dynamic Mechanical Analyzer
Rotational Viscosimeter
Equipment for accelerate ageing; High pressure Quartz mercury vapour lamp
FTIR spectrophotometer Perkin Elmer Spectrum One
UV chamber SUN-TEST CPS HEREUS 7281785 6259
Thermostatic chamber Memmert
Ozone generator MIC System Inc

Liquid chromatography Shimadzu
Spectral photometer SPEKOL 210 MA-9525 4581
Organic halide analyzer Dohrman
Apparatus TOC -total organic carbon analyzer
UV/VIS spectrophotometer
Photoreactor
Apparatus for ASTM distillation
Apparatus for determination of aniline point
Apparatus for determination of inflammation point
Abbe refractometer
Apparatus for determination of mechanical properties of materials
Apparatus for determination of impact strength
Apparatus for preparation of test specimens for mechanical studies
Apparatus for reverse osmosis and membrane testing (self-made)
Carbon Analyser
Contact Angle Measuring System, OCA 20, DataPhysics
Universal Testing Machine
Spectrophotometer, UV-1601, Shimatzu
Bioreactor, Biostat MD
Electrophoresis system, E-100
Electrodialysis system, Type 02
HPLC, Sykam
Gas Chromatograph, Siemens
High Pressure Reactor (Parr)
Gas Chromatograph (VARIAN 3300)
pH-meter INOLAB-LEVEL
Hydrogen generator (Packard)
Pulse Chemisorb 2700 (Micromeritics)
Ultraviolet spectrophotometer (Pye UNICAM)
Ion Chromatograph, Dionex, model DX 600
High Performance Liquid Chromatograph, Varian, ProStar,
CAMAG TLC Scanner II
Atomic Absorbent Spectrometer, Perkin Elmer 37
Flame photometer Model III, Carl Zeiss, Jena
Spectrophotometer, Perkin Elmer 124
Spectrophotometer, MA 9525-SPEKOL 210,
Spectrophotometer, Perkin Elmer, Lambda 1,
Digital pION metar, E940, Orion Research
Digital pION metar, 801/A, Orion Research
Microwave Accelerated Reaction System for Extraction and Digestion, Varian, MARS X,
Ion coupled plasma – mass spectrometer
Gas chromatograph - mass spectrometer
UV-Vis spectrophotometer Varian DMS-80
UV-Vis spectrophotometer Varian Cary 100
Polarograph Potentiostat/Galvanostat PAR 263A
Spectrophotometer HACH DR/2400
SRI 8610C Gas Chromatograph,
Buck scientific Inc
Composting bioreactor with mechanical agitation and forced aeration
Microscope OLYMPUS BX50

Kjeltec 2100 Distillation Unit with 2006 Digestion System
ASAP Micromeritics – instrument for specific surface and pore size distribution determination
RHEOMETER BROOKFIELD DVIII+
COULTER COUNTER ZM – instrument for particle size distribution determination
Varian Cary 50 Scan UV-Visible Spektrophotometer
UV Perkin Elmer Double Beam Spectrophotometer 124
Varian CARY ECLIPSE Fluorescence Spectrophotometer
IR-Perkin Elmer M-297 Spectrophotometer
IR-Perkin Elmer M-137 Spectrophotometer
GC-MS (Varian CP-3800 Gas Chromatograph-Varian Saturn 2200)
Varian NMR EM360L Netzch, STA409 simultaneous thermal analyser (DSC/TGA)
Netzch, DSC200 thermal analyser (DSC)
Phillips, powder X-ray diffractometer
Fritsch, Pulverisette 6, planetary mill

II. 4.3. List of scientific and development projects which the doctoral study is based on

SCIENTIFIC PROJECTS

Number	Main researcher	Project name
0054024	Jasenka Bertol-Vrček	Architecture constructions in the function of environment protection
0125009	Rajka Budin	Improvements of energetic effectiveness in the industry
0125016	Štefica Cerjan-Stefanović	Ionic exchange and the membrane process in the processing of chemical industry waters
0098122	Božena Ćosović	Nature and reactivity of organic substances in the sea and environment
0036048	Danilo Feretić	Sustainable production fo electric energy on the liberalized market
0058030	Margareta Glancer-Šoljan	Granulated nitrificants and de-nitrificants in the processing of waste waters
0125060	Antun Glasnović	Process properties of the dispersed systems
0054030	Oleg Grgurević	Basic evaluation of space for general theory of spatial planning
0119121	Mladen Kerovec	Diversities of habitats and fauna of the continental waters in Croatia
0058010	Jasna Kniewald	Reproductive toxicology and effects of ksenobiotics
0125018	Natalija Koprivanac	Advanced oxidation processes for decreasing the waste of the organic chemical industry
0058012	Želimir Kurtanjek	Mathematical modelling and managing the

		biotechnological processes
0082218	Neven Kuspilić	Ecological arrangement and renewal of water flows
0125014	Sanja Martinez	Experimental research and the mathematical models of the corrosion protection system
0068103	Slavko Matić	Influence of the cultivation on the preserving the biodiversities and the continuity of forests in Croatia
0125002	Tomislav Matusinović	Development of the hydratation process model
0195029	Darko Mayer	Exploitation of the supplies of the groundwaters in Croatia
0125019	Helena Jasna Mencer	New materials for special purposes
0125011	Mirjana Metikoš-Huković	New materials and catalysts for sustainable technologies
0082238	Dunja Mikulić	Quality management in civil engineering projects
0036013	Borivoj Modlic	Electromagnetic compatibility – the influence on environment
0082236	Josip Petraš	Research of soil erosion and protective measurements on torrent catchment areas
0082208	Mladen Radujković	Management with resuoces and risk at civil engineering projects
0125059	Vesna Rek	Modification and stability of the mutiphase polymer systems
0120026	Nikola Ružinski	Research of processes of the technological water processing
0195039	Branko Salopek	Separation of the two phase systems by application of attrition and flotation in column
0068107	Zvonko Seletković	Causes of the change of natural balance of the forest ecosystems
0125017	Laszlo Sipos	Development and research of the complex processes of water purification
0125012	Ema Stupnišek-Lisac	New non-toxic inhibitors of metal corrosion
0058007	Branko Tripalo	Mechanism of the control degradation of carbon hydrates by the extrusion process
0125021	Đurđa Vasić-Rački	Biocatalisysts and biotransformations
0178034	Željko Vidaček	Protection of soil and waters in agricultural eco systems
0195051	Mirko Zelić	Disposal of the technological waste by squeezing it into deep boreholes
0125001	Stanka Zrnčević	Catalysis in the environment protection

II.4.5. Contractual relationships between the students and the institution in charge for the doctoral study

Teaching and the doctoral study takes place at the Faculty of Chemical Engineering and Technology and at other faculties of the University in Zagreb which signed the Agreement of performance the courses on the University interdisciplinary study Ecoengineering. Students are contractually obliged to refund the financial means for teaching performance, research work performance and doctoral thesis defence

4.6. Lecturers

Lecturer data

Name, Surname	**Ph.D. Mladen Kerovec, Full Professor**
E-mail address	mkerovec@biol.pmf.hr
Course	**(111) ECOLOGY**
Institution	Faculty of Science, Zagreb

Curriculum vitae

Born on November 26th 1950 in Ivanec. Graduated biology in 1974 in Zagreb, University of Zagreb. In 1979 received M.Sc. degree and in 1989 Sc.D. degree in biology at the same faculty. From 1975 till present has been working in Department of Zoology, Faculty of Science, University of Zagreb, first as a research assistant, then an associated professor and at present as a full professor of Ecology. From 1997 till present the head of Department of Zoology.
Till present he has published more than 60 scientific papers and numerous expert papers in eminent national and international publications. He has taken part in more than 50 scientific expert studies on biological and ecological features of freshwater ecosystems.
Besides lecturing at Faculty of Science and Faculty of Agriculture at the undergraduate level, lectures also at the postgraduate study of Natural sciences in the biology field of the same faculty. Leads the postgraduate study of Ecology.
He is a member of Croatian ecological society, Croatian biological society, International ecological association etc. and an editor of numerous publication of Croatian ecological society (A Little Ecological Library, Ecological monographs).

Date of last election 7.03.2002.

Referent publications of lecturer

1. Kerovec, M., Tavčar, V., Meštrov, M.: **Macrozoobenthos as an indicator of the level of trophy and saprobity of lake Jarun**, Acta Hydrochim. Hydrobiol., **17**(1), 37-45, 1989.
2. Bonacci, O., Kerovec, M., Roje-Bonacci, T., Mrakovčić, M., Plenković-Moraj, A.: **Ecologically acceptable flows definition for the Žrnovnica river (Croatia)**, Regul. Rivers: Res. Mgmt, **14**, 245-256, 1998.
3. Bukvić, I., Kerovec, M., Plenković, A., Mrakovčić, M.: **Impact of silver and bighead carp (Cyprinidae) on plankton and water quality in fish ponds**, Biologia, Bratislava, **53**/2, 145-157, 1998.
4. Mihaljević, Z., Kerovec, M., Tavčar, V., Bukvić, I.: **Macroinvertebrate community on an artificial substrate in the Sava river: long-term changes in the community structure and water quality**, Biologia, Bratislava, **53**/5, 611-620, 1998.
5. Bukvic-Ternjej, Kerovec, M., Mihaljević, Z., Tavčar, V., Mrakovčić, M., Mustafić, P.: **Copepod communities in karstic mediterranan lakes along the easteren Adriatic coast,** Hydrobiologia **453/454**, 325-333,2001.
6. Mihaljević, Z., Kerovec, M., Ternjej, I., Mrakovčić, M.: **Composition and depth distribution of oligochaete fauna of Mediterranean karstic lake (Lake Visovac, Croatia)**, Biologia, **56**/5, 461-467,2001.
7. Sket, B., Dovč, P., Jalžić, B., Kerovec, M., Kučinić, M.,Trontelj, P.,: **A cave leech (Hirudinea, Erpobdellidae) from Croatia with unique morphological features**, Zoologica Scripta, **30**(3) 223-229,2001.

List of papers in last 5 years

1. D. Schneider, M. Mrakovčić, P. Mustafić, M. Kerovec,**Morphological Differences in Some Cobitis Populations from Croatia**, Folia Zoologica, 49 (1) (2000) 115-123.
2. M. Mrakovčić, D. Schneider, P. Mustafić, M. Kerovec, **Status of Genus Cobitis and Related**

Species in Croatia, Folia Zoologica. 49 (1) (2000) 183-187.
3. B. Sket, P. Dovč, B. Jalšić, M. Kerovec, M. Kučinić, P. Trontelj, **A Cave Leech (Hirudinea, Erpobdellidae) from Croatia with Unique Morphological Features**, Zoologica Scripta., 30 (3) (2001) 223-229.
4. Z.Mihaljević, M. Kerovec, I. Ternjej, M. Mrakovčić, **Composition and Depth Distribution of Oligochaete Fauna of Mediterranean Karstic Lake (Lake Visovac, Croatia).,** Biologia. 56 (5) (2001) 461-467.
5. I. Bukvić-Ternjej, M. Kerovec, Z. Mihaljević, V. Tavčar, M. Mrakovčić, P. Mustafić, **Copepod Communities in Karstic Mediterranean Lakes Along the Easteren Adriatic Coast.,** Hydrobyologia. 453/454 (2001) , 453/454; 325-333.
6. Gottstein, S. (ed.), Bakran-Petricioli, T., Bedek, J., Bukovec, D., Buzjak, S., Franičević, M., Jalžić, J., **Kerovec, M.**, Kletečki, E., Kovačić, M., Kralj, J., Kružić, P., Kučinić, M., Kuhta, M., Matočec, N., Ozimec, R., Rađa, T., Štamol, V., Ternjej, I. & N. Tvrtković 2001. Croatia, pp 2237-2287. In: Juberthie, C. & V. Decu (eds.) **Enciclopaedia Biospeologica**. III. Société de Biospéologie, Moulis.
7. Gottstein Matočec, S. (ed.), Bakran-Petricioli, T., Bedek, J., Bukovec, D., Buzjak, S., Franičević, M., Jalžić, B., **Kerovec, M**., Kletečki, E., Kralj, J., Kružić, P., Kučinić, M., Kuhta, M., Matočec, N., Ozimec, R., Rađa, T., Štamol, V., Ternjej, I. & N. Tvrtković 2002. **An overview of the cave and interstitial biota of Croatia**. Natura Croatica 11 (Suppl. 1): 1-112.
8. Gottstein Matočec S., Kerovec, M.: **Distribution patterns of two species *Atyaephyra desmaresti* and *Palaemonetes antennarius* (Decapoda, Natantia) in the delta of the River Neretva**, Croatia. *Biologia,* **57**/2: (2002) 461-467.
9. M. Tomec, I. Ternjej, M. Kerovec, E. Teskeredšić, M. Meštrov, **Plankton in the Oligotrophic Lake Vrana (Croatia)**, Biologia, Bratislava, 57 (5) (2002) 579 – 588.
10. Z. Mihaljević, M. Kerovec, I. Ternjej, A. Popijač, **Long-term Changes in the Macroinvertebrate Community Structure of a Shallow Mediterranean Lake**, Ekologia (Bratislava), 23 (4) (2004) 421-429.

Lecturer data

Name, Surname	**Ph.D.Jasna Kniewald, Full Professor**
E-mail address	jkniewal@pbf.hr
Course	**(112) ECOTOXICOLOGY**
Institution	Faculty of Food Technology and Biotechnology, Zagreb

Curriculum vitae

Jasna Kniewald is born in Zagreb, Croatia. She earned BS in biotechnology in 1962 and PhD 1965 in chemical sciences, both at the Faculty of Technology University of Zagreb, Croatia. In 1969 she spent a year as a postdoctoral fellow at Institute for Pharmacological Investigations *Mario Negri* at Milan, Italy and earned a specialisation in pharmacology and toxicology. From 1962 J. Kniewald was employed at University of Zagreb. Currently she has tenure position of full professor and Head of Laboratory of Toxicology at Faculty of Food Technology and Biotechnology, University of Zagreb. She is in charge of the subjects at the undergraduate and the postgraduate studies, entitled: *Food Toxicology, Toxicological Aspects in Food Preparation, Methodology of Scientific Work, Toxicology Aspects in Food Industry, Safety in Biotechnology* and *Ecotoxicology* At the postgraduate study in Toxicology at the Faculty of Science University of Zagreb, she is lecturing and is in charge of the several subjects as *Mechanism of Biochemical Toxicity, Food Toxicology* and *Reproductive Toxicology.* At the postgraduate study in Ecoengineering at the Faculty of Chemical Engineering and Technology University of Zagreb, she is lecturing the subject *Ecotoxicology*. She published more than 60 scientific papers, mostly indexed in CC cited more than 300 times in SCI; was an active participant at 99 scientific congresses (67 were international) and was invited lecturer on 14 scientific conferences. Beside this she presented 28 public lectures in the field of toxicology on the different events. Dr. Kniewald had published two university textbooks in 1993 and 1999, entitled *"Methodology of Scientific Work"* and *"Practice Work in Toxicology"*.

Since 1972 was the principal investigator of nine research projects in Croatia and two international projects in the collaboration with USDA/USA from 1985-1994. Currently she is the principal investigator of the scientific project *Reproductive toxicology and effects of xenobiotics.* For the international achievements with USDA, she got two awards as *Certificate of Appreciation* for the scientific endeavours and accomplishments in 1989 and 1994. Prof. Kniewald was several times invited scientist in USA (Chicago, Miami, San Francisco, Beltsville). The Wilson Centre, European Institute for East European Programme from Washington 1990 invited her to deliver lecture at the Conference *Public Health and the Environmental Crisis in Central Europe.* She got also the special acknowledgement as invited lecturer with two lectures on conference held 1997 at Hilton Head organised by Novartis Protection Co. for world experts dealing with the problems of environment pollution with atrazine and its influence on people and environment.

Prof. Kniewald is the member of several international and national scientific societies: the member of the Presidency of Croatian Society of Toxicology 1992-, since 1988 until 1994 a Croatian delegate at European Science Foundation as the member of Advisory Committee for Environmental Toxicology; the member of Editorial Board of scientific monograph *Chemical Exposure Prediction* published by ESF; since 1992 is the member of the International Contributing Editors of the international scientific journal *Central European Journal of Public Health* edited in Prague; since 2002 the member of EUROTOX Education Sub-Committee at European Societies of Toxicology. In 1994 was elected for the Associate Member and in 1998 for the Full Member of the Croatian Academy of Engineering, and in 2000 she became the Active Member of the New York Academy of Sciences. She is also a member of Scientific Council for Agriculture and Forestry of Croatian Academy of Sciences and Arts.

Date of last election 26.10.1995.

Referent publications of lecturer

1. Šimić,B., Kniewald,J., Kniewald,Z.: **Effects of atrazine on reproductive performance in rat**, Journal of Applied Toxicology,**14** , 401-404, 1994.
2. Kniewald,J., Osredečki,V., Gojmerac,T., Zechner,V., Kniewald,Z.: **Effect of *s*-triazine compounds on testosterone metabolism in the rat prostate**, Journal of Applied Toxicology, **15**, 215-218, 1995.
3. Kniewald,J., Kniewald,Z.: **Environmental impact, healthful food and education in toxicology – Trends in Croatia**, Central European Journal of Public Health, **3**, 163-168, 1995.
4. Kniewald,J., Kniewald,Z.: **Modern biotechnology and public perceptions**, Annual 2000 of the Croatian Academy of Engineering, **1**, 55-65, 2000.

5. Kniewald,J.: **Pesticide presence and risk in the environment - Benefiits of biotechnology**, In: Current Studies of Biotechnology, Vol.2 – Environment, (Z.Kniewald *et al*, eds.), Croatian Society of Biotechnology, Zagreb, pp.35-53, 2001.

List of papers in last 5 years

1. J.Kniewald, M.Jakominić, A.Tomljenović, B.Šimić, P.Romac, Đ.Vranešić, Z.Kniewald: Disorders of male reproductive tract under the influence of atrazine. *Journal of Applied Toxicology 20* (2000) 61-68.
2. M.Jakominić, A.Jeličić, B.Šimić, J.Kniewald: Effects of atrazine on 5α-dihydrotestosterone regulated meshanisms in rat prostate nuclei. In: *Current Studies of Biotechnology, Vol.1. – Biomedicine*, (Z.Kniewald *et al*, eds.), Croatian Society of Biotechnology, Zagreb (2000) pp. 51-59.
3. J.Kniewald, Z.Kniewald: Modern Biotechnology and Public Perceptions. In: *Annual 2000 of the Croatian Academy of Engineering,* (D.Aničić, ed.), Croatian Academy of Engineering, Zagreb (2000) pp. 55-65.
4. J.Kniewald: Pesticidi i okoliš – prisutnost i rizici. *Kemija u industriji 50* (2001) 343-350.
5. J.Kniewald: Pesticide presence and risk in the environment – Benefits of Biotechnology. In: *Current Studies of Biotechnology, Vol.1I. – Environment*, (Z.Kniewald *et al*, eds.), Croatian Society of Biotechnology, Zagreb (2001) pp. 35-54.
6. B.Šimić, M.Jakominić, P.Romac, J.Kniewald: Effect of atrazine on sperm parameters in rats. In: *Current Studies of Biotechnology, Vol.1I. – Environment*, (Z.Kniewald *et al*, eds.), Croatian Society of Biotechnology, Zagreb (2001) pp. 195-202.
7. Z.Kniewald, J.Kniewald: Possible impact of biotechnology on the future development of the pharmaceutical industry. In: *Annual 2002 of the Croatian Academy of Engineering*, (D.Aničić, ed.), Croatian Academy of Engineering, Zagreb (2002) pp. 45-49.
8. J.Kniewald: Risks evaluation from pesticide residues in food. In: *Current Studies of Biotechnology, Vol.1II. – Food*, (Z.Kniewald *et al*, eds.), Croatian Society of Biotechnology and Medicinska Naklada, Zagreb (2003) pp. 149-159.
9. I.Kmetič, V.Gaurina-Srček, B.Šimić, Z.Kniewald, J.Kniewald: Cytotoxic effects of organochlorine insecticides in Baby Hamster Kidney (BHK 21 C13) cell line. In: *Current Studies of Biotechnology, Vol.1II. – Food*, (Z.Kniewald *et al*, eds.), Croatian Society of Biotechnology and Medicinska Naklada, Zagreb (2003) pp. 177-184.
10. Đ.Vasić-Rački, J.Kniewald: Engineering education for environmental protection. *Annual 2004 of the Croatian Academy of Engineering* (2004) 145-153.
11. J.Kniewald, I.Kmetič, Z.Kniewald: Alternative methods for toxicity testing of xenobiotics. *Arhives of Industrial Hygiene and Toxicology 56* (2005) 193-202.

Lecturer data

Name, Surname	**Ph.D. Božena Ćosović, Senior Scientist**
E-mail address	cosovic@rudjer.irb.hr
Course	**(113) ENVIRONMENTAL CHEMISTRY**
Institution	Ruđer Bošković Institute, Zagreb

Curriculum vitae

Graduated at the Faculty of Technology, University of Zagreb in 1963. MSc degree obtained in 1965 at the Faculty of Sciences, University of Zagreb , as well as the PhD degree in 1967. Employed at the Ruđer Bošković Institute since 1963. Senior scientist in the Center for Marine and Environmental Research since 1989. Head of the Center 1991-2003. Director of the long-term research programme «Environmental Risk Studies in the Adriatic and Continental Regions of Croatia». Published over 100 scientific papers in CC journals, many technical reports, professional publications and studies. Field of research: aquatic chemistry, fundamental and applied electrochemistry, development of new methods and techniques in marine and environmental research, characterization of organic matter in natural waters and adsorption processes at model and natural phase boundaries.
Member of several Croatian and international professional societies. Since 1992 member of the European Environmental Research Organization (ESF-EERO); since 1996 member of the EERO Council. Courses in the postgraduate studies in Chemistry and Oceanology , at the University of Zagreb and in the interdisciplinary postgraduate study « Nature Conservation and Environment Protection» at the University of Osijek, Croatia

Date of last election 1998.

Referent publications of lecturer

1. Ćosović, B., Hršak, D., Vojvodić, V., Krznarić, D., 1996: **Transformation of organic matter and bank filtration from a polluted stream.** Water Research 30, 2921-2928.
2. Ahel, M., Mikac, N., Ćosović, B., Prohić, E., Soukup, V.,1998: **The impact of contamination from a municipal solid waste landfill (Zagreb, Croatia) on underlaying soil**. Water Scince and Technology 37, 203-210.
3. Plavšić, M., Ćosović, B., 1999: **Voltammetric study of the role of organic acids on sorption of Cd and Cu ions by alumina particles**. Colloids and Surfaces 151, 189-200.
4. Ćosović, B., Vojvodić, V., 2000: **Mucilage events in the Northern Adriatic: Search for tools for early warning**. Period. Biol., 102, Supplement 1, 255-259.
5. Gašparović, B., Ćosović, B., 2003: **Surface active properties of organic matter in the North Adriatic Sea**. Estuarine Coastal Shelf Science 58, 555-566.

List of papers in last 5 years

1. Gašparović, Blaženka; Plavšić, Marta; Ćosović, Božena; Reigstad, Marit. Organic matter characterization and fate in the subarctic Norwegian fjords during late spring/summer period. // *Estuarine Coastal and Shelf Science*. 62 (2005) ; 95-107.
2. Gašparović, Blaženka; Risović, Dubravko; Ćosović, Božena. **Complex voltammetric and fractal study of adsorbed layer's structure of pure Triton-X-100 and in mixture with o- or p-nitrophenol**. // *Electrochimica Acta*. **49** (2004) , 20; 3383-3396.
3. Gašparović, Blaženka; Risović, Dubravko; Ćosović, Božena. **The simple electrochemical method for detection of 3d molecular reorientation in adsorbed layer of organic substances**. // *Journal of Electroanalytical Chemistry*. **573** (2004) , 2; 391-398.
4. Orlović-Leko, Palma; Kozarac, Zlatica; Ćosović, Božena. **Surface active substances (SAS) and dissolved organic matter (DOC) in atmospheric precipitation of urban area of Croatia (ZAGREB)**. // *Water, Air & Soil Pollution*. **158** (2004) , 1; 295-310.

5. Ciglenečki, Irena; Plavšić, Marta; Vojvodić, Vjeročka; Ćosović, Božena; Pepi, Milva; Baldi, Franco. **Mucopolysaccharide transformation by sulfide in diatom culture and natural mucilage**. // *Marine Ecology Progress Series*. **263** (2003) , 28; 17-27.
6. Gašparović, Blaženka; Ćosović, Božena. **Surface-active properties of organic matter in the North Adriatic Sea**. // *Estuarine, Coastal and Shelf Science*. **58** (2003) ; 555-566.
7. Kozarac, Zlatica; Ćosović, Božena; Frka, Sanja; Moebius, Dietmar; Hacke, Sussane. **Complex methodological approach to the studies of natural microlayers at the air/water interface**. // *Colloids and Surfaces A: Physicochemical and engineering aspects*. **219** (2003) ; 173-186.
8. Gašparović, Blaženka; Ćosović, Božena. **Distribution of surface active substances in the northern Adriatic Sea**. // *Marine Chemistry*. **75** (2001) ; 301-313.
9. Krznarić, Damir; Ciglenečki, Irena; Ćosović, Božena. **Voltammetric investigations of 2-dimethylarsinyl-ethanol sulphide in NaCl and seawater**. // *Analytica Chimica Acta*. **431** (2001) 269-278.
10. Risović, Dubravko; Gašparović, Blaženka; Ćosović, Božena. **Fractal and voltammetric study of linoleic acid adsorption at the mercury/electrolyte solution interface**. // *Langmuir*. **17** (2001) , 4; 1088-1095.
11. Ciglenečki, Irena; Ćosović, Božena; Vojvodić, Vjeročka; Plavšić, Marta; Furić, Krešimir; Minacci, Andrea; Baldi, Franco. **The role of reduced sulfur species in the coalescence of polysaccharides in the Adriatic Sea**. // *Marine Chemistry*. **71** (2000) , 3-4; 233-249.
12. Ćosović, Božena; Ciglenečki, Irena; Viličić, Damir; Ahel, Marijan. **Distribution and seasonal variability of organic matter in a small eutrophicated salt lake**. // *Estuarine, Coastal and Shelf Science*. **51** (2000) ; 705-715.
13. Furić, Krešimir; Ciglenečki, Irena; Ćosović, Božena. **Raman spectroscopic study of sodium chloride water solutions**. // *Journal of molecular structure*. **550-551** (2000) , SI; 225-234.
14. Kozarac, Zlatica; Ćosović, Božena; Moebius, Dietmar; Dobrić, Mila. **Interaction of polysaccharides with lipid monolayers**. // *Journal of Colloid and Interfacial Science*. **226** (2000) 210-217.
15. Krznarić, Damir; Goričnik, Tihana; Ćosović, Božena. **Electrochemical determination of organic surface active substances in model and natural sea water with Au(111) monocrystal electrode**. // *Croatica chemica acta*. **73** (2000) , 1; 247-261.
16. Plavšić, Marta; Ćosović, Božena. **Adsorption properties of different polysaccharides on mercury in sodium chloride solutions solutions**. // *Electroanalysis*. **12** (2000) , 12; 895-900.
17. Risović, Dubravko, Gašparović Blaženka, Ćosović, Božena.**The impact of fractal geometry on permittivity and related quantities**.// Journal of Physical Chemistry B, **106** (2002); 9810-9814.
18. Risović, Dubravko, Gašparović, Blaženka, Ćosović, Božena.**Hydrodynamic influence on the fractal morphology of the linoleic acid adsorbed at the mercury/electrolyte interface**.// Colloids and Surfaces A: Physicochemical and Engineering Aspects.**223** (2003); 145-156.

Lecturer data

Name, Surname	**Ph.D. Felicita Briški, Associate Professor**
E-mail address	fbriski@pierre.fkit.hr
Course	**(114) ENVIRONMENTAL MICROBIOLOGY**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Felicita Briški graduated at Faculty of Technology, Department of Biotechnology, University of Zagreb in 1975, master degree got in 1984 and PhD got in 1991. From 1979 worked as microbiologist and after it as head of Department of Development and Technical-Technological Control in mineral water filling facility Badel-Jamnica. In 1987 started to work as research assistant at Faculty of Chemical Engineering and Technology (FCET), Division of Industrial Ecology. She was assistant professor from 1995 to 2005, and today is associate professor. As author and co-author has published 34 scientific works. In study programs at FCET introduced several new courses: Environment protection, Microbiology and Industrial ecology. She was mentor of 16 bachelor thesis, 6 master thesis and 2 PhD thesis. Fields of researches: biological removal of organic and inorganic pollutants by immobilised microbial cells from waste water, quality of natural waters, removal of ammonia from ground water, removal of humic substances, and protection of drinking water resources, biocorrosion and protection of historical artefacts, agroindustrial solid waste management.

Date of last election 17.01.2005.

Referent publications of lecturer

1. 1. F. Briški, L. Sipos and M. Petrović, **Distribution of Faecal Indicator Bacteria and Nutrients in Krka River in the Region of Krka National Park**, Periodicum Biologorum, 102 (2000) 273-281.
2. F. Briški, N. Horgas, M. Vuković, Z. Gomzi, **Aerobic Composting of Tobacco Industry Solid Waste- Simulation of The Process**, Clean Technol Environ Policy, 5 (2003) 295-301.
3. F. Briški, Z. Gomzi, N. Horgas, M. Vuković, **Aerobic Composting of Tobacco Solid Waste**, Acta Chim. Slov., 50 (2003)715-729.
4. T. Štembal, M. Markić, N. Ribičić, F. Briški and L. Sipos, **Biological Removal of Ammonia, Iron and Manganese from Ground Waters of Northern Croatia Pilot-Plant Studies**, Process Biochemistry, 40 (2005) 327-335.
5. L. Foglar, F. Briški, L. Sipos and M. Vuković, **High Nitrate Removal from Synthetic Wastewater with the Mixed Bacterial culture**, Bioresource Technology, 96 (2005) 879-888.

List of papers in last 5 years

1. F. Briški, L. Sipos and M. Petrović, **Distribution of Faecal Indicator Bacteria and Nutrients in Krka River in the Region of Krka National Park**, Periodicum Biologorum, 102 (2000) 273-281.
2. Ž. Bajza, F. Briški, A. Hublin, **Smanjenje štetnih sastojaka u mulju otpadnih voda kožara**, Gospodarstvo i okoliš, 46 (2000) 502-505.
3. F. Briški, R. Jagić, D. Krstić, **Microbial Species on a Polychromed Sculpture from Ruined Church**, Studies in Conservation, 46 (2001)14-22.
4. L. Foglar, F. Briški, **Wastewater Denitrification Process-the Influence of Methanol and Kinetic Analysis**, Process Biochem., 39 (2003) 95-103.
5. F. Briški, N. Horgas, M. Vuković, Z. Gomzi, **Aerobic Composting of Tobacco Industry Solid Waste- Simulation of The Process**, Clean Technol Environ Policy, 5 (2003) 295-301.
6. F. Briški, Z. Gomzi, N. Horgas, M. Vuković, **Aerobic Composting of Tobacco Solid Waste**, Acta Chim. Slov., 50 (2003)715-729.

7. F. Briški, Z. Gomzi, A. Hublin, M. Vuković, **Aerobno kompostiranje otpadaka voća i povrća: modeliranje procesa**, Kem. Ind. 52 (2003) 95-102.
8. R. Budin, I. Sutlović, A. Mihelić-Bogdanić, F. Briški, **Smanjenje toplinskog i kemijskog opterećenja okoliša u procesu proizvodnje FDPE**, Sigurnost 45 (2003)1-11.
9. T. Štembal, M. Markić, F. Briški, L. Sipos, **Rapid Start-Up of Biofilters for Removal of Ammonia, Iron and Manganese from Groundwater**, J Water Supply: Res. and Technol.–Res. and Technol., Aqua, 53(2004)509-518.
10. T. Štembal, M. Markić, N. Ribičić, F. Briški and L. Sipos, **Removal of Ammonia, Iron and Manganese from Ground Waters of Northern Croatia Pilot-Plant Studies**, Process Biochemistry, 40 (2005) 327-335.
11. L. Foglar, F. Briški, L. Sipos and M. Vuković, **High Nitrate Removal from Synthetic Wastewater with the Mixed Bacterial culture**, Bioresource Technology, 96 (2005) 879-888.

Lecturer data

Name, Surname	**Ph.D. Ladislav Palinkaš, Full Professor**
E-mail address	lpalinka@public.srce.hr
Course	**(115) ENVIRONMENTAL GEOCHEMISTRY**
Institution	Faculty of Science, Zagreb

Curriculum vitae

Ladislav Palinkaš, born 19.Oct.1944 in Zagreb.
Education: Chemical technical school, Zagreb. B.Sc. Chemistry, Faculty of Chemical Technology, University of Zagreb,1971, B.Sc. Geology, Faculty of Mining-Geology-Petroleum Engineering, University of Zagreb, 1973, M.Sc. Geochemistry, Pennsylvania State University-Zagreb University, Ph.D. Geochemistry, University of Zagreb, 1988.
Present occupation: Ordinary professor of geochemistry and mineral deposits at the Faculty of Natural Sciences and Mathematics, University of Zagreb.
Awards: Extraordinary member of Croatian Academy of Science and Art.
Duties: Ex-president of Croatian Geological Society.
Vice-president of the Geochemical Committee of Cro.Acad.Sci.Art

Date of last election 2004.

Referent publications of lecturer

1. Palinkaš, A.L., Srebočan, E., Miko,F.S., Pompe-Gotal, I., Namjesnik, K., Pirc.S.(1994): Regional contamination of soil and biota with heavy metals following the explosion of an ammunition stockpile near Oštarije, Croatia - In: Richardson (ed.): *Chemical Safety, Chapter 21*, pp 311-328, VCH Publisher, Cambridge, Weinheim, New York, Basel, p. 613.
2. Miko, S., Palinkaš, A. L., Biondić, B., Namjesnik, K., Štiglić, S. (1995): Groundwater pollution hazard by heavy metals following the explosion of an ammunition depot near Oštarije, Croatia.- In: Richardson (ed.): *The effects of war on the Environment: Croatia, Chapter 7*, 175-193, E & FN SPON, Chapmen & Hall publisher, London, Glasgow, New York, Tokyo, Melbourne, Madras, p. 229.
3. Palinkaš, A. L., Pirc, S., Miko, F. S., Durn, G., Namjesnik, K., Kapelj, S. (1995): The Idrija mercury mine Slovenia, a semi-millenium of continous operation: an ecological impact. In: Richardon M. (ed.): *Environmental Toxicology Assessment, Chapter 23*, 317-339, Taylor & Francis, London, p. 438.
4. Palinkaš, A.L., Namjesnik-Dejanović, K., Miko, S.F., Pirc. S., Durn, G. (1996): Distribution of Mercury, Lead and Cadmium in Zagreb City Soil.- In: Richardson, M. (Ed.): *Environmental Xenobiotics, Chapter 19,* 355-372, Taylor & Francis, London, p. 492.
5. Miko, F. S., Palinkaš, A.L., Biondić, B., Namjesnik, K., Štiglić, S. (1996): Opasnost od onečišćenja podzemnih voda teškim metalima zbog eksplozije skladišta streljiva u blizini Oštarija.- U: Richardson, M. (Ed.): *Učinci rata na okoliš: Hrvatska, Poglavlje 7*, 163-181, Izvori, Zagreb, str. 190, prijevod s engleskog.
6. Palinkaš, A. L., Miko, S., Dragičević, I., Namjesnik, K., Papeš, J. (1993): Geochemical exploration for blind bauxite ore bodies, Jajce, Central Bosnia.- *Acta Geol. Hungarica, 36/4*, 459-477, Budapest.
7. Palinkaš, A. L., Namjesnik, K., Miko, S., Muvrin, B., Kaveđija, B. (1995): Augmentation of Mercury Concentration in Soil and Sediments of the Sava River Banks and Terraces in Zagreb City, Croatia.- *Land contamination & Reclamation, Vol. 3, No. 4*, 145-147. London.
8. Durn, G., Miko, S., Čović, M., Barudžija, U., Tadej, N., Namjesnik-Dejanović, K., Palinkaš, L. (1999): "Distribution and behavior of selected elements in soil developed over a historical Pb-Ag mining site at Sv. Jakob, Croatia. Jour.Geochem.Exploration, 67, 361-376, Elsevier.

9. Palinkaš, A. L., Biondić, B., Osmond, K. J. (1994): Water Tracing in the Dinaride Karst Using Uranium Series Disequilibria.- *13th Intr. Symposium "Chemistry of the Mediterranean" - "Distribution of Microconstituents between Marine Compartments",* 11-18.5.1994., 57-59, Rovinj.

List of papers in last 5 years

1. Bermanec, Vladimir; Wegner, Reinhard; Kniewald, Goran; Rakvin, Boris; Palinkaš, Ladislav; Rajić, Maša; Tomašić, Nenad; Furić, Krešimir (2005): The role of uranium(V) ion in the chemical composition of meta-autunite from pegmatites of Quintos de Baixo, Brazil. *Neues Jahrbuch für Mineralogie, Abhandlungen*. 181, 1; 27-38.
2. Palinkaš, Ladislav; Strmić, Sabina; Spangenberg, J.E.; Prochaska, W.; Herlec, U. (2004): Ore-forming fluids in the Grübler orebody, Idrija mercury deposit, Slovenia. *Swiss Bulletin of Mineralogy and Petrology*. 84, 1; 1-24.
3. Pamić, Jakob; Balogh, Kadosa; Hrvatović, Hazim; Balen, Dražen; Jurković, Ivan; Palinkaš, Ladislav (2004): K-Ar and Ar-Ar dating of the Palaeozoic metamorphic complex from the Mid-Bosnian Schist Mts., Central Dinarides, Bosnia and Herzegovina. *Mineralogy and Petrology*. 82; 65-79.
4. Palinkaš, A.L.; Borojević, S.; Strmić, S.; Prochaska, W.; Spangenberg, J. (2003): Siderite-hematite-barite-polysulfide mineral deposits, related to the early intra-continental Tethyan rifting, Inner Dinarides. In: Eliopoulos, D.G. et al. (ed.) Mineral Exploration and Sustainable Development. Rotterdam : Millpress.
5. Palinkaš, A.L.; Strmić, S.; Spangenberg, J.; Prochaska, W. (2003): Vareš and Veovača, Triassic, Fe-Pb-Zn-Ba SEDEX deposits, related to the advanced Tethyan rifting, Central Bosnia. In: Eliopoulos, D.G. et al. (ed.) Mineral Exploration and Sustainable Development. Rotterdam : Millpress.
6. Bermanec, Vladimir; Palinkaš, Ladislav; Strmić, Sabina (2001): Mineralogy of pegmatite with giant epidote crystals, near Caniste, Macedonia. In Piestrzynski et al. (ed.) Mineral Deposits at the Beginning of the 21st Century. Lisse : Balkema
7. Palinkaš, Ladislav; Strmić, Sabina; Herlec, Uroš (2001): The ore-forming fluids in the Idria mercury mine, Slovenia. In Piestrzynski et al. (ed.) Mineral Deposits at the Beginning of the 21st Century. Lisse : Balkema
8. Palinkaš, Ladislav; Borojević, Sibila; Prochaska, Walter; Šinkovec, Boris; Šiftar, Dubravko (2001): Rude, Samobor deposit as a prototype of the siderite -barite -polysulfide -hematite mineralization in the Inner Dinarides, Croatia. In Piestrzynski et al. (ed.) Mineral Deposits at the Beginning of the 21st Century. Lisse : Balkema
9. Pamić, Jakob; Palinkaš, Ladislav (2000): Petrology and geochemistry of Paleogene tonalites from the easternmost parts of the Periadriatic Zone. *Mineralogy and Petrology.*. 70; 121-141
10. Durn, Goran; Miko, Slobodan; Čović, Marta; Barudžija, Uroš; Tadej, Neven; Namjesnik-Dejanović, Ksenija; Palinkaš, Ladislav (1999): Distribution and behavior of selected elements in soil developed over a historical Pb-Ag mining site at Sv. Jakob, Croatia. *Journal of geochemical exploration*. 67; 361-376.

Lecturer data

Name, Surname	**Ph.D. Slavka Pfaff, Assistant Professor**
E-mail address	pfaffs@rgn.hr
Course	**(121) STATISTICS**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb

Curriculum vitae

Date and place of birth: October 13, 1947, Zagreb.
Educational qualifications: 1972 B.Sc. in Mathematics, Mathematical Department of the Faculty of Natural Sciences and Mathematics University of Zagreb (study group of practical mathematics),1982 M.Sc. in Mathematics, University of Zagreb (study group of applied mathematics),1992 Ph.D. in Mathematics, Mathematical Department of the Faculty of Natural Sciences and Mathematics University of Zagreb.
Study visits:1989, Mathematical Institute University of Heidelberg, two and a half month as DAAD (Deutscher Akademischer Austauschdienst) scholarship holder, 1994, June, Mathematical Institute University of Heidelberg
Employment: 1973-1983, Teaching Assistant, 1983 –1997, Senior Assistant,1997-, Assistant Professor (re-elected in 2003), Faculty of Mining, Geology and Petroleum Engineering (MPG) University of Zagreb, 1997-2001, the Head of Division for Mathematics, Informatics and Descriptive Geometry at the MGP Faculty.
Research interests: Symmetric designs and finite groups, Applications of mathematical and statistical methods in the field of mining and geology
Memberships: Croatian Mathematical Society

Date of last election 9.05.2003.

Referent publications of lecturer

1. S.Pfaff, *Nemarkovski modeli u teoriji repova*, magistarski rad, Zagreb (1982).
2. B.Salopek,S.Pfaff, *Simulacijski model čeljusne drobilice*, Zbornik radova 10.jug.simpozija o oplemenjivanju mineralnih sirovina,Struga(1985),507-619.
3. B.Salopek,S.Pfaff,M.Garapić,S.Jelić, *Computer use in Mineral processing education*, Computerized information system in University education symposium, Zagreb(1987), 263-268.
4. B.Salopek,M.Garapić,S.Pfaff*, Matematički model vibracijskog sita*, Zbornik radova 11. jug. simpozija o oplemenjivanju mineralnih sirovina, Zagreb(1987),95-101.
5. B.Salopek,S.Pfaff,S.Jelić, *Matematički model mlina s kuglama*, Zbornik radova 1.jug. simpozija o primjeni matematičkih modela i računala u rudarstvu i geologiji, Beograd(1988), 288-295.
6. B.Salopek,S.Pfaff,M.Garapić,S.Filipović*, Simulacija procesa oplemenjivanja mineralnih sirovina*, RGN-zbornik,Zagreb,2, (1990),121-128.
7. S.Pfaff, *Ispitivanje egzistencije dizajna (121,16,2) i (78,22,6)*, doktorska disertacija, Zagreb (1992).
8. S.Pfaff, *Classification of (78,22,6) designs having the full automorphism group* $E_8 \cdot F_{21}$, Glasnik matematički , Vol. 28(48) (1993),3-9.
9. S. Pfaff, *Non-existence of a biplane (121,16,2) with automorphism group* A_5,Glasnik Matematički, Vol.29(49) (1994),9-15.
10. S.Pfaff, *New symmetric designs for (79,27,9*), Glasnik matematički, Vol.31(51) (1996),226-228

List of papers in last 5 years

1. B.Salopek,S.Pfaff,R.Rajić, *A statistical experimantal design approach in coal briquetting,* 12th International Symposium on Mine Planning & Equipment Selection, Kalgoorlie, Western Australia (2003),349-352.

2. S.Pfaff,B.Salopek, *Primjena planiranja eksperimenata u oplemenjivanju mineralnih sirovina,* Rudarsko-geološko-naftni zbornik,Vol.16 (2004),99-108.

Lecturer data
Name, Surname **Ph.D. Želimir Kurtanjek, Full Professor**
E-mail address zkurt@pbf.hr
Course **(122) MATHEMATICAL AND COMPUTER MODELING OF ECOLOGICAL SYSTEMS**
Institution Faculty of Food Technology and Biotechnology, Zagreb

Curriculum vitae

Želimir Kurtanjek was born in 1946 in Zagreb, Croatia. He received degree in physics from the University of Zagreb, Department of Natural Sciences. In 1979 he received PhD degree in chemical engineering from the University of Houston Chemical Engineering Department, Houston, TX, USA. Currently is employed as a professor of chemical engineering at the University of Zagreb, Faculty of Food Technology and Biotechnology. He is a delegate from Croatia in working groups on process modeling and control of European Federation of Biotechnology (EFB) and International Federation of Automatic Control (IFAC). His scientific interest in the field of mathematical modeling and control of chemical and biotechnological processes.

Date of last election 1.12.2004.

Referent publications of lecturer

1. Kurtanjek, Ž.:**Optimal nonsingular control of fed-batch fermentation**, Biotechnol. Bioeng., **37**, 814-823, 1991.
2. Kurtanjek Ž.: **Modeling and control by artificial neural networks in biotechnology**, Computers Chem. Eng., **18**, S627, 1994.
3. Kurtanjek Ž.: **Singular value decomposition and principal component decomposition for process data modeling**, Automatika, **36**, (3-4), 109-112, 1995.
4. Kurtanjek, Ž.: **Principal Component ANN for Modelling and Control of Baker's Yeast Production**, Journal of Biotechnology, **65**, 25-35, 1998.
5. Kurtanjek Ž.: **Modeling of chemical reactor dynamics by nonlinear principal components**, Chemometrics and Intel. Laboratory Systems, **46**, 149-159, 1999.

List of papers in last 5 years

1. J. Gajdoš, K. Galić, Ž. Kurtanjek, Nada Ciković, **Gas permeability and DSC characteristics of polymers used in food packaging**", Polymer Testing, **20** (2001) 49-57.
2. Ž. Kurtanjek, **Matematičko modeliranje i vođenje industrijskih procesa u prehrambenoj industriji**, Bilten HAZU, 3 (1), (2000) 25-29.
3. D. Sinčić, Ž. Kurtanjek, **Demulsification analysis by neural networks**, Nafta, **51**(9) 303-308 (2000).
4. D. Kovačević, Ž. Kurtanjek, **Effect Of k-Carrageenan And NaCl On Initial Freezing Point Of Egg And Surimi**, Acta Alimentaria **29**(4) 335-3444 (2000).
5. Ž. Kurtanjek, (2001), **Interaction of Hydrodynamic Environment On Performance of Homogeneous Bioreactors With Enzyme Kinetic Models**, Book of Abstracts, Biotechnology and Environment, p. 10, Feb. 19-22, Zagreb (ISBN 953-98094-2-8).
6. Ž. Kurtanjek, **Modelling Effects of Micromixing on Performance of Continuous Bioreactors**, Proceedings of the 23rd International Conference on Information Technology Interfaces", Ed. (D. Kalpić, V. Hljuz Dobrić), Pula, Croatia, June 19-22 (2001), p. 339-344., ISBN 953-96769-3-2; ISSN 1330-1012, Published by SRCE.
7. Gajdoš J. Vidaček S. i Kurtanjek Ž**.: "**Meal Planning in Boarding Schools in Croatia using Optimisation of food Components**"**, Biotehnology and Environment 2001, 19-22. veljače 2001., Zagreb.

8. J. Gajdoš i Ž. Kurtanjek: **Modeliranje i optimiranje u planiranju prehrane**, XVII Hrvatski Skup kemičara i kemijskih inženjera, 10-13. lipnja 2001., Osijek.
9. J. Gajdoš i Ž. Kurtanjek: **Optimiranje prehrane**, PrimMath[2001], 27-28. rujan 2001., Zagreb.
10. J. Gajdoš, Ž. Kurtanjek: **Optimisation of diet and modelling of nutritional assessment in Croatian boarding schools**, 4. Hrvatski kongres prehrambenih tehnologa, biotehnologa i nutricionista, 03-05. listopad 2001., Opatija.
11. J. Gajdoš, Ž. Kurtanjek: **Differences and comparison of anthropometry characteristics and alimentary habits of young people in Republic of Croatia**, 4. Hrvatski kongres prehrambenih tehnologa, biotehnologa i nutricionista, 03-05. listopad 2001., Opatija.
12. S. Matošić, Ž. Kurtanjek, M. Bošnjak, B. Šlaus, **Applicability of the three dimensional growth model in description of *Mucor miehei NCAIM 5238* cultivation and renin biosynthesis**, Chem. Bioche. Eng. Quart., **15** (3), 98-101, 2001.
13. D. Kovačević, Ž. Kurtanjek, **Effect of k-carrageenan and NaCl on thermal properties of frozen surimi prepeared from Adriatic pilchard**, Acta Alimentaria, 30 (4) 381-393, (2001).
14. J. Gajdoš, S. Vidaček, Ž. Kurtanjek, **Meal planning in boarding schools in Croatia using optimisation of food components**, Current Studies of Biotechnology, **2** 217-222 (2001).
15. Ž. Kurtanjek, **Interaction of hydrodynamic environment on performance of homogeneous bioreactors with enzyme kinetic models**, Current Studies of Biotechnology, **2** 89-95 (2001).
16. D. Vranešić, Ž. Kurtanjek, A.M. P. Santos, F. Maugeri, **Optimisation of Inulinase Production by *Kluyveromyces bulgaricus***, Food Technology and Biotechnology, 40 (1) 67-73 (2002).
17. E. Bauman, Ž. Kurtanjek, **15 Years of Chemical and Biochemical Engineering Quarterly: Initative, Present and Future**, Kem. ind. **51** (3) 127-130 (2002).
18. J. Gajdoš Kljusurić, Ž. Kurtanjek, **Statistical Modelling of Anthropometric Characteristics Evaluated on Nutritional Status**, Poster Abstracts, ITI 2002, Dubrovnik, June, 24-27, 2002, p. 168-169 (ISBN 953-96769-5-9, ISSN 1330-1012, Edit. V. Glavinić, V. Hljuz-Dobrić, D. Šimić).
19. D. Horvat , D. Magdić, Z. Jurković, G. Šimić, G. Drezner, Ž. Kurtanjek, **Chemometric And Image Analysis Of Croatian Wheat Cultivars And Their Bread Making Quality**, Proceedings of ITI 2002, Dubrovnik, June, 24-27, 2002, p. 91-95 (ISBN 953-96769-5-9, ISSN 1330-1012, Edit. V. Glavinić, V. Hljuz-Dobrić, D. Šimić).
20. Magdić D., Horvat D., Jurković Z., Sudar R., Kurtanjek Ž., **Chemometric Analysis of High Molecular Weight Glutenin Proportions and Image Data of Bread Crumb Structure from Croatian Wheat Cultivars**, Food Technol.Biotechnol., **40** (4) 331-341 (2002).
21. D. Kovačević, D. Šubašić, Ž. Kurtanjek, **Effect of polydextrose and NaCl on initial freezing point of chicken, egg and surimi**, Italian Food Science, **15** (1) 105-113, 2003.
22. J. Gajdoš, Ž. Kurtanjek, **Neizrazito modeliranje i optimiranje u planiranju prehrane**, Kem. Ind., **52** (5) 195-200 (2003).
23. Ž. Kurtanjek, **Stochastic simulation of a single gene cell model**, Proceedings of 25-th ITI 2003, p. 489-493.,Editors: Leo Budin, Vesna Lužar-Stiffler, Zoran Bekić, Vesna Hljuz Dobrić, Publisher SRCE U. of Zagreb, ISBN 953-96769-6-7, ISSN 1330-1012, June 16-19, 2003, Cavtat, Croatia.
24. J. Gajdoš Kljusurić, Ž. Kurtanjek, **Fuzzy logic modelling in nutrition planning**, Conference Proceedings "Current Studies on Biotechnology, Vol. III - Food", p. 347-354, Zagreb, 2003., Ed. Z. Kniewald, ISBN 953-176-209-0, Medicinska naklada.
25. Ž. Kurtanjek, D. Horvat, Z. Jurković, G. Dresner, R. Sudar, D. Magdić, **Validation of chemometric analysis of Osijek wheat cultivars**, Conference Proceedings "Current Studies on Biotechnology, Vol. III - Food", p. 185-193, Zagreb, 2003, Ed. Z. Kniewald, ISBN 953-176-209-0, Medicinska naklada.
26. J. Gajdoš, S. Đaković, I. Kruhak, Ž. Kurtanjek, **Determination of inhibition time as index of antioxidant activity**, PrimMath[2003], Zbornik sažetaka, str.21, Zagreb, 25-26 November, 2003, Ed. Šime Ungar, ISBN 953-6076-74-8.
27. Ž. Kurtanjek, **Stochastic simulation of cellular reactions**, PrimMath[2003], Zbornik sažetaka, str.35, Zagreb, 25-26 November, 2003, Ed. Šime Ungar, ISBN 953-6076-74-8.
28. M. Matić, M. Čurlin, M. Matošić, Ž. Kurtanjek, I. Mijatović, **Modelling of mixing and residence time distribution in a membrane**, PrimMath[2003], Zbornik sažetaka, str.43, Zagreb, 25-26 November, 2003, Ed. Šime Ungar, ISBN 953-6076-74-8.

29. Ž. Kurtanjek, **Stochastic simulation of cellular reactions**, Proceedings of 8-th Croatian Biological Congress", Ed. V. Besendorfer, N. Kopjar, ISBN 953-6241-05-6, UDK 57(063), str. 101-102, Zagreb,27 sept.-2 October, 2003.
30. D. Bičanić, C. Neamtu, M. Manojlović, D. Linden, D. Dadarlat, K. Posavec, A. Gijsbersten, Ž. Kurtanjek, **Tomato pastes and their moisture content as determined via the measurements of thermal effusivity by means of infrared photothermal radiometry and inverse photopyroelectric technique**, Acta Chim. Slov. **51**, 39-46, (2004).
31. Ž. Kurtanjek, **Simulation of Mammalian Cell Population Dynamics**, Proceedings of 26-th Int. Conf. *Information Technology Interfaces* ITI 2004, Cavtat, June 7-10, 2004, p. 35-40, Edit. V. Lužar-Stiffler, V. Dobrić Hljuz, ISBN 953-96769-9-1, Publisher Srce University Zagreb.
32. J. Gajdoš, K. Gedrich, Ž. Kurtanjek, G. Karg, **Assasment and optimization of the nutritional situation in Croatian boarding schools**, Food Service Technology, **4** (2) 54, (2004).
33. M. Čurlin, M. Matić, M. Matošić, I. Mijatović, Ž. Kurtanjek, Effects of Hydraulic Residence Time and Mixing on Wastewater Treatment in a Membrane Reactor, Chem. Biochem. Eng. Q. **18** (2) 97-104 (2004).
34. N. Pavicic, T. Jemric, Z. Kurtanjek, T. Cosic, I. Pavlovic, D. Blaskovic, **Relationship between water-soluble Ca and other elements and their bitter pi occurance in "Iderad" apples: a multivariate approach**, Ann. appl. Biol. **145**, 193-196 (2004).

Lecturer data

Name, Surname	**Ph.D. Đurđa Vasić-Rački, Full Professor**
E-mail address	dvracki@marie.fkit.hr
Course	**(123) ECOLOGICAL PROCESS ENGINEERING**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Prof.dr.sc.Đurđa Vasić-Rački was born in 1946 in Zagreb, Croatia. She graduated in 1971 with B.Sc. degree in Chemical Engineering from Faculty of Chemical Engineering, University of Zagreb. After graduation she has employed as an assistant at Faculty of Chemical Engineering, Zagreb. She completed postgraduate studies in Chemical Engineering at Faculty of Chemical Engineering, University of Zagreb. She received MSc in 1976. In 1981 she received Ph.D. in Chemical Engineering at University of Zagreb. In 1983 she was appointed Assistant Professor and in 1985, Associated Professor in Chemical Engineering, at Faculty of Chemical Engineering, Zagreb. In 1992 she became a Full Professor. During 1985-86 she was a visiting researcher at Institute of Biotechnology, Research Center, Jülich, Germany. Since 1986 she is a member of editorial board of the journal "Chemical and Biochemical Engineering Quarterly"and a member of WP "Applied Biocatalysis" of EFB. Since 1993 she is a member of IOBB.

Prof.dr.sc.Đurđa Vasić-Rački's research interests have been firmly in the area of biochemical engineering and, more specifically, enzyme reaction engineering. The industrial use of enzyme for the synthesis of chemical is receiving increased attention as their potential for novel green chemistry is more widely recognized. The industrial usefulness of biotransformations has been increased via awareness of the particular role biocatalysis can play in the synthesis of enantiomerically pure products and it has also been increased via awareness of the particular role biocatalysis can play in the development of more environmentally compatible processes. Biocatalysis is relatively green technology. Enzyme reactions can be carried out in water at ambient temperature and at neutral pH, without the need for high pressured and harsh conditions, so saving energy in processes.

Date of last election 16.09.1997.

Referent publications of lecturer

1. Bogdan, S., Gosak, D., Vasić-Rački, Đ.: **Mathematical modelling of liquid-liquid equilibrium in aqueous polymer solution containing neutral proteinase and oxytetracycline using artificial neural network**, Comp.Chem.Eng., **19** , 791-796, 1995.
2. U.Kragl, Vasić-Rački, Đ., Wandrey,C.: **Continuous production of L-*tert* leucine in series of two enzyme membrane reactors**, Bioproc. Eng., **14,** 291-297, 1996.
3. Vasić-Rački, Đ., Berovič, M.: **Integrirani bioreaktorji,** in Raspor, P. (Ed), Biotehnologija , BIA, Ljubljana, 551-567, 1996.
4. Vasić-Rački, Đ., Kragl, U., Conrad, D., Wandrey, C.: **Modelling of yeast alcohol dehydrogenase catalysed production of chiral alcohols,** Chem.Biochem.Eng. Q., **12**, 87-95, 1998.
5. Zelić, B., Pavlović, N., Delić, V., Vasić-Rački, Đ.: **Kinetic model for the bioconversion of glucose to 2,5-diketo-d-gluconic acid**, Bioproc. Eng., **21**, 45-50, 1999.

List of papers in last 5 years

1. Lj. Matijašević, Đ. Vasić-Rački, **Separation of Glucose/Fructose Mixture: Counter-Current Adsorption System**., Bioch. Eng. J., 4 (2000) 101-106.
2. Đ. Vasić-Rački, **History of Industrial Biotransformations-Dreams and Realities**. In: Liese, A., Seelbach, K., Wandrey C. (Eds): Industrial Biotransformations.: Wiley-VCH, Weinheim, 2000, 3-29.

3. J. Giacometti, F. Giacometti, Č. Milin, Đ. Vasić-Rački, **Kinetic Characterisation of Enzymatic Esterification in a Solvent System: Adsorptive Control of Water with Molecular Sieves**, J. Molecular Catalysis B: Enzymatic 11 (2001) 957-964.
4. A. Hublin, H. Gradišar, J. Friedrich, Đ. Vasić-Rački, **Stability and Stabilization of Doratomyces Microporous Keratinase**, Biocatal. Biotrans., 20 (2002) 329-336.
5. B. Zelić, N. Pavlović, V. Delić, Đ. Vasić-Rački, **Optimization of pH and Temperature in the Process of Bioconversion of Glucose to 2, 5-diketo-D-gluconic Acid**, Chem. Biochem. Eng. Q., 16 (2002) 7-11.
6. Đ. Vasić-Rački, J. Bongs, U. Schörken, G.A. Sprenger, A. Liese, **Modeling of Reaction Kinetics for Reactor Selection in the Case of L-erythrulose Synthesis**, Bioprocess Biosyst. Eng., 25 (2003) 285-290.
7. B. Zelić, T. Gerharz, M. Bott, Đ. Vasić-Rački, C. Wandrey, R. Takors, **Fed-batch Process for Pyruvate Production by Recombinant Escherichia coli YYC202 Strain**, Eng. Life Sci., 3 (2003) 299-305.
8. Đ. Vasić-Rački, U. Kragl, A. Liese, **Benefits of Enzyme Kinetics Modelling**, Chem. Biochem. Eng. Q., 17 (2003) 7-18.
9. B. Zelić, S. Gostović, K. Vuorilehto, Đ. Vasić-Rački, R. Takors, **Process Strategies to Enhance Pyruvate Production with Recombinant Escherichia coli: From Repetitive Fed-batch to ISPR with Fully Integrated Electrodialysis**, Biotechnol. Bioeng. 85 (2004) 638-646.
10. B. Zelić, Đ. Vasić-Rački, C. Wandrey, R. Takors, **Modeling of the Pyruvate Production with Escherichia coli in a Fed-batch Bioreactor**, Bioprocess Biosyst. Eng., 26 (2004) 249-258.
11. Z. Findrik, B. Zelić, S. Bogdan, Đ. Vasić-Rački, **Model-based and Experimental Pptimization Using Genetic Algorithm**, Chem. Biochem. Eng. Q., 18 (2004) 105-116.
12. R. Wichmann, Đ. Vasić-Rački, **Lab-scale Cofactor Regeneration**. In: Scheper, T. (Ed): Technology Transfer in Biotechnology. Advances in Biochemical Engineereing/ Biotechnology, Springer Verlag, 92 (2004) 225.
13. B. Zelić, Đ. Vasić-Rački, **Process Development and Modeling of Pyruvate Recovery from Model Solution and Fermentation Broth,** Desalination, 174 (2005) 267-276.
14. B. Zelić, Đ. Vasić-Rački, **Primjena metodologije kemijskog inženjerstva u razvoju bioprocesa**, Kem. Ind, (2005) U tisku.
15. A. Vrsalović-Presečki, Đ. Vasić-Rački, **Modeling of Alcohol Dehydrogenase Production in Bakers Yeast**, Process Biochem., (2005) In print.

Lecturer data

Name, Surname	**Ph.D. Bruno Zelić, Assistant Professor**
E-mail address	bzelic@marie.fkit.hr
Course	**(123)ECOLOGICAL PROCESS ENGINEERING**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Bruno Zelić was born 1973 in Osijek. In 1996 he completed his undergraduate studies in chemical engineering and received his B. S. in chemical engineering from the Faculty of Chemical Engineering and Technology, University of Zagreb. From 1996 to 2003 he worked as assistant at the Faculty of Chemical Engineering and Technology. In 1999 he completed his graduate studies in chemical engineering and received his M. S. in chemical engineering from the Faculty of Chemical Engineering and Technology. In 2003 he received his PhD in chemical engineering at the University of Zagreb. From 2003 he worked as assistant professor at the Faculty of Chemical Engineering and Technology. From 2005 he is a member of editorial board of — Chemical and Biochemical Engineering Quarterly" journal. He is a member of Croatian Society of Chemical Engineers and Technologists (HDKI) and International Organization for biotechnology and Bioengineering (IOBB His research interests are in the field of bioreaction engineering and bioseparation processes. 11 scientific and professional publications, 2 patent applications, and 9 oral and poster presentations on the international conferences present his scientific work.

Date of last election 16.09.1997.

Referent publications of lecturer

1. Zelić, B., Pavlović, N., Delić, V., Vasić-Rački, Đ.: **Kinetic model for the bioconversion of glucose to 2,5-diketo-d-gluconic acid**, Bioproc. Eng., **21**, 45-50, 1999.

List of papers in last 5 years

1. Gerharz, T., Zelić, B., Takors, R. Bott, M.: Produktion von Pyruvat aus Glucose mit Escherichia coli. U: Heiden, S., Erb, R. (Eds): Biokatalyse. Spektrum akademischer Verlag Gmbh, Heidelberg, 2001, 29-33
2. Zelić, B., Pavlović, N., Delić, V., Vasić-Rački, Đ.: Optimization of pH and temperature in the process of bioconversion of glucose to 2, 5-diketo-D-gluconic acid. Chem. Biochem. Eng. Q. 16(2002) 7-11
3. Zelić, B., Gerharz, T., Bott, M., Vasić-Rački, Đ., Wandrey, C., Takors, R.: Fed-batch Process for Pyruvate Production by Recombinant Escherichia coli YYC202 strain. Eng. Life Sci. 3 (2003) 299-305
4. Zelić, B., Gostović, S., Vuorilehto, K., Vasić-Rački, Đ., Takors, R.: Process strategies to enhance pyruvate production with recombinant Escherichia coli: From repetitive fed-batch to ISPR with fully integrated electrodialysis. Biotechnol. Bioeng. 85 (2004) 638-646
5. Zelić, B., Vasić-Rački, Đ., Wandrey, C., Takors, R.: Modeling of the pyruvate production with Escherichia coli in a fed-batch bioreactor. Bioprocess Biosyst. Eng. 26 (2004) 249-258
6. Findrik, Z., Zelić, B., Bogdan, S., Vasić-Rački, Đ.: Model-based and experimental optimization using genetic algorithm. Chem. Biochem. Eng. Q. 18 (2004) 105-116
7. Zelić, B., Vasić-Rački, Đ.: Process development and modeling of pyruvate recovery from model solution and fermentation broth. Desalination. 174 (2005) 267-276
8. Biwer, P. A., Zubert, T. P., Zelić, B., Gerharz, T., Bellmann, K., Heinzle, E.: Modeling and analysis of a new process for pyruvate production. Ind. Eng. Chem. Res. (2005) In print
9. Zelić, B., Vasić-Rački, Đ.: Primjena metodologije kemijskog inženjerstva u razvoju bioprocesa. Kem. Ind. (2005) U tisku

Lecturer data

Name, Surname	**Ph.D. Margareta Glancer-Šoljan, Full Professor**
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Course	**(124) BIOTECHNOLOGY IN ENVIRONMENT PROTECTION**
Institution	Faculty of Food Technology and Biotechnology, Zagreb

Curriculum vitae

Margareta Glancer-Šoljan, born in Teslić (Bosnia and Herzegovina) in 1944 where she graduated from the primary school and secondary technical school (chemistry). Took BSc from the Faculty of Technology in Tuzla (1971). Post-graduate studies in chemical engineering began at the Faculty of Technology in Zagreb (1973) where she took her MSc and PhD in process engineering (1976 and 1977 respectively). Years 1978 and 1979 spent at the Massacussets Institute of Technology (MIT) Cambridge, USA. From 1971 worked as technical associate at Department of Biotechnology, Faculty of Technology in Zagreb. In 1973 elected at the same Faculty for an assistant professor and in 1979 for a associated professor. In 1986 became a professor at the Faculty of Food Technology and Biotechnology, University of Zagreb (graduate and post-graduate studies in the treatment of wastewater and waste materials). Mentored over 80 MSc and 8 PhD theses. Leader of five national and two international scientific projects. Awarded «Nikola Tesla» and «Kliment Ohridski» awards (1988, IFIA 1995 and ARCA 2003). Published over 60 scientific works.

Date of last election 12.01.1999.

Referent publications of lecturer

1. Glancer-Šoljan, M., Ban, S.N., Dvoraček, L., **Biodegradacija betaina pomoću kvasca** *Trichosporon* i mješovite kulture aktivnog mulja. *Prehrambeno-tehnološka revija,* **7** (1-2) (1985) 3-10.
2. Dvoraček, L., Glancer, M., Ban, S. **Degradation of phenol in industrial waste waters. Part I: Selection of microorganisms**, *Prehrambeno-tehnološka i biotehološka revija*, **27** (2-3) (1989) 147-154.
3. Glancer-Šoljan, M. **New technologies for biological treatment of municipal and industrial waste waters by using suitable microorganisms as starter culture,** *Kem. Ind*. **42** (9)(1993) 323-330.
4. Landeka, T., Šoljan, V., Glancer, M., **Razgradnja tiocijanata odabranim sojevima bakterija i združenim mješovitim kulturama**, *Prehrambeno-tehnol. botehnol. rev.*, **31** (4) (1993) 137-143.
5. Glancer-Šoljan, M., Landeka Dragičević, T., Šoljan, V., Ban, S., **Biološka obradba otpadnih voda**, Interna skripta, Izdavač Kugler, 2002, Zagreb.

List of papers in last 5 years

1. Glancer-Šoljan, M., Ban, S., Landeka Dragičević, T., Šoljan, V., Matić, V. (2001) Granulated mixed microbial culture suggesting successful employment of bioaugmentation in the treatment of process wastewater. *Chem.Biochem.Eng.Q.* **15** (3), 87-94.
2. Glancer-Šoljan, M., Šoljan, V., Landeka Dragičević, T., Čačić. Lj. (2001) Aerobic degradation of formaldehyde in wastewater from the production of melamine resins. *Food technol. biotechnol.* **39** (3), 197-202.
3. Čačić, Lj., Šoljan, V., Dragičević, T.L., Glancer-Šoljan, M., Vuksan, B., Krivohlavek, A. (2002) The removal of nitrogen substances from a chemically defined medium by the addition of liner alkylbenzene sulfonate (LAS) using a mixed bacterial culture of nitrificants and denitrificants. Limnological reports. Proceedings of the 34th Conference in Tulcea, August 2002 (Eds. G. Brezeanu, R. Stiuca), Tulcea, Romania, Vol. **34**, 21-30.

4. Landeka Dragičević, T., Zanoški, M., Glancer-Šoljan, M., Šoljan, V., Matić, V., Krajina , J. (2004) Activity of the granulated biomass of the mixed microbial culture for highly efficient carbon and nitrogen removal in the process wastewater. Proceedings of the European Symposium on Environmental Biotechnology, ESEB 2004, (Ed. W. Verstraete), 25-28 April 2004, Oostende, Belgium, 645-648.

Lecturer data

Name, Surname	**Ph.D. Stanislav Tedeschi, Professor Emeritus**
E-mail address	vlasta@grad.hr
Course	**(125) ENVIRONMENTAL PROTECTION IN CONSTRUCTION**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

Born: May 27, 1931, in Korčula, Croat, citizen of R. Croati.
Bachelor of Science in Civil Engineering – University of Zagreb, 1958.
Master of Science in Environmental Engineering – University of Zagreb, 1976.
PhD degree – University of Zagreb, 1980.
From 1959 to 1975 he worked at Physical Planning Department of Dalmatia – Split, as designer of water – supply and wastewater systems.
From 1967 to 1970 he was member of planning group for «South Adriatic Project» - UNDP/SFRJ.
From 1975 to 1977 lecturer at the Faculty of Civil Engineering – Split.
From 1977 to 1978 he worked at Engineering Design Department – Zagreb, as designer of wastewater systems.
Since 1978 employed at the Faculty of Civil Engineering- Zagreb. The Faculty apointed him: associate Professor in 1981, Full Professor in 1986, 1991, 1996, Professor emeritu sin 2002.
On the Faculty of Civil Engineering Zagreb he teached on graduate and post-graduate courses in environment protection, water conservation and wastewater treatment.
From 1988 to 1998 he was scientific coordinator of the priority action «Solid and Liquid Waste Management» of UNEP Mediterranean Actions programme.
From 2002 to 2003 temporary consultant of the World Bank for the Coastal Cities Pollution Control Project in R. Croatia.
Member of: The New York Academy of Sciences, International Water Association, Croatian Association on Water Pollution Control, association of Civil Engineers of Croatia. He use English, Italian and partially Russian and French.

Date of last election 1.10.2002.

Referent publications of lecturer

1. Tedeschi, S.: **Zaštita voda,** Zagreb, Hrvatsko društvo građevinskih inženjera, 1997., 297 str.
2. Tedeschi, S.: **Marine Environment,** Split: UNEP/MAP-Regional Activity Centre – Priority Actions Programme, 1989., 54
3. Tedeschi, S.: **Planification et conception des projects d'assainissement dans les agglomerations cotieres Mediterraneennes,** Split UNEP/MAP – Regional Activity Centre – Priority Actions Programme, 1992, 95 str.
4. Tedeschi, S.: **Disposal of Municipal Solid Waste Sanitary Landfills Split:** UNEP/MAP – Regional Activity Centre – Priority Actions Programme, 1994, 55 str.
5. Studija o utjecaju na okoliš sustava javne odvodnje Srima-Vodice-Tribunj, srpanj 2003.
6. Studija o utjecaju na okoliš luke Rabac, rujan 2003.
7. Studija o utjecaju na okoliš sustava javne odvodnje Biograda na moru, studeni 2003.
8. Studija o utjecaju na okoliš sustava javne odvodnje Nacionalnog parka Plitvička jezera, lipanj 2004.
9. Studija o utjecaju na okoliš sustava javne odvodnje grada Drniša, studeni 2004.

List of papers in last 5 years

1. Tedeschi, S.: Ponovna uporaba vode, Zbornik radova: Voda na hrvatskim otocima, Zagreb, Hrvatsko hidrološko društvo, 1998, 199-210.
2. Tedeschi, S.: Opportunities for Investing in Water Project sin Croatia, Proceedings of Third Annual Conference Private Sector Participation in the Water Industries of Central and Eastern Europe, Wiena: IBC Global Conferences Lmtd, 1999, 8.1-8.14.
3. Bezak, S, Tedeschi, S., Radujković, M.: Optimalizacija projekata zaštite okoliša kroz studiju troškova i koristi, Zbornik radova 2. hrvatska konferencija o vodama Hrvatske vode od Jadrana do Dunava, Hrvatske vode, 1999., 1067-1075.
4. Tedeschi, S.: Klasifikacija voda prema WFD i hrvatskoj legislativi, Zbornik savjetovanja Prošireni obuhvat zaštite voda i obalnog mora u okviru integralnog gospodarenja vodama, Zagreb, 07.lipnja 2001., Hrvatske vode, 57-62.
5. Tedeschi, D.: Društvena opravdanost izgradnje uređaja za pročišćavanje otpadnih voda grada Zagreba, Građevinar (53) 2001., 205-210.
6. Tedeschi, S.: Zaštita priobalnog mora Splita, Solina, Kaštela i Trogira, Građevinar (55) 2003., 443-448.

Lecturer data

Name, Surname	**Ph.D. Branko Salopek, Full Professor**
E-mail address	bsalop@rgn.hr
Course	**(126) ENVIRONMENTAL PROTECTION AT EXPLOITATION OF MINERAL RAW MATERIALS**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb

Curriculum vitae

Branko Salopek was born 1942 in Zagreb, Croatia, and graduated as mining engineer (E.M.) from the Faculty of Mining, Geology and Petroleum Engineering at the University of Zagreb. After graduating he was with the Jugokeramika Company for three years, and then joined the Institute of Mineral Dressing at his Alma Mater as scientific Assistant. In 1982 he obtained the degree of Doctor of Sciences (Dr.Sc.), and. in the 1991 he was elected Professor at the mentioned Zagreb Mining Faculty, and since then he has been working there. From 1989 to 1995 he was the Vice-Dean at the Faculty of Mining, Geology and Petroleum Engineering, and from 1997 to 2001. he was the head of the Department of mining and geotechnics.

Up to now he has published more then 70 scientific and professional papers. Most significant scientific paper in the field of mineral processing technology deals with problems of sedimentation, filtration, mathematical modeling of the comminution and classification processes, and crushing and grinding of ores and industrial minerals. In the field of environmental technology the papers mostly deal with problems of red mud disposal, dust emision, and pollutant emision from the thermoenergetic plants, quorries, ect. In reacent time some papers deal with the problems of waste recycling, soil cleaning and reclamation of quorries and gravel-pits in Croatia.

He is the member of Society of Croatian Mining Engineers, CIM – Canadian Institute of Mining, Metallurgy and Petroleum, and SME – Society of the Ameraican Institute of Mining, Metallurgical and Petroleum Eng.,Inc. He is also the full member of Croatian Academy of Engineering.

Date of last election 5.05.1998.

Referent publications of lecturer

1. Salopek, B., Aurer Jezerčić, I., Bedeković, G.: Law Regulations and Emissions Control System in Croatian Thermoenergetic Plants. International Carpathian Control Conference ICCC'2001, Krynica, 2001, 531-538.
2. Salopek, B., Bedeković, G.: The recycling of metallic scrap in Croatia. VI Southern Hemisphere Meeting on Mineral Technology, Rio de Janeiro, 2001, Vol. 2, 690-693.
3. Salopek, B., Bedeković, G., Sobota, I.: Beneficiation and Utilization of Electric Furnace Slag. Conference on Environment and Mineral Processing. Ostrava, 2002, Vol. II, 367-372.
4. Salopek, B., Sobota, I., Bedeković, G.: Production of Construction Aggregates in Urban Aeras. Int. Conference on Sustainable Development Indicators in the Mineral Industries (SDIMI 2003). Milos Island, 2003, 273-278.
5. Salopek, B., Sobota, I., Bedeković, G.: Application of Mineral Processing Techniques in Soil Washing. 1st Int. Symp. on Environmental Management. (Book of Abstracts), Zagreb, 2003, 50.
6. Rumenjak, D., Salopek, B., Rajković, D.: Change of decision-making principles in environmental impact assessment applied on screening matrices. 1st Int. Conference on Advances in Mineral Resources Management and Envieonmental Technology. Hania (Kreta), 2004, 751-754.
7. Salopek, B., Galić, M.: Ljevaonički otpad i zaštita okoliša. Znanstveno-stručni ljevački skup. Zagreb, 2004, 81-85.
8. Premur, V., Salopek, B.: Recycling of Waste Mineral Wool. Global Symp. on Recycling, Waste Treatment and Clean Technology. Madrid, 2004, Vol. III, 2789-2790.

List of papers in last 5 years

1. Salopek, Branko: Studij rudarstva na početku novog tisućljeća. Rudarsko-geološko-naftni zbornik. 12 (2000.) ; pp. 125-128.
2. Salopek, Branko; Bedeković, Gordan: Sitnjenje - prvi stupanj u oplemenjivanju mineralnih sirovina. Rudarsko-geološko-naftni zbornik. 12 (2000) ; pp. 83-88.
3. Salopek, Branko; Bedeković, Gordan: Air Quality Control in Quarries of Technical Stone. Proceedings of the Ninth International Symposium on Mine Planing and Equipment Selection Athens : A.A.Balkema Publishers, 2000. pp. 951-956.
4. Salopek, Branko; Bedeković, Gordan: Beneficiation of Sand from the Sava-River Bed. Proceedings of the XXI International Processing Congress Rome : Elsevier, 2000. pp. C11-26 - C11-31.
5. Salopek, Branko; Bedeković, Gordan: Mjere zaštite u kamenolomima tehničkog kamena. Work and Safety. 5 (2001) , 3; pp. 141-166.
6. Salopek, Branko; Bedeković, Gordan: The Recycling of Metallic Scrap in Croatia. VI Southern Hemisphere Meeting on Mineal Technology - VOLUME 2 Rio de Janeiro : CETEM/MCT, 2001. pp. 690-693.
7. Salopek, Branko; Jezerčić-Aurer, Indira; Bedeković, Gordan: Law Regulations and Emission Control System in Croatian Thermoenergetic Plants. Proceedings of International Carpathian Control Conference Krynica : Inżynierii Mechanicznej i Robotyki AGH Krakowie, 2001. pp. 531-538.
8. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Vertical Impact Crusher In High-grade Chippings Production. Proceedings of the Tenth International Symposium on Mine Planing and Equipment Selection New Delhi : Mohan Primlani for Oxford & IBH Publishing Co. Pvt. Ltd., 2001. pp. 3-10.
9. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Konstrukcijske značajke i učinkovitost vertikalnih udarnih drobilica. Rudarsko-geološko-naftni zbornik. 14 (2002) ; pp. 65-75.
10. Bedeković, Gordan; Salopek, Branko; Sobota, Ivan: Beneficiation and Utilization of Electric Furnace Slag. 6th Conference on Environment and Mineral Processing (Part II) Ostrava : VŠB - TU Ostrava, 2002. pp. 367-372.
11. Salopek, Branko: Application of the Hydrocyclone in the Fine Tailings Dewatering. Proceedings of the Eleventh International Symposium on Mine Planning and Equipment Selection. Ostrava : VŠB - TU Ostrava, 2002. pp. 211-215.
12. Salopek, Branko; Pfaff, Slavka; Rajić, Rajna: Statistical Experimental Design Approach in Coal Briquetting. Proceedings of Mine Planing and Equipment Selection. The Australasian Institute of Mining and Metallurgy, 2003. pp. 349-352.
13. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Production of Construction Aggregates in Urban Aeras. Proceedings of the International Conference on Sustainable Development Indicators in the Mineral Industries (SDIMI 2003). Milos Island : Milos Conference Cener - George Eliopoulos, 2003. pp. 273-278.
14. Salopek, Branko; Sobota, Ivan; Halle, Radovan; Pfaff, Slavka: The Effect of Attrition in the Quartz Sand Beneficiation. Proceedings of X^th Balkan Mineral Processing Congress Mineral Processing in the 21th century Sofia : DJIEV TREADE LTD, 2003. pp. 565-569.
15. Bedeković, Gordan; Salopek, Branko; Sobota, Ivan: Comparison of Flotation Column and Mechanical Cell in Coal Flotation. Proceedings of the 8th Conference on Environment and Mineral Processing. Ostrava : VŠB TU Ostrava, 2004. pp. 23-28.
16. Rumenjak, Damir; Salopek, Branko; Rajković, Damir: Change of decision-making principles in environmental impact assessment applied on screening matrices. Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Technology. Hania : Heliotopos Conferences, 2004. pp. 751-754.
17. Salopek, Branko; Sobota, Ivan; Halle, Radovan; Bedeković, Gordan: Improvement of quartz sand quality using attrition cleaning. Proceedings of the Thirteenth International Symposium on Mine Planing and Equipment Selection. Lieden : A.A.Balkema Publishers, 2004. pp. 303-308.
18. Salopek, Branko: Mining Engineering Education - A Vision for the Future. Annual 2004 of the Croatian Academy of Engineering. Zagreb : Croatian Academy of Engineering, 2004. pp. 33-41.

19. Salopek, Branko; Galić, Mile: Ljevaonički otpad i zaštita okoliša. Znanstveno-stručni ljevački skup Zagreb 2004. Zagreb : Hrvatsko udruženje za ljevarstvo, 2004. pp. 81-85.
20. Premur, Vitomir; Salopek, Branko: Recycling of Waste Mineral Wool. Proceedings of the "Rewas'04": Global Symposium on Recycling, Waste Treatment and Clean Technology VOLUMEN III. San Sebastian : TMS & Inasmet, 2004. 2789-2790.
21. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Application of Mineral Processing Techniques in Soil Washing. Book of Abstracts Zagreb : Faculty of Chemical Engineering and Technology, University of Zagreb, 2004. pp. 50.

Lecturer data

Name, Surname	**Ph.D. Danilo Feretić, Professor Emeritus**
E-mail address	danilo.feretic@fer.hr
Course	**(127) POWER SYSTEMS AND THE ENVIRONMENT**
Institution	Faculty of Electrical Engineering and Computing, Zagreb

Curriculum vitae

Danilo Feretić was born in Omišalj (Island Krk, Croatia) in 1930. He graduated 1954 in Electrical Engineering at Technical Faculty in Zagreb .He obtained Msc. and PhH degrees in the field of nuclear engineering . He additionally specialized in nuclear technology at Ispra institute (Italy) in 1 and in Westinghouse R&D center in Pittsburgh (USA) .In 1982, he was elected as professor at the Faculty of Electrical engineering at University of Zagreb, in the period 1990-94 he was acting as dean of the Faculty. In 2002 we was elected as professor emeritus of University of Zagreb. He was acting as chief scientific investigator on two scientific projects sponsored by the Ministry of science and technology of Croatia and on three scientific projects sponsored by the International Atomic Energy Agency. The investigation was related to nuclear safety and to quantification of environmental damages caused by operation and construction of nuclear and conventional power plants (fossil and renewable).He is author of several university textbooks and of numerous scientific papers. For the subject of present curriculum is particularly relevant his University textbook "Electrical Power Plants and the Environment" issued in 2000 and in 2001 awarded by the Croatia academy of science and art.

Date of last election

Referent publications of lecturer

1. Kovačević, T., Tomšić, Ž., Feretić, D.: **Vrednovanje šteta po okoliš u elektroenergetici**, Energija, **46** (4), 219-228, 1997.
2. Feretić, D., Tomšić, Ž.: **Tehnički, energetski i ekonomski aspekti korištenja prirodnog plina u elektroenergetici**, Energija, **46**(3), 145-154, 1997.
3. Feretić,D.,Tomšić, Ž., Čavlina,N.: **Feasibility study of wind energy utilization in Croatia**, Energy International Journal., **24**(3), 239-246, 1999.
4. Feretić, D., Tomšić, Ž., Škanata, D., Čavlina, N., Subašić, D.: **Elektrane i okoliš**, Ur: Elezović Nenad, Element, Zagreb, 2000.
5. Feretić, D., Tomšić, Ž., Jakšić, D.: **Multi-Criteria Evaluation of Nuclear Option, full paper 8 pages**, S-1.1 Conference Proceedings 4th International Conference of Croatian Nuclear Society on Nuclear Option in Countries with Small and Medium Electricity Grids, Hrvatsko Nuklearno Društvo (Croatian Nuclear Society); IAEA Vienna; European Nuclear Society, Dubrovnik, Croatia, June 16-20, 2002.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Natalija Koprivanac, Full Professor**
E-mail address	nkopri@marie.fkit.hr
Course	**(128) ENVIRONMENTAL ENGINEERING**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Dr.sc.Natalija Koprivanac was born in Zagreb. Bachelor degree 1967, Faculty of Technology in Zagreb. Master of Science degree 1974, Faculty of Natural Science. Ph.D. 1981, Faculty of Technology. From 1967-1968 collaborator, Faculty of Agriculture and Forestry, Zagreb From 1968-assistant-, Faculty of Technology, -1982 assistant professor, 1987 associate professor. From 1996-2002 full professor, Faculty of Chemical Engineering and Technology Zagreb and from 2002 ć full professor (permanent position), University of Zagreb. Publishing: 50 papers in scientific journals with international referees, and 28 publications in other scientific and professional journals. Other activities, over 20 studies and projects, innovations and technological improvements. Leadership of more than 50 diploma works, 6 master of degree thesis, 5 disertations. 1999/2000 visiting professor at FAMU-FSU College of Engineerig, Tallahassee, Florida, USA, Fulbright fellow. From 2002. coordinator of international academic postgraduate —«Environmental Management Study».

Date of last election 12.12.2000.

Referent publications of lecturer

1. Koprivanac,N., Jovanović-Kolar,J. Bosanac,G., Meixner,J.: **Studies on wastewater decolorization by the precipitation/flocculation process**, Microchemical Journal, **46**, 379-384, 1992.
2. Koprivanac, N., Lončarić Božić, A., Papić, S.; Meixner, J.: **Organic halides removal from dye wastewater, Physical nad thermal technologies**: Remediation of Chlorinated and Recalcitrant Compounds / Wickramanayake, B.G. ; Gavaskar, Ar. (ur.). Columbus, Ohio : Battelle Press, 215-220, 2000.
3. Meteš, A., Koprivanac, N., Glasnović, A.: **Flocculation as a treatment method of printing ink wastewater**,Water Environment Research. **72**,6, 680-688,2000.
4. Papić, S., Koprivanac, N., Meteš, A.: **Optimizing polymer-induced flocculation process to remove reactive dyes from wastewater**, Environmental Technology, **21**, 97-105, 2000.
5. Koprivanac, N., Lončarić Božić, A., Papić, S.: **Cleaner production processes in the synthesis of blue anthraquinone reactive dye**, Dyes and Pigments, **44** , 33-40, 2000.

List of papers in last 5 years

1. N.Koprivanac, A.Lončarić Božić, S.Papić, **Cleaner Production Processes in the Synthesis of Blu Anthraquinone Reactive Dyes**, Dyes&Pigm., 44 (2000) 33-40.
2. A.Meteš, N.Koprivanac,A.Glasnović, **Flocculation as a Treatment Method of Printing Ink Wastewater**, Water Environment Research, 72 (6) (2000) 680-688.
3. S.Papić, N.Koprivanac, A.Lončarić-Božić, **Removal of Reactive Dyes from Wastewater using Fe(III) Coagulant**, Journal of the Society of Dyers and Colourists, 116 (2000) 352-358.
4. S.Papić, N.Koprivanac, A.Meteš, **Optimizing polymer-included flocculation process to Remove Reactive dyes from wastewater**, Environmental Technology, 21 (2000) 97-105.
5. S.Papić, N.Koprivanac, A.Lončarić Božić,A.Meteš, **Removal of Some Reactive Dyes from Synthetic Wastewater by Combined Al(III) Coagulation/Carbon Adsorption Process**, Dyes and Pigments, 62 (2004) 291-298.

6. A. Lončarić Božić, N. Koprivanac, P. Šunka, M. Člupek, V. Babicky, **Organic Synthetic Dye Degradation by Modified Pinhole Discharge**, Czechoslovak Journal of Physics, 54 (2004) 1-6.
7. N. Koprivanac, H. Kušić, D. Vujević, I. Peternel, B.R. Locke, **Influence of Iron on Degradation of Organic Dyes in Corona, Journal of Hazardous Materials**, 117 (2004) 113-119.
8. D.Vujević, N.Koprivanac, A.Lončarić Božić, R.B.Locke,**The Removal of Direct Orange 39 by Pulsed Corona Duscharge from model Wastewater**, Environmental Technology. 25(7) (2004) 791-800.
9. H. Kušić, N. Koprivanac, I. Peternel, B.R. Locke, **Hybrid Gas/Liquid Electrical Discharge Reactors with Zeolites for Colored Wastewaters Degradation**, Journal of Advanced Oxidation Technologies, u tisku 2005.
10. S. Papić, N. Koprivanac, A.Lončarić Božić, D. Vujević, S. Kučar Dragičević, H. Kušić, I. Peternel, **AOPs in Azo Dye Wastewater Treatment**, Water Environment Research, u tisku 2005.

Lecturer data

Name, Surname	**Ph.D. Nikola Ružinski, Full Professor**
E-mail address	nikola.ruzinski@fsb.hr
Course	**(129) PROCESSES AND TECHNOLOGIES FOR ENVIRONMENTAL PROTECTION**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb

Curriculum vitae

Professional Experience

Professional and scientific work of prof.dr.Nikola Ružinski is connected to educational, research, development and consulting work in Water Treatment and Environmental Technologies. As author he has published scientific and professional articles and has coordinated a number of projects. At the present time dr. Nikola Ružinski is professor at the Faculty of Mechanical Engineering and Naval Architecture and he is the head of Department of Environmental Protection and Water Treatment.

Scientific & Professional References

18 papers published in scientific journals., 25 papers published in proceedings of conferences. More than 80 professional projects.

Societies

Croatian Society of Mechanical Engineers, DI Zagreb, Croatian Energetic Society, Croatian Society for Water Protection, International Institute of Refrigeration, (IIR), France, American Water Works Association, (AWWA) USA

Higher Education

Bachelor of science Mechanical Engineering, University of Zagreb; Master of science 1985, and Doctor of science (DE) 1990, University of Zagreb - Faculty of Mechanical Engineering and Naval Architecture, Dpt.of Energy

Languages	***German, English***
General	Born in April 07, 1945, Novoselec, Croatia He lives in Zagreb, is married, and has one son.

Date of last election 12.06.2001.

Referent publications of lecturer

1. Ružinski, N.; Filipan T.; Benc, S.: "*Application of Natural Activated Zeolites in the Treatment of Highly Contaminated Wastewaters*", E.A. Huisman at all: Biological Basis of Sustainble Animal Production, EAAP Publication No. 67, 1994, Wageningen Pers, Netherlands 1994. (193-197)
2. Benović, A.; Lovrić, J.; Ružinski, N.: Ballast Waters: "Problems and Perspectives", Naše More 42(1-2)/95, (5-8)
3. Ružinski, N.: "*The Influence of Energetic Processes on the Tracegases Concentration in the Earth Atmosphere*", Energy and Environment, Rijeka 1992. (263-270). ISBN 86-81601-01-9
4. Ružinski, N.; Mustapić, M.; Dobrović, S.: "*Choice of the Power Plants Fuel Based Upon Ecological Aspects*", Energy and Enviroment, Rijeka 1994. (199-208), ISBN953-96054-1-5
5. Filipan, T.; Prpić, B.; Ružinski, N.: "*Štetne posljedice viška N-spojeva u ekosustavu šuma i opskrba pitkom vodom*", Šumarski list, br.9-10, Zagreb 1996, (411-418)
6. Filipan, T.; Ružinski, N.; Cerjan-Stefanović, Š.: "*Prirodni zeoliti za obradu otpadnih voda s visokim sadržajem dušičnih spojeva*" Sigurnost, Volume 39, Zagreb 1997, (1-10)

List of papers in last 5 years

1. Ljubas, D.; Ružinski, N.; Dobrović, S.: "*Utjecaj redoslijeda primjene koagulanata i adsorbenata na smanjenje udjela prirodnih organskih tvari u jezerskoj vodi*", Strojarstvo 41 (5,6) 191-200 (1999.)
2. Zvizdić, D.; Grgec-Bermanec, L.; Ružinski, N.: "*NDT and Characterization of Low Gauge Pressure Gas Sensors*", INSIGHT, U.K. Volume 42, Nr.1, o1.2000.
3. Zvizdić, D.; Ružinski, N.: "*Design of Heath Transfer Network Analogy Model for Complex Thermal Systems*", International Design Conference- Design 2000, Dubrovnik, 2000, ISBN 953-6313-38-3.
4. Ružinski, N.; Ljubas, D.; Juretić, H.: "*Membrane Technoligies in Preparation of Make-up Water*", Interklima, Zagreb, 2001.
5. Ružinski, N.; Dobrović, S.: "Ecologically Friendly Desinfection in Closed Water Subsystems", Interklima, Zagreb, 2001.
6. Juretić, H.; Ružinski, N.; Dobrović, S.: "*Interfacial Bahaviour in the Colloidal Systems and its Influence on Water Clarificatiom Processes*", Transactions of FAMENA, Volume 24, Zagreb, 2000 (63-74)
7. Filipan, T; Ružinski, N.; Cerjan-Stefanović, Š.; Farkaš, A-M: "*Prirodni zeoliti u zaštiti okoliša*", Sigurnost, Volume 42, Zagreb 2000, (1-11)
8. Crnčević, M.; Peharda, M.; Bolotin, J.; Dobrović, S.; Benović, A.; Bratoš, A.; Kožul, V.; Glavić, N.; Tutman, P.; Lovrić, J.; Ružinski, N.: "*Effects of UVC radiation on survival of Artemia cysts and nauplii (Crustacea, Branchiopoda)*", Rapport du 37e Congres de la CIESM / Briand, Frederic (ur.), Monaco: CIESM, 2004.
9. Dobrović, S.; Ružinski, N.; Juretić, H.: "*Alteration of Chemical Disinfection to Environmentally Friendly Disinfection by UV-Radiation*", Sustainable Development of Energy, Water and Environment Systems, Afgan, Naim H., Duić, Neven, Bogdan, Željko (ur.)., Lisse, Abingdon, Exton (PA), Tokyo, 231-239, A.A. Balkema Publishers, 2004.
10. Ljubas, D.; Ružinski, N.; Dobrović, S.: "*The application of solar radiation for the treatment of lake water*", Sustainable Development of Energy, Water and Environment Systems, Afgan, Naim H., Duić, Neven, Bogdan, Željko (ur.)., Lisse, Abingdon, Exton (PA), Tokyo, 119-127, A.A. Balkema Publishers, 2004.

Lecturer data

Name, Surname	**Ph.D. Nenad Mikulić, Assistant Professor**
E-mail address	nenad.mikulic@mzopu.hr
Course	**(2010) ENVIRONMENTAL IMPACT ASSESSMENT (EIA)**
Institution	Ministry of Environmental Protection, Physical Planning and Construction, Zagreb

Curriculum vitae

Graduated at the age of 24 from the Faculty of Technology, University of Zagreb in 1970. At the Faculty of Chemical Engineering and Technology, University of Zagreb, obtained a Master's degree in 1980 and Doctor's degree in 2003 in chemical engineering.
Graduated from the Faculty of Civil Engineering, University of Zagreb in 1997. Fluent in English and French and has a basic knowledge of Italian.
From 1971 until 1989 employed with the Civil Engineering Institute of Croatia in Zagreb, managed the investigation and testing of materials, and water protection. Since 1989 employed with the Ministry of Environmental Protection, Physical Planning and Construction. In 1995/96 the deputy director of former State Directorate for Environmental Protection and today the head of the Environmental Impact Assessment Department. Headed the Sofia initiative on EIA programme, member of the OECD Bureau of Environment for Europe programme, the chairman and a member of the UNECE Convention on Environmental Impact Assessment in a transboundary context (Espoo Convention). Working on programmes: "Protection of the Danube River Basin", Alpe -Adria, "Environment for Europe" and "Environment and Health" (WHO/EURO). "Focal point" in the MAP/UNEP programme, a member of the Implementation Committee to the Espoo Convention and the Commission for the Challenges of Modern Society of NATO. By decision of the Government of Croatia nominated a head of the Working group for the preparation of the negotiation on accession of Croatia to the European Union. Investigates distribution of heavy metals in the environment and works on the development of environmental management instruments. The results of his work are published in 25 papers: among them 5 scientific in bulletins indexed in current contents database, 3 indexed in secondary publications, 1 in Proceedings of an international conference, 3 papers in Proceedings of domestic conferences, 4 professional papers in trade journals and 12 professional papers in Proceedings of various conferences. Co-author of chapters in 4 books. As appointed assistant professor lectures on the postgraduate study in "Eco-engineering" at the University of Zagreb and on postgraduate study "Regional cooperation and integration into the European Union" at the University Josip Juraj Strossmayer of Osijek. Lectures on professional training programme at the Faculty of Civil Engineering, University of Zagreb. Founder and chairman of the Association of Experts in Environment and Nature Protection. A member of the programme committee of the Gornji Grad forum in Zagreb.

Date of last election 17.01.2005.

Referent publications of lecturer

1. Mikullić N., Istraživanje kemijskih onečišćenja i razvoj modela poluzatvorenih morskih zaljeva, Doktorska disertacija, Fakultet kemijskog inženjerstva i tehnologije Sveučilišta u Zagrebu, lipanj 2003., str. 140.
2. Mikulić, N., Rumenjak, D.: Sustav upravljanja okolišem-Procjena utjecaja na okoliš, Sabor hrvatskih graditelja, Cavtat, 2000, Zbornik radova, str.909-917.
3. Mikulić, N., Dusik, J.: Recent Developments of Strategic Environmental Assessment in Central and Eastern Europe, OECD/ECMT Conference on Strategic Environmental Assessment for Transport, Warsaw, 14-15 October, 1999., str. 11.
4. Mikulić, N., Dusik, J., Sadler, B., Casey-Lefkowitz, S.: Strategic Environmetal Assessment in Transitional Countries, The Regional Environmental Center for Central and Eastern Europe, Szententdre, 1998., str. 59.

5. Mikulić, N., Jelić-Muck., V.: "Zaštita okoliša i održivi razvoj". Sabor hrvatskih graditelja '96. Cavtat, 1996., Zbornik radova, str.79-87.
6. Krakar, Z., Mikulić, N., Novak, J.: "The Environmental Management Information System - Croatian Aproach". 8. Symposium Informatik Fur den Umveltschatz. Hamburg, 1994., str. 151-158.
7. Krakar, Z., Mikulić, N.: "A Metastructure of the Environmental Management Information System in the Republic of Croatia". First European ISCO Conference. Bratislava, 1994., str. 53-55.
8. Mikulić N., Precali R., Degobbis D., Picer M., Raspor B., Šipoš L., Šobot S., Zvonarić T.: Monitoring Programme of the Eastern Adriatic Coastal Area, Report for 1983-1991, MAP Technical Reports Series No. 86, UNEP, Athens 1994., str. 311.
9. Mikulić, N., Model asfaltne baze, Magistarski rad, Tehnološki fakultet Sveučilišta u Zagrebu, ožujak, 1980., str.140.

List of papers in last 5 years

1. Oreščanin, V., Mikulić, L., Rubčić, M., Lulić, S., Nađ, K., Mikulić, N., Pavlović, G.: Purification of electroplating waste waters utilizing waste by-product ferrous sulfate and wood fly ash, Journal of Environmental Science and Health, Part A, 39 (9), 2437-2446, 2004.
2. Mikulić, N., Oreščanin, V., Legović, T., Žugaj, R.,: Estimation of heavy metals (Cu, Zn, Pb) input into Punat Bay, Environmental Geology, 46 (1), 62-70, 2004.
3. Mikulić, N., Plešnik, N.,: Zakonski okviri i Projekt Družba Adria, Kemija u industriji, 52 (7-8), 353-358, 2003.
4. Oreščanin, V., Mikulić, N., Obhođaš, J., Nađ, K., Valković, V.: Distribution of trace elements in the coastal sea sediments: Punat Bay in the Nothern Adriatic, Journal of Trace and Microprobe Techniques, 20 (2), 247-260, 2002.
5. Oreščanin, V., Nađ, K.,Valković, V., Mikulić, N., Meštrović, O.: Red mud and waste base: Raw materials for coagulant production, Journal of Trace and Microprobe Techniques, 19 (3), 419-428, 2001.
6. Valković, V., Oreščanin, V., Mikulić, N., Obhođaš, J.:Gechemical map of island Krk in Adriatic sea: Elements determined by XRF, Journal of Trace and Microprobe Techniques, 19 (3), 393-408, 2001.
7. Horvatinčić, N., Groening, M., Mikulić, N., Obhođaš, J., Valković, V.: Investigation of Groundwater Infiltration to Seawater in Punat Bay, Croatia, by Measurements of Conductivity and Stable Isotopes in Water, Acta Carsologica, 29 (6), 2000.

Lecturer data

Name, Surname	**Ph.D. Ante Barić, Associate Professor**
E-mail address	abaric@unepmap.gr
Course	**(2010) ENVIRONMENTAL IMPACT ASSESSMENT (EIA)**
Institution	Institute of Oceanography and Fisheries Split

Curriculum vitae

He was born in Zadar in 1943, where he received, in 1961, his high school (gymnasium) diploma. In 1965 he graduated from the Faculty of Chemical Technology of the University of Split. He received his M.Sc, and Ph.D. in chemistry from the Faculty of Science of the University of Zagreb in 1967 and 1972 respectively.
He was employed by the Rudjer Boskovic Institute in Zagreb as an assistant from 1965 – 1971 and as a research assistant from 1973 – 1974 in the Center for Marine Research of the Rudjer Boskovic Institute in Rovinj. During 1982-1989 he was assistant professor at the Faculty of Science of the University of Split, lecturing General and Inorganic Chemistry. During the same period he was also the manager of the Faculty. From 1989 to 1995 he was the Director of the Institute of Oceanography and since 1995 Head of the Laboratory of Marine Chemistry and Sedimentology. During 1999-2001 he was Head of the Department of the Marine Study of the University of Split and deputy director of the National Monitoring Programme of the Adriatic.
Since 1980 he was a permanent associate to the Regional Activity Centre for Priority Actions Programme of the Mediterranean Action Plan of the United Nations Environment Programme, where he was the scientific coordinator of an action on EIA. He was the principal coordinator of the EU financed project on the Introduction of Strategic Action Assessment in Planning System of Mediterranean countries. As from 2001 he is on leave from the Institute and seconded to the Mediterranean Action Plan in Athens, Greece, as Manager of its Global Environmental Facility (GEF) project, for the protection of the Mediterranean Sea against pollution from land-based sources, a project financed by the UNEP's Global Environmental Facility (GEF). He is a member of the Committee for the Adriatic HAZU, Croatian Society for Water Protection, of CIESM, of MEDCOAST , and of the EIA Network of the EIA Centre of the University of Manchester.

Date of last election

Referent publications of lecturer

1. Mladineo, N., Stošić, S., Tomić, T., Barić, A.: **The application of multicriteria analysis estimating pollution in urban and coastal zones**, Revue des systemes de decision, **1** (4), 401-419, 1992.
2. Barić, A., Marasović, I., Gačić, M.: **Eutrophication phenomenon with special reference to the Kaštela bay**, Chemistry and Ecology, **6**, 51-68, 1992.
3. Milicic, J., Šimunovic, I., Baric, A., Mladineo, N., Trumbic, I.: **Project "Environmental management of the Kaštela Bay": Synthesis of the first research cycle**: 1988-1994, University of Split in cooperation with the Croatian Academy of Arts and Sciences, Split, 196, 1993.
4. Baric, A.: **Environmental assessment of county of Dubrovnik-Neretva land use plan. In strategic environmental assessment in transitional countries**. Ed: Mikuluć,N., Dusik,J., Sadler,B., Casey-Lefkowitz,S., REC for Central and Eastern Europe, Szentendre. 19-22, 1998.
5. Baric, A., Pavasovic, A.: **UNEP/MAP/WHO: Remedial actions for pollution mitigation and rehabilitation in cases of non-compliance with established criteria**, MAP Technical Report Series No. 132, UNEP/MAP, Athens, 78, 2001.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Marin Hraste, Full Professor**
E-mail address	mhraste@pierre.fkit.hr
Course	**(211) MECHANICAL SEPARATION PROCESSES**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Born in Sisak, Croatia, September 24, 1938. He took B.A. at Faculty of Technology, University in Zagreb 1962, M.Sc. at Faculty of Pharmacy, University of Zagreb 1967 and Ph.D, at Faculty of Technology, University of Zagreb 1972. He was trainee in Boots Pure Drug Co. Nottingham, England and Kali - Chemie A.G. Hannover, Germany. From 1963 he is on Faculty of Chemical Engineering and Technology, University of Zagreb teaching assistant, assistant professor, associate professor and from 1982 Professor of Chemical Engineering. From 1993 to 1997 he was Faculty Dean. He was visiting scientist in National Research Council of Canada, Ottawa, Canada and University of Technology, Dresden, Germany. He taught Unit operation, Transport phenomena and Engineering of particulate systems. His research interest is particle technology with emphasize on mechanical processes for transforming materials, such as size reduction, size enlargement, separation and contacting. Special area of interest in which he published numerous papers is particle characterization and influence of particle size distribution on the equipment performance characteristics and material processing properties. Membership: Croatian Society of Chemical Engineers, representative to European Federation of Chemical Engineering, Croatian Academy of Engineering and associate fellow of Croatian Academy of Science and Art.

Date of last election 16.09.1997.

Referent publications of lecturer

1. Vidović, K., Hraste, M.: **Utjecaj svojstava suspenzije na specifični otpor filtarskog kolača**, Kem. Ind. **34**, 63,1985.
2. Hraste, M., Vidović, K.: **Asbestos particle characteristics important for the filter cake formation**, Part. Charact. **3**, 40, 1986.
3. Popadić, M., Glasnović, A., Hraste,M.: **Izbor kriterija za utvrđivanje optimalne količine pomoćnih sredstava za filtraciju**, Prehrambeno-tehnološka i biotehnološka revija **27**, 195, 1989.
4. Vidović, K., Lovreček, B., Hraste, M.: **Influence of surface charge on sedimentation and filtration behavior of fibrous material**, Chem. Biochem. Eng. Q. **10**, 33, 1996.
5. Špirić, Z., Hraste, M.: **Mercury saturation profile across the sulfur impregnated activated carbon bed, Mercury contaminated sites: Characterization, risk assessment and remediation**, Eds.: Ebinghaus,R., Turner,R.R., Lacerda,D., Vasiliev, O., Salomons, W., Springer Environmental Science, Springer Verlag Heidelberg, 409 – 417,1999.

List of papers in last 5 years

1. M. Hraste, **Trends in Chemical Engineering Education**, Annu. Croat. Acad. Eng. ISSN 1332-3482, Zagreb 2004.
2. M. Hraste, **O razvoju kemijskog inženjerstva**, Tehnika u Hrvatskoj, Matica hrvatska ISBN 953-150-701-5, Zagreb 2004.
3. M. Hraste, Mehaničko procesno inženjerstvo, Hinus ISBN 953-6904-07-1, Zagreb, 2003.
4. Z. Špirić and M. Hraste, **Mercury Saturation Profile Across the Sulfur Impregneted Activeted Carbon Bed, Mercury Contaminated Sites: Characterization, Risk Assessment And Remediation**, R. Ebinghaus, R.R. Turner, D. Lacerda, O. Vasiliev and W. Salomons.

Lecturer data
Name, Surname **Ph.D. Srećko Tomas, Associate Professor**
E-mail address
Course **(212) ECOPROCESSES OF DRYING**
Institution Faculty of Food Technology, Osijek

Curriculum vitae

Srećko Tomas was born in 1954 in Drinovci (Grude), Bosnia and Herzegovina. He graduated from the Faculty of Chemical Technology in Split in 1977. He obtained a Master's degree in 1989, and a Ph.D. in 1993 at the Faculty of Chemical Engineering and Technology in Zagreb in the fileld of Technical science; subfield: Chemical Engineering. After he had graduated he worked for 9 years at the rural economy (″ Zagorka ″- Bedekovčina,″ Borovo ″-Vukovar, i ″ Opeka ″-Osijek). Since 1987 he has been working at the Faculty of Food Technology in Osijek, first as an assistant, than as a senior assistant (1995) and at last as an associate professor (1998). In his scientific works he is interested in mass and heat transfer mechanisms as well as heat and separation processes. He studies the characterization of those processes and analyses the relations between process parametars of separation processes, by analysing the processes of imposed conditions of implemetation, material properties, velocity and effiniency of those processes.
His major research effort focuses on the field of drying processes. Based on kinetics of those processes he makes conclusions and suggestions for a greater efficiency of drying processes.
He has published more than 25 scientific and professional papers in relevant international and national scientific journals.
He is the principal investigator of the scientific project 0113005 ″Contemporary drying methods in food-processing engineering", and a technological project T.P. - 01/0113-03 ″Research of malting procedures for domestic wheat varieties″.
Before that he took an active part in the realization 4 scientific and 7 professional projects.
He is a collaborating member of the Croatian Academy of Engineering and also a member of the Croatian Society of Chemical Engineers and Technologists, Croatian System Society and New York Academy of Science.

Date of last election

Referent publications of lecturer

1. Tomas, S., Skansi,D., Sokele, M.: **Convection drying of porous material**, Ceramics International, **20** (1), 9-16,1994.
2. Tomas, S., Skansi, D.: **Microwave drying of a clay-plate**, Ceramics International, **21**, 207-211,1995.
3. Tomas, S., Skansi, D.: **Numerical interpretation of drying curve of food products**, Jornal of Chemical Engineering of Japan, **29** (2) 367.370,1996.
4. Skansi, D., Tomas, S., Pudić, I., Arapović, A.: **The influence of pressure and temperature on kinetics of vacuum drying of ketoprofen**, Drying Technology, **15** (5),1617-1631,1997.
5. Sander, A., Tomas, S., Skansi, D.: **The influence of air temperature on effective diffusion coeficient of moisture in the falling rate period**, Drying Technology, **16** (7), 1487-1499,1998.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Ljubica Matijašević, Assistant Professor**
E-mail address	ljmatij@marie.fkit.hr
Course	**(213) ENVIRONMENTAL PROCESS DESIGN**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Degree B.S (1974), Faculty of Technology, University of Zagreb
M.S (1981), Faculty of Chem.Eng.& Technology, University of Zagreb
Ph.D (1992), Faculty of Chem.Eng.& Technology, University of Zagreb
Memberships: NewYork Academy of Sciences, American Chemical Society, biography in Who`sWho in the World, Who`sWho in the Science & Technology. Professional Development Certificate (PDC) in Environmental Management and Cleaner Production in Industry (World Cleaner Production Society), Certificate of attendance, Minimization Opportunities Environmental Diagnosis,
MOED (Regional Activity Centre for Cleaner Production)
Main duties consisted in supervising students, in laboratories for Unit operations, Reaction Engineering and Catalysis including the major aspect of Plant Design as related to the overal design project. The results of scientific research were presented at the international congresses and published in several publications.

Date of last election 20.03.2000.

Referent publications of lecturer

1. H. Otmačić, Lj. Matijašević, **Useful Energy exploitation - cleaner production**, VI. International Symposium Waste managment ZAGREB 2000, Zagreb, 15-17. Novembre 2000.
2. M. Host, Lj. Matijašević, **Cleaner production in Croatia**, Workshop "Sustainable water management and industrial development", Proceeding (CD-full text), Bucharest, 5/2001, 1-5.
3. Lj.Matijašević, H.Otmačić, **Energy recovery by Pinch technology**, Applied Thermal Engineering 22/4 (2002) 477-484
4. Lj. Matijašević, **Reduction of emissions from the NPK fertilizing facility,** Upravljanje resursima čimbenik poslovnog uspjeha, HIS, Proceedings, 11/2004, 291-299
5. Lj. Matijašević, E. Beer, R. Fabek, I.Dejanović, **Absorption of the exhaust gases in urea production**, Journal of Cleaner Production, 2005 (in press)
6. R. Fabek, Lj. Matijašević, **Parametric analysis of urea synthesis section**, Industrial & Engineering Chemistry Research, 2005 (in press)

List of papers in last 5 years

1. Lj.Matijašević, E. Beer, **Application of heat pump. Feasibility study**, Chem. Eng. Education, 1, 34 (2000) 68 – 73.
2. H. Otmačić, Lj. Matijašević, **Useful Energy exploitation - cleaner production**, VI. International Symposium Waste managment ZAGREB 2000, Zagreb, 15-17. Novembre 2000.
3. Lj.Matijašević, Đ.Vasić-Rački, **Separation of glucose/ fructose mixtures. Counter-current adsorption system**, Biochemical Engineering Journal, 4 (2000) 101-106.
4. Lj. Matijašević, E. Beer, M. Maren, R. Fabek, Z. Cikač, **The Absorption of Exhaust Gases During the Urea Production**, Air Protection, Proceedings, 9/2001, 223 – 229.
5. M. Host, Lj. Matijašević, **Cleaner production in Croatia, Workshop "Sustainable water management and industrial development**, Proceeding (CD-full text), Bucharest, 5/2001, 1-5.

6. Lj.Matijašević, **H.Otmačić, Energy recovery by Pinch technology**, Applied Thermal Engineering 22/4 (2002) 477-484.
7. Lj. Matijašević, **Reduction of emissions from the NPK fertilizing facility"Upravljanje resursima čimbenik poslovnog uspjeha**, HIS, Proceedings, 11/2004, 291-299.
8. Lj. Matijašević, E. Beer, R. Fabek, I.Dejanović, **Absorption of the exhaust gases in urea production**, Journal of Cleaner Production, 2005 (in press).
9. R. Fabek, Lj. Matijašević, **Parametric analysis of urea synthesis section**, Industrial & Engineering Chemistry Research, 2005 (in press).

Lecturer data

Name, Surname	**Ph.D. Stanka Zrnčević, Full Professor**
E-mail address	sznce@marie.fkit.hr
Course	**(214) ENVIRONMENTAL CATALYSIS**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Stanka Zrnčević (born in Zagreb, Croatia, January 2, 1946) is full professor of Chemical Engineering at the Faculty of Chemical Engineering and Technology University of Zagreb and the author or co-author over 60 papers maintains professional interests in chemical reaction engineering and catalysis and in particular catalyst deactivation and a variety of phenomena involving transport-kinetic interaction.
She received her BS (1969) and MS (1976) degrees in chemistry and PhD (1981) in chemical engineering from the Faculty of Technology University of Zagreb. From 1995 to 1997 she was Vice-dean and from 1997 to 2001 Dean of The Faculty of Chemical Engineering and Technology. She teaches catalysis and catalysts, catalytic reaction engineering, and laboratories that go with them. She is the member of Croatian Academy of Engineering, Croatian Society of Chemical Engineering, American Institute of Chemical Engineers and representative in the European WP Chemical Engineering in Catalyst Application.

Date of last election 16.09.1997.

Referent publications of lecturer

1. Rušić, D., Zrnčević, S.: **Performance of Ni/Al_2O_3 pellets poisoned by thiophene**, Catalyst Deactivation, Studies in Sur.Sci. Catal., Vol.**111**, Elsevier ,1997.
2. Tomašić, V., Gomzi, Z., Zrnčević, Z.: **Catalytic reduction of NO_x over Cu/ZSM-5 catalyst**, Appl.Catal.Environ., **18**, 233, 1998.
3. Glavanović,T., Zrnčević, S.: **Mass transfer resistance in palladium-catalysed hydrogenation of 1-methoxy-2,4-(nitrophenyl)- ethane**, Catal.Today, **48,** 119, 1999.
4. Barjaktarović, Z., Zrnčević,S.: **Utjecaj otpora prijenosu tvari na oksidaciju fenola na CuY-5 katalizatoru**, Kem.Ind., **51**, 259, 2001.
5. Tomašić, V., Gomzi, Z., Zrnčević, S.: **Reaction and mass transfer effects in a catalytic monolith reactor**, React.Kinet.Catal.Lett., **77**, 245, 2001.

List of papers in last 5 years

1. V. Tomašić, A. Geržina, Z. Gomzi and S. Zrnčević, **Catalytic Removal of No: The Effect of Cu Loading and Type of Binder on Catalytic Properties of Cu/Zsm-5 Catalyst**,12th Int.Con. on Catalysis (Ed. A. Corma et all.), Elsevier, Amsterdam 2000, p. 1493.
2. V. Tomašić, A. Geržina, S. Zrnčević, **The Influence of Thermal Treatment on the Performance of Ni/Al2o3 Catalyst**, Chem. Biochem. Eng. Q., 14 (2)(2000) 47.
3. V. Tomašić, Z. Gomzi, S. Zrnčević, **Reaction and Mass Transfer Effects in a Catalytic Monolith Reactor**, React. Kinet. Catal. Lett., 77(2)(2002) 245.
4. V. Tomašić, S. Zrnčević, Z. Gomzi, **Modelling and Simulation of a Monolith Reactor**, Pol. J. Environ. Stud., 11 (Suppl. III)(2002), 23.
5. Z. Barjaktarović, S.Zrnčević, **Utjecaj otpora prijenosu tvari na oksidaciju fenola na cuy-5 katalizatoru,** Kem.Ind. 51 (2003) 259.
6. V. Tomašić, S. Zrnčević, Z. Gomzi, **Direct Decomposition of No in a Monolith Reactor: Comparison of Mathematical Models**, Catal. Today 90 (2004) 77.
7. S. Zrnčević, Z. Gomzi, **Cwpo: An Environmental Solution for Pollutant Removal from Wastewater,** Ind.Eng.Chem.Res. (2005) in press.

Lecturer data
Name, Surname **Ph.D. Štefica Cerjan-Stefanović, Full Professor**
E-mail address scerjan@pierre.fkit.hr
Course **(211) CHEMISTRY OF WATER**
Institution Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Born 19. September 1939. in Zagrebu, Croatia.
B.C.E.: 19. April 1963, Faculty of Technology, University of Zagreb. Mentor: Ph.D. Aleksandar Bezjak, professor, "Determination of bemit structure".
M.Sc.: 16. December 1968. Faculty of Technology, University of Zagreb. Mentor: Ph.D. Vjera Marjanović - Krajovan, professor, "Comparation of methods for determination of free CaO in clinkers".
Ph.D.: 11. december 1973. Faculty of Technology, University of Zagreb, Mentor: Ph.D. Vjera Marjanović - Krajovan, professor, "Distribution of some chemical elements in iron materials".
Work experience: From 1. December 1963. until now work at Laboratory for Analytical Chemistry, Faculty of Chemical Engineering and Technology, University of Zagreb, as follows: assistant 1975. - 1977.; Docent 1977.-1983.; 1983. until now professor.
Post doctoral studies: 1985. and 1987. Department of Analytical Chemistry, L. Eotvos, University - Budapest. Mentor: Ph.D. I. Incedya, professor.
Scientific publications: 70 scientific publications in journals, 50 international conferences, 50 conferences in Croatia.
Projects: President of projects: "Ion Exchangers in Prevention of Pollution of Chemical Industry Waters", and "Chromatography in Water Analysis (CRO-SLO collaboration)", financed by Ministry of Science and Technology, Republic of Croatia.
Social activities: President of AMACIZ, member of CCS, CSCI, Academy of Science NY and IAWQ.

Date of last election 10.11.1998.

Referent publications of lecturer

1. Grahek, Ž., Lukić, S., Košutić, K., Eškinja, I., Cerjan-Stefanović, Š.: **Separation of radioactive stroncium from natural samples by means of mixed-solvent anion exchange**, Journal of Radioanalytical and Nuclear Chemistry, **189**(1), 140, 1995.
2. Leaković, S., Mijatović, I., Cerjan-Stefanović, Š., Hođić,E.: **Nitrogen remuval from fertilizer wastewater by ion exchange** , Water Research A Journal of the International Water Association, **34**(1),185, 2000.
3. Rožić, M., Cerjan-Stefanović, Š., Kuraica, S., Vančina, S., Hodžić, E.: **Ammoniacal nitrogen remuval from water by treatment with clays and zeolites**, Water Research A Journal of the International Water Associationm, **34** (14), 3675, 2000.
4. Cerjan – Stefanović,Š., Bolanča,T., Ćurković,L.: **Simultaneous determination of six inorganic anions in drinking water by non-suppressed ion chromatography**, Journal of Chromatography A, 918, 325, 2001.
5. Srečnik,G., Debeljak,Ž., Cerjan – Stefanović, Š., Nović,M., Bolanča,T.: **Optimization of artificial neural networks used for retention modelling in ion chromatography**, Journal of Chromatography A, 973, 47-59, 2002.

List of papers in last 5 years

1. Š. Cerjan-Stefanović, T. Bolanča, L. Ćurković, **Selection of Criteria for Comparing and Evalueting the Optimization of Separation in Ion Chrmatography**, Journal of Liquid

Chromatography & Related Technologies, 23 (14) (2000) 2169.
2. Š. Grahek, I. Eškinja, K. Košutić, Š Cerjan-Stefanović, **Isolation of Yttrium and Strontium from Soil Samples and Rapid Determination of 90Sr**, Croatica Chemica Acta, 73 (3) (2000) 795.
3. S.Leaković, I. Mijatović, Š Cerjan-Stefanović, E. Hodžić, **Nitrogen Remuval from Fertilizer Wastewater by Ion Exchange**, Water Research A Journal of the International Water Association, 34 (1) (2000) 185.
4. A. Rastovčan - Mioč, Š. Cerjan-Stefanović, L. Ćurković, **Aqueous Leachate form Eletric Furnace Slag**., Croatica Chemica Acta, 73 (2) (2000) 615.
5. M. Rošić, Š. Cerjan-Stefanović, S. Kuraica, V. Vančina, E. Hodžić, **Ammoniacal Nitrogen Remuval from Water by Treatment with Clays and Zeolites**, Water Research A Journal of the International Water Associationm, 34 (14) (2000) 3675.
6. Š.Cerjan-Stefanović, T.Bolanča, L.Ćurković, **Simultaneous Determination of six Inorganic Anions in Drinking Water by Non-Suppressed Ion Chromatography**, Journal of Chromatography A, 918 (2001)325.
7. L. Ćurković, Š. Cerjan-Stefanović, **Batch Pb2+ and Cu2+ Removal by Eletric Furnace slag, Water Research**, 35 14 (2001) 3436-3440.
8. M. Novič, Š. Cerjan-Stefanović, M. Prošek, J. Turšić, T. Bolanča, **Međulaboratorijski Krušni testovi za analize aniona ionskom kromatografijom**, Hrvatska vodoprivreda, X 102, 2001, 49-53.
9. M. Rošić, Š. Cerjan-Stefanović, L. Ćurković, **Evaluation of Croatian Clinoptilolite and Montmorillite œrich Tuffs for Ammonium Remuval**, Croatica Chemica Acta, 75 (1) (2002) 255-269.
10. G. Srečnik, Š. Debeljak, Š. Cerjan-Stefanović, T. Bolanča, M. Novič,K. Lazarić, Š. Gumhalter - Lulić, **Use of Artificial Neural Networks for Retention Modelling in Ion Chromatography**, Croatica Chemica Acta, 75 (3) (2002) 713-725.
11. G. Srečnik, Š. Debeljak, Š. Cerjan-Stefanović, M. Nović, T. Bolanča, **Optimization of Artificial Neural Networks Used for Retention Modelling in Ion Chromatography**, Journal of Chromatography A, 973 (2002) 47-59.
12. T. Sofilić, A. Rastovčan-Mioč, Š. Cerjan-Stefanović, V. Novosel-Radović, M. Jenko, **Characterization of steel mill electric-arc furnace dust**, Journal of Hazardous Materials, 109(1-3) (2004) 59-70.
13. T. Bolanča, Š. Cerjan-Stefanović, G. Srečnik, Š. Debeljak, M. Novič, **Development o an Ion Chromatographic Method for Monitoring Fertilizer Industry Wastewater Quality**, Journal of Liquid Chromatography & Related Technologies, 27 17 (2004) 2781-2798.
14. Š. Cerjan-Stefanović, T. Bolanča, M. Novič, J. Turšić, M. Regelja, **Krušni testovi u analizi aniona i kationa ionskom kromatografijom**, Hrvatske vode, 49 (2004) 313.
15. T. Bolanča, Š. Cerjan-Stefanović, M. Regelja, D. Štanfel, **Development of Ion Chromatographic Method for Determination of Inorganic Cations in Sea Water used in OTC Pharmaceutical Industry**, Journal of Liquid Chromatography & Related Technologies, 28 (2), 2005, 233-145.
16. T. Bolanča, Š. Cerjan-Stefanović, M. Novič, **Application of Artificial Neural Network and Multiple Linear Regression Retention Models for Optimization of Separation in Ion Chromatography by Using Several Criteria Functions**, Chromatographia, 61 (3-4), 2005.
17. T. Bolanča, Š. Cerjan-Stefanović, G. Srečnik, Š. Debeljak, M. Novič, **Comparison of Retention Modelling in Ion Chromatography by Using Multiple Linear Regression and Artificial Neural Networks**, Separation Science and Technology, 40 (6), 2005
18. T. Bolanča, Š. Cerjan-Stefanović, M. Regelja, H. Regelja, S. Lončarić, **Development of an Inorganic Cations Retention Model in Ion Chromatography by Means of Artificial Neural Networks with Different Two Phase Training Algorithms**, Journal of chromaotography A, 2005.

Lecturer data

Name, Surname	**Ph.D. Janez Levec, Full Professor**
E-mail address	janez.levec@fkkt.uni-lj.si
Course	**(222) OXIDATION PROCESSES FOR TREATING INDUSTRIAL WASTEWATERS**
Institution	Faculty of Chemistry and Chemical Technology, Ljubljana

Curriculum vitae

Prof. Janez Levec was born in 1943 in Celje, Slovenia. He received degree in Chemistry from the University of Ljubljana 1968. In 1972. he received PhD degree in Chemistry from the University of Ljubljana, Slovenia. Currently he is employed as a full professor of chemical engineering at University of Ljubljana, Faculty of Chemistry and Chemical Technology.

Date of last election

Referent publications of lecturer

1. Donlagic, J., Levec, J.: **Wet oxidation of an azo dye: Lumped kinetics in batch and mixed flow reactors**, AICHE Journal, **45**(12), 2571-2579, 1999.
2. Shende, R.V., Levec, J.: **Wet oxidation kinetics of refractory low molecular mass carboxylic acids**, Industrial & Engineering Chemistry Research, **38**(10), 3830-3837, 1999.
3. Shende, R.V., Levec, J.: **Kinetics of wet oxidation of propionic and 3-hydroxypropionic acids**, Industrial & Engineering Chemistry Research, **38**(7), 2557-2563, 1999
4. Shende, R.V., Levec, J.: S**ubcritical aqueous-phase oxidation kinetics of acrylic, maleic, fumaric, and muconic acids**, Industrial & Engineering Chemistry Research, 39(1), 40-47, 2000.
5. Pintar, A., Batista, J., Levec, J.: **Catalytic denitrification: direct and indirect removal of nitrates from potable water**, Catalysis Today, **66**(2-4), 503-510, 2001.
6. Pintar, A., Batista, J., Levec, J.: **Integrated ion exchange/catalytic process for efficient removal of nitrates from drinkig water**, Chemical Engineering Scienc, 56(4), 1551-1559, 2001.

List of papers in last 5 years

Lecturer data

Name, Surname	**Ph.D. Stanislav Tedeschi, Professor Emeritus**
E-mail address	vlasta@grad.hr
Course	**(223) WATER QUALITY MANAGEMENT**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

Born: May 27, 1931, in Korčula, Croat, citizen of R. Croati.
Bachelor of Science in Civil Engineering – University of Zagreb, 1958.
Master of Science in Environmental Engineering – University of Zagreb, 1976.
PhD degree – University of Zagreb, 1980.
From 1959 to 1975 he worked at Physical Planning Department of Dalmatia – Split, as designer of water – supply and wastewater systems.
From 1967 to 1970 he was member of planning group for «South Adriatic Project» - UNDP/SFRJ.
From 1975 to 1977 lecturer at the Faculty of Civil Engineering – Split.
From 1977 to 1978 he worked at Engineering Design Department – Zagreb, as designer of wastewater systems.
Since 1978 employed at the Faculty of Civil Engineering- Zagreb. The Faculty apointed him: associate Professor in 1981, Full Professor in 1986, 1991, 1996, Professor emeritu sin 2002.
On the Faculty of Civil Engineering Zagreb he teached on graduate and post-graduate courses in environment protection, water conservation and wastewater treatment.
From 1988 to 1998 he was scientific coordinator of the priority action «Solid and Liquid Waste Management» of UNEP Mediterranean Actions programme.
From 2002 to 2003 temporary consultant of the World Bank for the Coastal Cities Pollution Control Project in R. Croatia.
Member of: The New York Academy of Sciences, International Water Association, Croatian Association on Water Pollution Control, association of Civil Engineers of Croatia. He use English, Italian and partially Russian and French.

Date of last election 1.10.2002.

Referent publications of lecturer

1. Tedeschi, S.: **Zaštita voda,** Zagreb, Hrvatsko društvo građevinskih inženjera, 1997., 297 str.
2. Tedeschi, S.: **Marine Environment,** Split: UNEP/MAP-Regional Activity Centre – Priority Actions Programme, 1989., 54
3. Tedeschi, S.: **Planification et conception des projects d'assainissement dans les agglomerations cotieres Mediterraneennes,** Split UNEP/MAP – Regional Activity Centre – Priority Actions Programme, 1992, 95 str.
4. Tedeschi, S.: **Disposal of Municipal Solid Waste Sanitary Landfills Split:** UNEP/MAP – Regional Activity Centre – Priority Actions Programme, 1994, 55 str.
5. Studija o utjecaju na okoliš sustava javne odvodnje Srima-Vodice-Tribunj, srpanj 2003.
6. Studija o utjecaju na okoliš luke Rabac, rujan 2003.
7. Studija o utjecaju na okoliš sustava javne odvodnje Biograda na moru, studeni 2003.
8. Studija o utjecaju na okoliš sustava javne odvodnje Nacionalnog parka Plitvička jezera, lipanj 2004.
9. Studija o utjecaju na okoliš sustava javne odvodnje grada Drniša, studeni 2004.

List of papers in last 5 years

1. Tedeschi, S.: Ponovna uporaba vode, Zbornik radova: Voda na hrvatskim otocima, Zagreb, Hrvatsko hidrološko društvo, 1998, 199-210.

2. Tedeschi, S.: Opportunities for Investing in Water Project sin Croatia, Proceedings of Third Annual Conference Private Sector Participation in the Water Industries of Central and Eastern Europe, Wiena: IBC Global Conferences Lmtd, 1999, 8.1-8.14.
3. Bezak, S, Tedeschi, S., Radujković, M.: Optimalizacija projekata zaštite okoliša kroz studiju troškova i koristi, Zbornik radova 2. hrvatska konferencija o vodama Hrvatske vode od Jadrana do Dunava, Hrvatske vode, 1999., 1067-1075.
4. Tedeschi, S.: Klasifikacija voda prema WFD i hrvatskoj legislativi, Zbornik savjetovanja Prošireni obuhvat zaštite voda i obalnog mora u okviru integralnog gospodarenja vodama, Zagreb, 07.lipnja 2001., Hrvatske vode, 57-62.
5. Tedeschi, D.: Društvena opravdanost izgradnje uređaja za pročišćavanje otpadnih voda grada Zagreba, Građevinar (53) 2001., 205-210.
6. Tedeschi, S.: Zaštita priobalnog mora Splita, Solina, Kaštela i Trogira, Građevinar (55) 2003., 443-448.

Lecturer data

Name, Surname	**Ph.D. Margareta Glancer-Šoljan, Full Professor**
E-mail address	mglancer@pbf.hr
Course	**(224) BIOLOGICAL WASTEWATER TREATMENT PROCESSES**
Institution	Faculty of Food Technology and Biotechnology, Zagreb

Curriculum vitae

Margareta Glancer-Šoljan, born in Teslić (Bosnia and Herzegovina) in 1944 where she graduated from the primary school and secondary technical school (chemistry). Took BSc from the Faculty of Technology in Tuzla (1971). Post-graduate studies in chemical engineering began at the Faculty of Technology in Zagreb (1973) where she took her MSc and PhD in process engineering (1976 and 1977 respectively). Years 1978 and 1979 spent at the Massacussets Institute of Technology (MIT) Cambridge, USA. From 1971 worked as technical associate at Department of Biotechnology, Faculty of Technology in Zagreb. In 1973 elected at the same Faculty for an assistant professor and in 1979 for a associated professor. In 1986 became a professor at the Faculty of Food Technology and Biotechnology, University of Zagreb (graduate and post-graduate studies in the treatment of wastewater and waste materials). Mentored over 80 MSc and 8 PhD theses. Leader of five national and two international scientific projects. Awarded «Nikola Tesla» and «Kliment Ohridski» awards (1988, IFIA 1995 and ARCA 2003). Published over 60 scientific works.

Date of last election 12.01.1999.

Referent publications of lecturer

1. Glancer-Šoljan, M., Ban, S.N., Dvoraček, L., **Biodegradacija betaina pomoću kvasca** *Trichosporon* i mješovite kulture aktivnog mulja. *Prehrambeno-tehnološka revija,* **7** (1-2) (1985) 3-10.
2. Dvoraček, L., Glancer, M., Ban, S. **Degradation of phenol in industrial waste waters. Part I: Selection of microorganisms**, *Prehrambeno-tehnološka i biotehološka revija*, **27** (2-3) (1989) 147-154.
3. Glancer-Šoljan, M. **New technologies for biological treatment of municipal and industrial waste waters by using suitable microorganisms as starter culture,** *Kem. Ind*. **42** (9)(1993) 323-330.
4. Landeka, T., Šoljan, V., Glancer, M., **Razgradnja tiocijanata odabranim sojevima bakterija i združenim mješovitim kulturama**, *Prehrambeno-tehnol. botehnol. rev.*, **31** (4) (1993) 137-143.
5. Glancer-Šoljan, M., Landeka Dragičević, T., Šoljan, V., Ban, S., **Biološka obradba otpadnih voda**, Interna skripta, Izdavač Kugler, 2002, Zagreb.

List of papers in last 5 years

1. Glancer-Šoljan, M., Ban, S., Landeka Dragičević, T., Šoljan, V., Matić, V. (2001) Granulated mixed microbial culture suggesting successful employment of bioaugmentation in the treatment of process wastewater. *Chem.Biochem.Eng.Q.* **15** (3), 87-94.
2. Glancer-Šoljan, M., Šoljan, V., Landeka Dragičević, T., Čačić. Lj. (2001) Aerobic degradation of formaldehyde in wastewater from the production of melamine resins. *Food technol. biotechnol.* **39** (3), 197-202.
3. Čačić, Lj., Šoljan, V., Dragičević, T.L., Glancer-Šoljan, M., Vuksan, B., Krivohlavek, A. (2002) The removal of nitrogen substances from a chemically defined medium by the addition of liner alkylbenzene sulfonate (LAS) using a mixed bacterial culture of nitrificants and denitrificants. Limnological reports. Proceedings of the 34th Conference in Tulcea, August 2002 (Eds. G. Brezeanu, R. Stiuca), Tulcea, Romania, Vol. **34**, 21-30.

4. Landeka Dragičević, T., Zanoški, M., Glancer-Šoljan, M., Šoljan, V., Matić, V., Krajina , J. (2004) Activity of the granulated biomass of the mixed microbial culture for highly efficient carbon and nitrogen removal in the process wastewater. Proceedings of the European Symposium on Environmental Biotechnology, ESEB 2004, (Ed. W. Verstraete), 25-28 April 2004, Oostende, Belgium, 645-648.

Lecturer data
Name, Surname **Ph.D. Laszlo Sipos, Full Professor**
E-mail address lsipos@pierre.fkit.hr
Course **(225) URBAN AND INDUSTRIAL WASTEWATER TREATMENT AND DISPOSAL**
Institution Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Born 1943 in Bečej. Received BSc 1997, MSc 1970 and PhD 1974 at the University of Zagreb. Began his work at the Center for Marine Research, Institute "Ruđer Bošković" in Zagreb (1967-1982). Subsequently, he worked at the Faculty of Civil Engineering University of Zagreb (1982-1988). Since 1988 he is professor of General and Inorganic Chemistry at the Faculty of Chemical Engineering and Technology University of Zagreb. He was on leave for ten months (1969/70) at the University of Warsaw, Poland, and three years (1975-1978), at the Nuclear Research Center (KFA) in Jülich, F.R. Germany. His scientific interest is study of electrochemical redox processes, development and application of electroanalytical techniques for determination and characterization of trace metals in aquatic environment as well as development, scale up and application of water treatment processes.

Date of last election 14.09.2004.

Referent publications of lecturer

1. Galić M., Raspor, B., Sipos, L.: **Toxicity of cadmium and nitrilotriacetic acid in sea water to the photobacteria vibrio fisheri**, The Science of the Total Environment, **60**, 173-184, 1986.
2. Van Loosdrecht,M., Barcelo, D., Benfenati, E., Bianchedi, R., Coccagna, L., Fernex, F., Maslejova, A., Ramadori, R., Rindone, B., Sipos, L.: **Urban and industrial wastewater**, Ed.: Monnanni, R., Deppolution Planning of the Mediterranean Sea (a document elaborated during a workshop held in San Miniato, Pisa, October 22-24, 1992), Societa Chimica Italiana, 17-27, 1992.
3. Degobbis, D., Picer, M., Raspor, B., Sipos, L., Sobot, S., Zvonarić, T.: **Monitoring programme of the eastern Adriatic coastal area**, Report for 1983-1991. MAP Technical Reports Series No.86, UNEP, Athens, 1-311, 1994.
4. Briški, F., Petrović, M., Kaštelan-Macan, M., Sipos, L.: **Removal of humic substances from aqueous solution by fungal pellets**, Biocatalysis, **10**, 1-14, 1994.
5. Filipović-Kovačević, Ž., Sipos, L.: **Decolorization of yeast-production industry wastewater by ozone**, Journal of Environmental Science and Health, **A30**, 1515-1522, 1995.

List of papers in last 5 years

1. Š. Filipović-Kovačević, L. Sipos, and F. Briški, **Biosorption of Chromium, Copper, Nickel and Zinc Ions onto Fungal Pellets of Asspergillus niger 405 from Aqueous Solutions**, Food Technology and Biotechnology, 38 (2000) 211-216.
2. Z. Grabarić, D. Iveković, L. Sipos and B. Grabarić, **Improved Signals Ratio Resolution Method by Optimization of Resolution Function - Simultaneous Determination of Cu(II) and Cd(II) in Water Samples**, Journal of AOAC International, 82(1999)1185-1196.
3. F. Briški, L. Sipos and M. Petrović, **Distribution of Faecal Indicator Bacteria and Nutrients in Krka River in the Region of Krka National Park**, Periodicum Biologorum, 102 (2000) 273-281.
4. M. Vuković, Š. Filipović-Kovačević, N. Ribičić and L. Sipos, **Determination of Arsenic inWater Samples Treated with Ozone**, Journal of Environmental Sceience and Health, Part A, A39 (2004) 1979-1988.
5. K. Košutić, I. Novak, L. Sipos and B. Kunst, **Removal of Sulfathes from Potable Water by Thin Film Polyamide Nanofiltration Membranes of Characterized Porosity**, Separation and

Purification Technology, 37 (2004) 177-185.
6. T. Štembal, M. Markić, N. Ribičić, F. Briški and L. Sipos, **Removal of Ammonia, Iron and Manganese from Ground Waters of Northern Croatia Pilot-Plant Studies**, Process Biochemistry, 40 (2005) 327-335.
7. K. Košutić, L. Furač, L. Sipos and B. Kunst, **Removal of Arsenic and Pesticides from Drinking Water by Nanofiltration Membranes**, Separation and Purification Technology, 42 (2005) 137-144.
8. L. Foglar, F. Briški, L. Sipos and M. Vuković, **High Nitrate Removal from Synthetic Wastewater with the Mixed Bacterial culture**, Bioresource Technology, 96 (2005) 879-888.

Lecturer data

Name, Surname	**Ph.D. Davor Malus, Associate Professor**
E-mail address	malus@grad.hr
Course	**(226) WATER TREATMENT**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

Born on 30th August 1951 in Zagreb, Croatian nationality, and citizen of RH. Primary and secondary school finished in Zagreb. Graduated at the Faculty of Civil Engineering of Zagreb University on 17th November 1997– specialization in water management.First employment at the Faculty of Civil Engineering of Zagreb University at the Sanitary engineering department.MS degree in Ecological Engineering on the Faculty of technology of Zagreb University attained on the 21st October 1985.
From 1992 to 1995 on the position of assistant with Ms degree. On the 15th November 1995, PhD degree attained in Sanitary Engineering on the Faculty of Civil Engineering of Zagreb University, on the thesis "Potable Water resources Management in the Strategy of Sustainable Development. In the 1999 promoted in assistant professor, and in the 2003 in associate professor. Teaching subjects in sanitary engineering on the graduate and postgraduate studies: Water supply and Sewerage, Water resources protection and Scientific Investigations in the Sanitary Engineering. Living in Zagreb, married, with two children. Speaking and writing English. Member of: European Water Pollution Control Association, International Water Resources Association, Croatian Society of Civil Engineers, Croatian Water Pollution Control Society, Croatian Chamber of Civil Engineering.

Date of last election 17.12. 2003.

Referent publications of lecturer

1. Malus,D.: **Application of black box models to a river-run lake** , Poljsko-Jugoslavenski simpozij, Research on hydraulic engineering, Begovo Razdoblje, Zbornik radova, 365-377, 1986.
2. Malus,D.:**Approach to river-run lake ecological modeling**, Poljsko-Jugoslavenski simpozij, Research on hydraulic engineering, Gdansk, Zbornik radova, 315-323, 1989.
3. Sipos,L., Galić,M., Vujanić,B., Malus,D.: **Single or two-stage biological treatment preceding wastewater discharge into the sea**, 2nd Symposium international, Marseilles, Zbornik radova, 1-7, 1990.
4. Sawicky, D., Malus, D.: **Velocity dependent coefficient of eddy viscosity,** Archives of Hydroengineering, Vol. 39, 3-13, 1992.
5. Malus, D.: **Economic analysis of drinking water abstraction,** International symposium on research on hydraulic engineering Gdansk, Zbornik radova, 197-205, 1995.
6. Malus, D.: **Drainage of traffic arteries and environmental protection from negative influences,** The first international conference, drainage, and treatment of wastewaters, hazardous and solid waste and protection from negative influences, Ohrid, R.Makedonija, Zbornik radova, 257-265,1996.

List of papers in last 5 years

1. Malus, D., Pertaš, J.: HIGHWAY RUNOFF TREATMENT IN CROATIA, IV international Conference: Water Supply and Water Quality, Krakow, Poznan – Poland , 2000., Conference Proceedings, p.311-321.
2. Malus, D.: HIGHWAY RUNOFF BMPs IN CROATIA, Water Management and Hydraulic Engineering: Proceedings of the VII International Symposium on Water Management and Hydraulic Engineering, Miedzybrodzie Zywieckie, Poljska, 10-12.09.2001. p. 185-189.

3. Vukelić, Z., Petraš, J., Malus, D.: GROUNDWATER – THE UNSEEN RESOURCE OD SUBSURFACE QUALITY, Water Supply and Water Quality, Proceedings of the 17-th National and 5th International Scientific and Technical Conference – Poznan – Poljska, 2002. p.205-214.
4. Malus, D.: HIGHWAY RUNOFF BMP IN CROATIA, Water Management and Hydraulic Engineering, VII International Symposium on Water Management and Hydraulic Engineering, Miedzybrodzie Zywieckie, Poljska, 10-12.09.2001. Proceedings, p.185-191.
5. Ćosić-Falajsig, G., Malus, D., Petrićec, M.: IMPORTANCE OF PROTECTED AREAS IN INTEGRATED MANAGEMENT, VIII International Symposium on Water Management and Hydraulic Engineering. Podbanske – Slovačka, 5-9.10.2003. Proceedings, p.49 –54.
6. Malus, D., Ćosić-Flajsig, G.: WASTEWATER COLLECTION, TREATMENT AND DISPOSAL IN SMALL COMMUNITIES IN CROATIA. VIII International symposium on Water Management and Hydraulic Engineering. Podbanske – Slovačka, 5-9.10.2003. Proceedings, p. 243-248.
7. Petraš, J., Malus, D.: HYDROLOGY OF DETENTION BASINS AS CONSTITUENTS OF FLOOD PROTECTION SYSTEMS OF ZAGREB CITY. VIII International symposium on Water Management and Hydraulic Engineering. Podbanske – Slovakia, 5-9.10.2003. Proceedings, p.335-352.
8. Malus, D.: TRANSBOUNDARY AQUIFERS IN CROATIA, UNESCO Workshop: Inventory of Internationally Shared Aquifers: Thessaloniki, 15-17. October 2004.
9. Malus, D.: TRANSBOUNDARY RIVER BASINS IN CROATIA, UNESCO Workshop: Development of an Inventory of Internationally Shared Surface Waters in South-Eastern Europe, Thessaloniki, 18-20. October 2004.

Lecturer data

Name, Surname	**Ph.D. Darko Mayer, Full professor**
E-mail address	dmayer@rgn.hr
Course	**(227) GROUNDWATER PROTECTION**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb

Curriculum vitae

Date and place of birth: March 6, 1945, Zagreb, Croatia; Education and qualifications: Universuty graduated, dipl. ing. degree in Geology (BSc), Faculty of Mining, Geology and Petroleum, Engineering., Postgraduated study, master of science in Geology, spec. Hydrogeology,(MSc), University of Zagreb, Doctor's degree in Geology, spec. Hydrogeology (PhD), University of Zagreb. Specialized in: Hydrogeological investigations, groundwater resources research, groundwater quality and protection; Present position; Full professor of "Groundwater protection", and Design of hidrogeological investigations» at Faculty of Mining, Geology and Petroleum Engineering, Dean of Faculty of Mining, Geology and Petroleum Engineering; Professional experience in Croatia: Groundwater resource investigations in east part of Croatia; Hydrogeological investigations of potential locations of nuclear power plants in Yugoslavia; Hydrogeological investigations about 40 waste-disposal sites in Yugoslavia, Hydrogeological projects of protection zones of about 30 pumping sites in Croatia; Professional experience abroad: Feasibility studies for water supply El Obeid WSP and Wadi Halfa WSP (Sudan, 1986); Hydrogeological investigations of Bara basin - phase I (Sudan, 1988); Books: Author of the books *«Kvaliteta i zaštita podzemnih voda» ("Groundwater Quolity and Protection")*, Croat. Soc. of Water Protection, Zagreb. 1995., and *«Voda od nastanka do upotrebe» (Water from orign to use),* Prosvjeta, Zagreb, 2004.; Conferences and papers: Taking part at 11 international conferences, published 48 scientific and 15 professional articles; Memberships: "Croatian Water Pollution Control Society», "Croatian Geological Society; International Association of Hydrogeologists (IAH); Editorial Board of jurnal "Hrvatske vode"; Languages: Croatian and English.

Date of last election 14.07 1998.

Referent publications of lecturer

1. Mayer, D.: **Possibility of aquifer pollution as a cosequence of hydrodinamic characteristics of restrictedly part of Save River Basin in Croatia**, IV, 151, RGN fakultet, Zagreb
2. Mayer, D. Velić, J., Lenartić, S.:**Hydrogeological and Engineering-geological Criteria for the Selection of Nuclear Power Plant Location- Case of the Sava River Bacin in Croatia.,** RGN Zbornik, 3, 29-34, Zagreb,1991.
3. Mayer, D., Markovac, Z.: **Hydrogeology of Refuse Disposal Site Jakuševac (Zagreb).,** RGN Zbornik, 4, 15-31, Zagreb,1992.
4. Kovačić, D., Mayer, D., Muhovec, I.: **Geotechnical Characteristics of Zasgreb Waste disposal Site and Possibilities of its Reclamation.** Waste Disposal by Landfill, Proc. of Symp. "Green 93"- Geotechnics Related to the Environment, Balkema, Roterdam, 1995.
5. Mayer, D.: **Drinking Water Deficit -The Largest Problem of the 21th Century**., Hrvatske vode, 14, 25-32, Zagreb,1996.

List of papers in last 5 years

1. Premur, V., Nuić, J., Mayer, D. & Gotić,I. (2000):KORIŠTENJE NAPUŠTENOG GLINOKOPA U TURČINU ZA ODLAGANJE KOMUNALNOG OTPADA, Zbornik radova Internat. Symp. Waste Managemrent, 15.-17.11 2000., Zagreb.
2. Mayer, D. & Bačani, A. (2003):NAVODNJAVANJE I PODZEMNE VODE, Hrvatske vode 11 (2003)45, 531-540, Zagreb.

3. Mayer, D. (2004): VODA OD NASTANKA DO UPOTREBE, Prosvjeta d.o.o.; Zagreb.

Lecturer data

Name, Surname	**Ph.D. Božidar Biondić, Full Professor**
E-mail address	bbiondic@usa.net
Course	**(228) KARST AQUIFERS PROTECTION**
Institution	Geotechnical Faculty, Varazdin

Curriculum vitae

Božidar Biondić was born on 16 of November 1940. in Zagreb, Croatia. Has graduated 1964. on the Technological faculty - The mining department (today RGN faculty) win a master's degree 1974 and doctor's degree 1982. on Nature-Mathematical faculty of the University of Zagreb. From 1964. to 2002. was employed in the Institute of Geology in Zagreb, where passed all research, scientific and managing levels, from the traineeship through researcher in working groups, leaders of working groups, head of departments to the general director of the Institute. In the all long scientific activity has published more than 80 scientific papers and about 240 professional reports. In Institute had the status of scientific counsellor in the permanent choice. Ab initio nineties has been actively involved in educational programmes of the University of Zagreb, on the graduate study on Faculty of Getechnical Engineering in Varaždin, postgraduate study on RGN and PMF in Zagreb and in preparation and defences of the numerous master and doctor theses on RGN faculty in Zagreb. On the basis of scientific and educational activities on national level and abroad, 1998. has been chosen in the status of full professor on University of Zagreb. In all scientific and professional activities often has participated with his papers on numerous domestic and international scientific congresses and conferences, very often as invited speaker and member of different scientific boards. Especially pointed was his participation in the organization of two national geologic congresses with the international participation. From 1992. to 1995. had been the president of the Croatian geologis society, and was one of the founders of national groups of IAH and IAEG. He is the regular member of IAH Karst commission and professional member of American Institute of Hydrology (AIH). 1989. had been the first proposer and chair person of one EU COST scientific project from countries out of EU with the participation of 16 European countries. This project has generated 2 new COST projects (620 and 621). From 1998. are the National Coordinator for COST and nominated representative of Croatia in this project orientation. As NC for COST had been one of the organizer of Ministerial conference in Dubrovnik, when was decided abot the integration of COST and ESF. Had been the member of Commission for state prizes in natural sciences, member of the Parent commission of University of Zagreb for geosciences, member of the state Advisory board for environmental protection and member of Management board of NC Plitvice Lakes responsible for the protection. He is the author of the new Regulation book for the protection of karst aquifers and the part of Water management plan in Croatia. One is from the author of Hydrogeological map of Croatia S 1:300.000 and information system for water resources in Croatia. In the professional activity can be pointed the new captages of potable water in the karst environment of Rijeka (arround 1.500 l/s). Abroad has worked in supervising of two large dams in Iran (1975) and as the representative of INGRA company and reserch leader in Mexico. He is the proposer and chair person of the national technological project "Potable water - export product" and the scientific project "Water resources and the sustainable development". Today is the head of the hydrotechnical department on Faculty of geotechnical engineering in Varaždin.

Date of last election

Referent publications of lecturer

1. Biondić, B., Biondić, R. i Dukarić, F.: **Protection of karst aquifers in the Dinarides in Croatia**, Environmental Geology, Springer, vol 34/4, 1988, pp 309-320.
2. Biondić, B., Šarin, A. et all: **National report for Croatia**, Final report of COST 65 action, European Commission, Bruxelles, 1995, pp 65-87.

3. Almeida, C., Biondić, B. et all: **Pollutants and pollutant trnasport in a karst areas**, Final report of COST 65 action, European Commission, Bruxelles, 1995, pp 371-380.
4. Biondić, B., Kapelj, S. and Mesić, S.: **Natural tracers - indicators of the Vrana lake water origin - Cres island**, **Croatia**, Intern. IAH Symp. on water tracing, Balkema, Portorož, 1997.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data
Name, Surname **Ph.D. Tomislav Cvitaš, Full Professor**
E-mail address
Course **(231) AIR CHEMISTRY**
Institution Faculty of Science, Zagreb

Curriculum vitae

Date of last election

Referent publications of lecturer

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Vladimira Vađić, Scientific Adviser**
E-mail address	vvadic@imi.hr
Course	**(232) AIR QUALITY**
Institution	Institute for Medical Research and Occupational Health, Zagreb

Curriculum vitae

Vladimira Vađić was born on 12 December 1944 in Zagreb, Croatia. She graduated from the Faculty of Technology, University of Zagreb in 1968. She has been working within the Environmental Hygiene Unit of the Institute for Medical Research and Occupational Health, Zagreb ever since, and has been the head of the unit since 1991. In Vladimira Vađić took a master's degree, and in 1984 a doctoral degree from the Faculty of Technology, University of Zagreb. In 1985 she became a research associate, in 1990 a senior research associate, in 1992 a scientific adviser, only to confirm the latter title in 1998. Vladimira Vađić has published 90 scientific and professional papers in Croatian and foreign journala. She participated in or headed several Croatian and International scientific projects. Since 1991, she has been chosen to co-ordinate the cooperation between WHO and UNEP GEMS/AIR and Croatia. Since 1996, this duty has been extended to the COST-615 CITAIR project "D"tabase, Monitoring and Modelling of Urban Air Pollution".”Ph.D. Vađić chairs the Croatian Air Pollution Prevention Association and acts as its co-ordinator on the international level. She is the member of the International Committee within the International Union of Air Protection and of the Executive Committee of the European Federation for Clean Air. She is the member of a committee of technical advisers, and the chair of a subcommittee for outer atmosphere within the national standardisation agency *Državni zavod za normizaciju i mjeriteljstvo*. She also teaches air quality control within Chemical Engineering Studies for graduate students.

Date of last election

Referent publications of lecturer

1. Gentilizza, M., Vađić, V.: **Size distribution of suspended particulates in different areas and seasons as a function of their sulphate and ammonium content,** Sci.Total Environ., **66**, 225-234, 1987
2. Vađić,V., Gentilizza, M., Halle, R.: **The effect of various types of cement dust on sulphur dioxide oxidation in the air,** Environ. Monitoring Assessment, **11,** 59-68, 1988.
3. Gentilizza, M., Vađić, V., Hršak, J.: **The characteristic of size distribution of suspended particulates in the air for sulphate and selected metals in different areas and seasons,** Environ. Monitoring Assesment, **11**, 137-145, 1988.
4. Vađić, V., Gentilizza, M.Hršak, J., Eškinja, I.: **The effect of metals and ammonia on SO_2 oxidation to sulphates in the ambient air**, Environmental Monitoring and Assessment, **18**, 163-171,1991.
5. Vađić, V., Gentilizza, M.Čačković, M., Eškinja, I.: **Comparison of mass concentrations of SO_2 determined in air by different methods**, Environ.Monitoring and Assessment, **21**, 19-26, 1992.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Zvjezdana Bencetić Klaić, Assistant Professor**
E-mail address	zklaic@rudjer.irb.hr
Course	**(233) METEOROLOGICAL ASPECTS OF ATMOSPHERIC POLLUTION**
Institution	Faculty of Science, Zagreb

Curriculum vitae

Education
1998 Ph.D. Natural Science-Physics, University of Zagreb, Croatia
1989 M.S. Physics-Atmospheric Physics, University of Zagreb, Croatia
1983 B.S. Physics-Meteorology, University of Zagreb, Croatia
Professional Experience
2002-present Assistant Professor, Andrija Mohorovičić Geophisical Institute, Faculty of Science, University of Zagreb
1998-2002 Senior Assistant, Andrija Mohorovičić Geophysical Institute, Faculty of Science, University of Zagreb
1994-1998 Assistant, Andrija Mohorovičić Geophysical Institute, Faculty of Science, University of Zagreb
1991-1994 Creation of databases, software enterprise '3Dnet', Zagreb
1988-1991 Hydrological and hydrotechnical modeling, 'Hidroprojekt', Zagreb
1983-1988 Graduate Research Assistant, Andrija Mohorovičić Geophysical Institute, Faculty of Science, University of Zagreb
Research Areas
Planetary Boundary Layer Pollution, Modeling of the Long-range Transport of Pollutants, Mesoscale Modeling, Biometeorology
Scholarships, Professional and Scientific Visits
2000 Post-doctoral scholarship of the Greek State Scholarship Foundation (I.K.Y.) at Laboratory of Heat Transfer and Environmental Engineering, Aristotle University, Thessaloniki, Greece
2000 Visiting Scientist at Desert Research Institute, Reno, Nevada, USA
1998 Professional collaboration on ALADIN project, Meteo-France, Toulouse, France
1987 Post-graduate scholarship of the Norwegian Government at Norwegian Meteorological Institute, Oslo, Norway
Professional activities
2003-present: Editor-in-Chief of Geofizika journal
2003-present: Member of the EURASAP Committee

Date of last election 9. 05.2002.

Referent publications of lecturer

1. Bešlić, I., Šega, K., Šišović, A., Klaić, Z.B., 2005: PM10, CO and NOx concentrations in the Tuhobić road tunnel, Croatia. *Int. J. Environment and Pollution,* (in press).
2. Nitis, T., Kitsiou, D., Klaić, Z. B., Prtenjak, M. T., Moussiopoulos, N., 2005: The effects of basic flow and topography on the development of the sea breeze over a complex coastal environment. *Q. J. R. Meteorol. Soc.*, **131**, 305–327.
3. Klaić, Z. B., Belušić, D., Herceg Bulić, I., Hrust, L., 2003: Mesoscale modelling of meteorological conditions in the lower troposphere during a winter stratospheric ozone intrusion over Zagreb, Croatia. *J. Geophys. Res.-Atmos.*, **108**, 4720, 10.1029/2003JD003878.
4. Bencetić Klaić Z., 2003: Assessment of wintertime atmospheric input of European sulfur to the Eastern Adriatic. *Il Nuovo Cimento C*, **26** C, 1-6.
5. Cvitan L., Šinik N. and Bencetić Klaić Z., 2002: Two simple wind speed models for practical application under stable conditions. *Meteorol. Appl.*, **9**, 423-432.

6. Bencetić Klaić Z., Nitis, T., Kos, I. and Moussiopoulos, N., 2002: Modification of the local winds due to hypothetical urbanization of the Zagreb surroundings. *Meteorology and Atmospheric Physics*, **79**, 1-12.
7. Klaić Z., 1996: A Lagrangian model of long-range transport of sulphur with the diurnal variations of some model parameters. *J. Appl. Meteorol.*, **35**, 574-585.
8. Klaić Z., 1990: A Lagrangian one-layer model of long-range transport of SO_2. *Atmos. Environ.*, **24A**, 1861-1867.

List of papers in last 5 years

1. Bešlić, I., Šega, K., Šišović, A., Klaić, Z.B., 2005: PM10, CO and NOx concentrations in the Tuhobić road tunnel, Croatia. *Int. J. Environment and Pollution,* (in press).
2. Nitis, T., Kitsiou, D., Klaić, Z. B., Prtenjak, M. T., Moussiopoulos, N., 2005: The effects of basic flow and topography on the development of the sea breeze over a complex coastal environment. *Q. J. R. Meteorol. Soc.*, **131**, 305–327.
3. Klaić, Z.B., Klaić, B., 2004: Croatian scientific publications in top journals according to the Science Citation Index for the 1980-2000 period. *Scientometrics*, **61**, 221-251.
4. Belušić D, Klaić Z.B., 2004: Estimation of bora wind gusts using a limited area model. *Tellus*, **56 A**, 296-307.
5. Klaić, Z. B., Belušić, D., Herceg Bulić, I., Hrust, L., 2003: Mesoscale modelling of meteorological conditions in the lower troposphere during a winter stratospheric ozone intrusion over Zagreb, Croatia. *J. Geophys. Res.-Atmos.*, **108**, 4720, 10.1029/2003JD003878.
6. Rožman, B., Bencetić Klaić, Z., Škreb, F., 2003: Influence of the incoming Solar radiation on the bone mineral density in the female adult population in Croatia. *Collegium Antropol.*, **27**, 285-292.
7. Bencetić Klaić Z., 2003: Assessment of wintertime atmospheric input of European sulfur to the Eastern Adriatic. *Il Nuovo Cimento C*, **26** C, 1-6.
8. Cvitan L., Šinik N. and Bencetić Klaić Z., 2002: Two simple wind speed models for practical application under stable conditions. *Meteorol. Appl.*, **9**, 423-432.
9. Bencetić Klaić Z., Nitis, T., Kos, I. and Moussiopoulos, N., 2002: Modification of the local winds due to hypothetical urbanization of the Zagreb surroundings. *Meteorology and Atmospheric Physics*, **79**, 1-12.
10. Bencetić Klaić Z., 2001: Weather types and traffic accidents. *Collegium Antropologicum*, **25**, 245-254.

Lecturer data

Name, Surname	**Ph.D. Branko Tripalo, Full Professor**
E-mail address	btripalo@pbf.hr
Course	**(234) SOLID-GAS SEPARATIONS OR LIQUID DROPS- GAS SEPARATIONS**
Institution	Faculty of Food Technology and Biotechnology, Zagreb

Curriculum vitae

*Birth date***:**May /31/1946.Split;B.Sc.*School*: Faculty of Technology,University of Zagreb,*Years*:1965/70; M.Sc.*School*:Faculty of Technology,*Year*:1973/76; Ph.D.*School:*Faculty of Technology,*Years:*1981;*Position*: Assistant,*Organization*:Department of Biotechnology, Faculty of Technology, University of Zagreb, *Years*: 1971/81; *Position:* Assistant Professor, *Organization*: Department of Process Engineering, Faculty of Food Technology and Biotechnology; *Years*:1981/88; *Position*:Associate professor, *Years*:1988/92; *Position:* Full professor,*Years*:1999;*Position:*Vice dean,*Years*:1984/88.*Position*: Dean,*Years*:1999/03; *Position:* General menager,*Organization:* Institute of Food Technology and Biotechnology,*Years*:1985/86;*Position*:Head, *Organization*:Department of Process Engineering,*Years*:1988/97. *Participation in work of professional organisations:Regular member* of Croatian Academy of Engineering;*Member* of Section for the Manufacture of Agricultural Products and Biotechnology, Scientific Council for Agriculture and Forestry of Croatian Academy of Sciences and Art;*Member* of Food Technologists, Biotechnologists and Nutritionists Society, Croatian Society of Chemical Engineers.

Date of last election 1999.

Referent publications of lecturer

1. E.Perlov-Narančić i B. Tripalo, Evaporation (*Isparavanje)*, Tehnička enciklopedija, Jugoslavenski leksikografski zavod, Zagreb, svezak 6, str. 540-551, 1979.
2. B.Tripalo,Ž.Viličić, Drying (Sušenje) , Tehnička enciklopedija, Leksikografski zavod "Miroslav Krleža", Zagreb, svezak 12, str.451-461, 1990.
3. B.Tripalo, *Heat Transfer in Food Engineering*, Advances in Food Process Engineering, , ed. G.Konja , T.Lovrić, D.Šrucelj i B.Tripalo, University of Zagreb, European Food and Agriculture Partnership Project, European Community's TEMPUS programme, str.29-36 (1992).
4. B.S.Grabarić, B.Tripalo, *Iskazivanje fizikalnih veličina u kemiji i biokemiji*, Prehrambeno-tehnol.biotehnol.rev. 31 (1) 19-33 (1993) (CA:119(23)249204w)

List of papers in last 5 years

1. Z.Herceg, V.Lelas, M.Brnčić, B.Tripalo, D.Ježek: *Fine Milling and Micronization of Organic and Inorganic Materials Under Dynamic Conditions*, Powder Technology, 139 (2004) 111-117. (SCI 776 AW)
2. D.Ježek, B.Tripalo, M.Brnčić, *Influence of Different Process Parameters on Vegetable Drying in Gas Fluidized Beds*, Compact Heat Exchangers and Enhancement Technology for the Process Industries, ed.R.K.Shah, Begell House, Inc. New York, str.247-252 (2003)
3. M.Brnčić, B.Tripalo, D.Ježek, V.Mrkić, D.Semenski, N.Drvar, M.Ručević, *Determining of Mechanical Hardness of Extrudates*, Proceedings of the 4th Croatian Congress of Food Technologists, Biotechnologists and Nutritionists – Central European Meeting, editorial board V.Lelas et all., Faculty of Food Technology and Biotechnology, University of Zagreb, Opatija, Croatia, str.72-76 (2002). (SCI BW 93M)
4. M.Brnčić, B.Tripalo, D.Ježek, *Influence of Chocolate Powder Addition on a Mechanical Hardness of Food Extrudates Type Flips*, ECCE, 4th European Congress of Chemical Engineering, Chemical Engineering, a Tool for Progress, Proceedings,Granada, Spain, P-11.3-028 (2003)

5. Z.Herceg, V.Lelas, M.Brnčić, B.Tripalo, D.Ježek:*Tribomechanical micronization and activation of whey protein concentrate and zeolite*, Sadhana, Vol.29, Part 1 (2004) 13-26

Lecturer data

Name, Surname	**Ph.D. Branko Salopek, Full Professor**
E-mail address	bsalop@rgn.hr
Course	**(235) CLEANING OF AIR AND WASTE GASES**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb

Curriculum vitae

Branko Salopek was born 1942 in Zagreb, Croatia, and graduated as mining engineer (E.M.) from the Faculty of Mining, Geology and Petroleum Engineering at the University of Zagreb. After graduating he was with the Jugokeramika Company for three years, and then joined the Institute of Mineral Dressing at his Alma Mater as scientific Assistant. In 1982 he obtained the degree of Doctor of Sciences (Dr.Sc.), and. in the 1991 he was elected Professor at the mentioned Zagreb Mining Faculty, and since then he has been working there. From 1989 to 1995 he was the Vice-Dean at the Faculty of Mining, Geology and Petroleum Engineering, and from 1997 to 2001. he was the head of the Department of mining and geotechnics.

Up to now he has published more then 70 scientific and professional papers. Most significant scientific paper in the field of mineral processing technology deals with problems of sedimentation, filtration, mathematical modeling of the comminution and classification processes, and crushing and grinding of ores and industrial minerals. In the field of environmental technology the papers mostly deal with problems of red mud disposal, dust emision, and pollutant emision from the thermoenergetic plants, quorries, ect. In reacent time some papers deal with the problems of waste recycling, soil cleaning and reclamation of quorries and gravel-pits in Croatia.

He is the member of Society of Croatian Mining Engineers, CIM – Canadian Institute of Mining, Metallurgy and Petroleum, and SME – Society of the Ameraican Institute of Mining, Metallurgical and Petroleum Eng.,Inc. He is also the full member of Croatian Academy of Engineering.

Date of last election 05.05.1998.

Referent publications of lecturer

1. Salopek, B.: **Clean coal technologies and environmental protection**, Progress in Min. Proc. Technology, Ed.: Balkema, A.A., Rotterdam, 305-313, 1994.
2. Salopek, B., Krasić, D., Mikulić, A.: **Novi postupci čišćenja plinova termoelektrana loženih ugljenom**, Međunarodni kongres "Energija i okoliš", Opatija, **I**, 209-216, 1994.
3. Salopek, B., Mikulić, A.: **Termoenergetic plants in urban environs-impacts and protecting means**, Int.Cong. on Energy and the Environment, Opatija, **I**., 451-459, 1996.
4. Salopek, B., Bedeković, G.: **Čišćenje dimnih plinova iz spalionica otpada,** IV. Međunarodni znanstveno-stručni simp. Gospodarenje otpadom ´96, Zagreb, 151-164., 1996.
5. Salopek, B., Bedeković, G.: **Zaštita zraka na kamenolomima tehničkog kamena**, Znanstveno-stručni skup "Zaštita zraka 99", Šibenik, 217-226, 1999.

List of papers in last 5 years

1. Salopek, Branko: Studij rudarstva na početku novog tisućljeća. Rudarsko-geološko-naftni zbornik. 12 (2000.) ; pp. 125-128.
2. Salopek, Branko; Bedeković, Gordan: Sitnjenje - prvi stupanj u oplemenjivanju mineralnih sirovina. Rudarsko-geološko-naftni zbornik. 12 (2000) ; pp. 83-88.
3. Salopek, Branko; Bedeković, Gordan: Air Quality Control in Quarries of Technical Stone. Proceedings of the Ninth International Symposium on Mine Planing and Equipment Selection Athens : A.A.Balkema Publishers, 2000. pp. 951-956.

4. Salopek, Branko; Bedeković, Gordan: Beneficiation of Sand from the Sava-River Bed. Proceedings of the XXI International Processing Congress Rome : Elsevier, 2000. pp. C11-26 - C11-31.
5. Salopek, Branko; Bedeković, Gordan: Mjere zaštite u kamenolomima tehničkog kamena. Work and Safety. 5 (2001) , 3; pp. 141-166.
6. Salopek, Branko; Bedeković, Gordan: The Recycling of Metallic Scrap in Croatia. VI Southern Hemisphere Meeting on Mineal Technology - VOLUME 2 Rio de Janeiro : CETEM/MCT, 2001. pp. 690-693.
7. Salopek, Branko; Jezerčić-Aurer, Indira; Bedeković, Gordan: Law Regulations and Emission Control System in Croatian Thermoenergetic Plants. Proceedings of International Carpathian Control Conference Krynica : Inżynierii Mechanicznej i Robotyki AGH Krakowie, 2001. pp. 531-538.
8. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Vertical Impact Crusher In High-grade Chippings Production. Proceedings of the Tenth International Symposium on Mine Planing and Equipment Selection New Delhi : Mohan Primlani for Oxford & IBH Publishing Co. Pvt. Ltd., 2001. pp. 3-10.
9. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Konstrukcijske značajke i učinkovitost vertikalnih udarnih drobilica. Rudarsko-geološko-naftni zbornik. 14 (2002) ; pp. 65-75.
10. Bedeković, Gordan; Salopek, Branko; Sobota, Ivan: Beneficiation and Utilization of Electric Furnace Slag. 6th Conference on Environment and Mineral Processing (Part II) Ostrava : VŠB - TU Ostrava, 2002. pp. 367-372.
11. Salopek, Branko: Application of the Hydrocyclone in the Fine Tailings Dewatering. Proceedings of the Eleventh International Symposium on Mine Planning and Equipment Selection. Ostrava : VŠB - TU Ostrava, 2002. pp. 211-215.
12. Salopek, Branko; Pfaff, Slavka; Rajić, Rajna: Statistical Experimental Design Approach in Coal Briquetting. Proceedings of Mine Planing and Equipment Selection. The Australasian Institute of Mining and Metallurgy, 2003. pp. 349-352.
13. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Production of Construction Aggregates in Urban Aeras. Proceedings of the International Conference on Sustainable Development Indicators in the Mineral Industries (SDIMI 2003). Milos Island : Milos Conference Cener - George Eliopoulos, 2003. pp. 273-278.
14. Salopek, Branko; Sobota, Ivan; Halle, Radovan; Pfaff, Slavka: The Effect of Attrition in the Quartz Sand Beneficiation. Proceedings of X^th Balkan Mineral Processing Congress Mineral Processing in the 21th century Sofia : DJIEV TREADE LTD, 2003. pp. 565-569.
15. Bedeković, Gordan; Salopek, Branko; Sobota, Ivan: Comparison of Flotation Column and Mechanical Cell in Coal Flotation. Proceedings of the 8th Conference on Environment and Mineral Processing. Ostrava : VŠB TU Ostrava, 2004. pp. 23-28.
16. Rumenjak, Damir; Salopek, Branko; Rajković, Damir: Change of decision-making principles in environmental impact assessment applied on screening matrices. Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Technology. Hania : Heliotopos Conferences, 2004. pp. 751-754.
17. Salopek, Branko; Sobota, Ivan; Halle, Radovan; Bedeković, Gordan: Improvement of quartz sand quality using attrition cleaning. Proceedings of the Thirteenth International Symposium on Mine Planing and Equipment Selection. Lieden : A.A.Balkema Publishers, 2004. pp. 303-308.
18. Salopek, Branko: Mining Engineering Education - A Vision for the Future. Annual 2004 of the Croatian Academy of Engineering. Zagreb : Croatian Academy of Engineering, 2004. pp. 33-41.
19. Salopek, Branko; Galić, Mile: Ljevaonički otpad i zaštita okoliša. Znanstveno-stručni ljevački skup Zagreb 2004. Zagreb : Hrvatsko udruženje za ljevarstvo, 2004. pp. 81-85.
20. Premur, Vitomir; Salopek, Branko: Recycling of Waste Mineral Wool. Proceedings of the "Rewas'04": Global Symposium on Recycling, Waste Treatment and Clean Technology VOLUMEN III. San Sebastian : TMS & Inasmet, 2004. 2789-2790.
21. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Application of Mineral Processing Techniques in Soil Washing. Book of Abstracts Zagreb : Faculty of Chemical Engineering and Technology, University of Zagreb, 2004. pp. 50.

Lecturer data
Name, Surname **Ph.D. Vesna Tomašić, Assistant Professor**
E-mail address vtomas@marie.fkit.hr
Course **(236) CHEMICAL ENGINEERING FOR AIR POLLUTION CONTROL**
Institution Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Ms. Vesna Tomašić was born in Sisak in 1964. In 1990 graduated from the Faculty of Technology in Zagreb and became a junior researcher at the Department of Reaction Engineering and Catalysis, Faculty of Technology (now the Faculty of Chemical Engineering and Technology). In 1991 applied for postgraduate study of engineering chemistry, course Chemical Engineering. Two years later got Master's degree in chemical engineering, then doctorate (in 1999). From 1995.-1999. she has worked as an assistant, from 1999.-2002. as senior assistant and in 2002. the elected assistant professor. At the Department of Reaction Engineering and Catalysis conducts the exercises in «Catalysis and Catalysts», «Reaction Engineering» and «Catalytic Reaction Engineering». Since 1999. Ms. Vesna Tomašić acts as a mentor in «Chemical Engineering Exercises". From 1990. is collaborator in three scientific-research projects supported by the Croatian Ministry of Science and Technology and a principal investigator in the project of young researchers («Reduction of NO_x over zeolites»). Ms. Vesna Tomašić works on catalytic reaction engineering, with special emphasis on the topics related to air protection. She has published 16 scientific papers, of which 10 in journals and proceedings with international referee, and has participated at 10 international and 14 local scientific and professional conferences. She has good oral and written command of English and speaks German. Membership in the following associations: Association of the graduate engineers and friends of chemical-technology study (AMACIZ), Croatian Air Pollution Prevention Association and Croatian Society of Chemical Engineers: Section for Chemical Engineering (president) and Section for Environmental Engineering.

Date of last election 14.10.2002.

Referent publications of lecturer

1. Tomašić, V., Gomzi, Z., Zrnčević,S.: **Kinetics of NO decomposition over Cu/ZSM-5 catalyst**, React. Kinet.Catal. Lett., **64**(1), 89, 1998.
2. Tomašić, V., Gomzi, Z., Zrnčević, S.: **Catalytic reduction of NO_x over Cu/ZSM-5 catalyst**, Appl. Catal.B: Environmental, **18**, 233, 1998.
3. Tomašić,V., Gomzi, Z., Zrnčević, S.: **Formation and depletion of NO_2 during catalytic decomposition of No over Cu/Zsm-5 catalyst,** Chem. Biochem. Eng. Q., **12** (3), 135, 1998.
4. Tomašić, V., Geržina, A., Gomzi, Z., Zrnčević, S.: **Catalytic removal of NO: The effect of Cu loading and type of binder on catalytic properties of Cu/ZSM-5 catalyst**, 12th International Congres on Catalysis (Ed.: Corma, A., Melo, F.V., Mendioroz, S., Fierro, J.L.G.), Elsevier, Amsterdam, 1493-1498,2000.
5. Tomašić, V., Gomzi, Z.: **Development of the structured catalysts for the exhaust gas treatment**, Chem. Biochem. Eng. Q., **15**(3), 109, 2001.

List of papers in last 5 years

1. V. Tomašić, A. Geržina, Z. Gomzi and S. Zrnčević, **Catalytic Removal of No: The Effect of Cu Loading and Type of Binder on Catalytic Properties of Cu/Zsm-5 Catalyst**,12th Int.Con. on Catalysis (Ed. A. Corma et all.), Elsevier, Amsterdam 2000, p. 1493.
2. V. Tomašić, A. Geržina, S. Zrnčević, **The Influence of Thermal Treatment on the Performance of Ni/Al2o3 Catalyst**, Chem. Biochem. Eng. Q., 14 (2)(2000) 47.
3. V. Tomašić, **Nove tehnologije za smanjenje emisija u atmosferu**, Zbornik radova—Zaštita

zraka ”01“, (ur. F. Valić, K. Šega), Hrvatsko udruženje za zaštitu zraka, Zagreb 2001, str. 215-221.
4. V. Tomašić, **Onečišćenje okoliša. Emisija štetnih plinova u atmosferu**, Kem. Ind. 50(1)(2001) 87.
5. V. Tomašić, Z. Gomzi, **Development of the Structured Catalysts for the Exhaust Gas Treatment**, Chem. Biochem. Eng.Q., 15(3)(2001) 109.
6. V. Tomašić, Z. Gomzi, S. Zrnčević, **Reaction and Mass Transfer Effects in a Catalytic Monolith Reactor**, React. Kinet. Catal. Lett., 77(2)(2002) 245.
7. V. Tomašić, S. Zrnčević, Z. Gomzi, **Modelling and Simulation of a Monolith Reactor**, Pol. J. Environ. Stud., 11 (Suppl. III)(2002), 23.
8. L. Zrnčević, T. Brajdić, V.Tomašić, **Razgradnja dušikovog monoksida u katalitičkom monolitnom reaktoru**, Kem. Ind. 52 (9)(2003) 421-426.
9. V. Tomašić, Z. Gomzi, **Experimental and Theoretical Study of No Decomposition in a Catalytic Monolith Reactor**, Chem. Eng. Proc., 43(6)(2004) 765.
10. V. Tomašić, S. Zrnčević, Z. Gomzi, **Direct Decomposition of No in a Monolith Reactor: Comparison of Mathematical Models**, Catal. Today 90 (2004) 77.
11. V. Tomašić, **Monolitni katalizatori i reaktori: osnovne značajke, priprava i primjena**, Kem. Ind. 53 (12) (2004) 567.

Lecturer data

Name, Surname	**Ph.D. Željko Vidaček, Full Professor**
E-mail address	vidacek@agr.hr
Course	**(241) SOIL CHEMISTRY**
Institution	Faculty of Agriculture, Zagreb

Curriculum vitae

Born in Varaždin in 1938, where he finished grammar school. Employed by the Faculty of Agriculture, University of Zagreb, as full professor with tenure, since 1992. Head of the Soil Science Department of the Faculty of Agriculture, University of Zagreb. Teaches General and Special Soil Science at the Faculty of Agriculture in Zagreb and the Faculty of Agriculture in Osijek, Ameliorative Soil Science at the Faculties of Agriculture and Civil Engineering in Zagreb, as well as Management of Drainage and Irrigation Systems at the Faculty of Agriculture in Zagreb.
Specialized in specified pedological and hydropedological research for the needs of agricultural amelioration, regional planning and soil protection, including contamination by heavy metals, nitrogen and residues of plant protection agents. Principal investigator in the research project "Soil and water protection in agro-ecosystems" Also runs the postgraduate course in Agroecology. Participated in a large number of symposia and congresses in this country and abroad. Worked abroad on the problems of desalinization and irrigation of halomorphic soils. Published 81 scientific papers in journals, proceedings and as separate editions. Authored or co-authored 14 conceptual designs – technical solutions, 65 studies and expert evaluations. Wrote the textbook "Management of Drainage and Irrigation Systems".

Date of last election 1996.

Referent publications of lecturer

1. Vidaček Ž., Bogunović M., Sraka M, Husnjak S. (1996): Water Discharges and Nitrates from some Soils of the Sava River Valley, 6. Gumpensteiner Lysimetertagung, BAL Gumpenstein, 16-17. p
2. Vidaček Ž. voditelj disertacije L. Čoge (2000) Raspodjela kadmija i cinka u sustavu tlo – voda - biljka nakon hidromelioracija, Agronomski fakultet, Zagreb
3. Vidaček Ž. voditelj disertacije, V. Galović (2003) Dinamika natrija u alkalnim tlima Istočne Hrvatske, Poljoprivredni fakultet Osijek
4. Vidaček Ž. (2002-2005) Zaštita tla i voda u agroekosustavima, glavni istraživač znanstvenog projekta
5. Vidaček Ž.(2004) Kemija tla, interna skripta, u tiskanom i digitalnom obliku, Zavod za pedologiju Agronomskog fakulteta, Zagreb

List of papers in last 5 years

1. Mihalić A., Vidaček Ž., Sraka M. (2000): Nitrates and Ammonia in the Waters of a Part of the Drava River Basin, International Conference on Agricultural Effects on Ground and Surface Waters, Proceedings, Wageningen
2. Sraka M., Drevenkar V**.,**Vidaček Ž., Mihalić AS. (2000):Herrbicides in the Soils and Waters of a Part of the Drava River Basin, International Conference on Agricultural Effects on Ground and Surface Waters, Proceedings, Wageningen
3. Vidaček. Ž., Sraka M., Čoga L., Mihalić A. (1999) Nitrati, teški metali i hericidi u tlu i vodama sliva Karašica – Vučica, Poljoprivredna znanstvena smotra 64, 2, 143-150
4. Vidaček Ž. (2001): Gospodarenje i zaštitia tla u Hrvatskoj: Globalno stanje i preporuke, IX kongres HTD-a s međunarodnim sudjelovanjem, Brijuni

5. Vidaček Ž. Sraka M. Bensa A (2002): Impact of hydroamelioration on soil moisture regime and nitrate leaching, *17th World Congress of soil Science* / Irb, Kheoruenromne, Bangkok, Thailand : Society of Soil Science of Thailand, 656-663

Lecturer data

Name, Surname	**Ph.D. Sulejman Redžepović, Full Professor**
E-mail address	sredzepovic@agr.hr
Course	**(242) SOIL MICROBIOLOGY AND BIOCHEMISTRY**
Institution	Faculty of Agriculture, Zagreb

Curriculum vitae

Sulejman Redžepović is professor of the Faculty of Agriculture University of Zagreb. Professor Redžepović is the main lecturer in courses of **General microbiology, Soil microbiology, Applied microbiology in catlling** as well as **Wine microbiology.** He is visiting professor at the Faculty of Agriculture, University of Sarajevo. In postgraduate studies, he is engaged in larege number of courses at the Faculty of Agriculture, Faculty of Forestry, Faculty of chemical engineering and technology University of Zagreb as well as at the Faculty of Agriculture, University of Sarajevo. He have published a large number of scientific papers in national and international publications and more than 80 projects, studies and professional papers. Professor Redžepović was the main investigator of one international project and several netional projects financed by Ministry of science and technology of the Republic of Croatia. During the last 20 years, he was concentrated on development of soil biotechnology and especially on the biological fixation of atmospheric nitrogen and investigations regarding indigenous *Bradyrhizobium japonicum* strains. This approach have resluted in own technology of submerged microbial growth of these microorganisms for soybean seed inoculation in Croatia. Recently, he is engaged in investigations of indigenous wine yeasts of croatian wine regions. He is active participant of many international and domestic congresses and member of the different scientific and professional societies. Prof.dr. Sulejman Redžepović is Head of Department of Microbiology since 1983. up till now. He was rewarded with Recognition for achievements in lecture and science at the Faculty of Agriculture University of Zagreb for 1989. and 1995. as well as **National Award for Science** in 2000. for applied results of scientific and investigating work.

Date of last election

Referent publications of lecturer

1. Sikora, S., Redžepović, S., Pejić, I., Kozumplik, V.: **Genetic diversity of *Bradyrhizobium japonicum* field population revealed by RAPD fingerprinting**, Journal of Applied Microbiology, **82**(4), 527-531, 1997.
2. Redžepović, S., Vratarić, M., Sudarić, A., Sikora, S.: **Symbiotic efficiency of indigenous *Bradyrhizobium japonicum* strains used in soybean production in agroecological conditions of Croatia**, World Soybean Research Conference, Chicago, 1999.
3. Sikora, S., Redžepović, S., Bradić M.: **Genomic fingerprinting of *Bradyrhizobium japonicum* isolates by RAPD and rep-PCR,** Microbiological Research **157**(3), 213-219, 2000.
4. Redžepović, S., Orlić, S., Sikora, S., Majdak, A., Pretorius, I.S.: **Identification and characterization of *Saccharomyces cerevisiae* and *Saccharomyces paradoxus* strains isolated from Croatian vineyards**, Letters in Applied Microbiology, **35**, 305-310, 2002.
5. Redžepović, S., Orlić, S., Majdak A., Kozina, B., Volschenk H., Viljoen-Bloom, M.: **Differential malic acid degradation by selected strains of *Saccharomyces* during alcoholic fermentation,** International Journal of Food Microbiology, 2578 (2002), article in press.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Sanja Sikora, Associate Professor**
E-mail address	ssikora@agr.hr
Course	**(242) SOIL MICROBIOLOGY AND BIOCHEMISTRY**
Institution	Faculty of Agriculture, Zagreb

Curriculum vitae

Born on 6. 9. 1959 in Osijek, RH. Graduated in1983 at the Faculty of Agriculture, Zagreb. Ms. degree received in 1990 at the Faculty of Agriculture, Novi Sad, and PhD. degree received in November 1996 at the Faculty of Agriculture, Zagreb. She was elected for scientific-educational title of associated professor in March, 2003. Professor Sikora was involved in lecturing general microbiology, soil microbiology, biological nitrogen fixation and soil biotechnology. As a mentor or a commission member she was included in development of a large number of graduate and masters works and one dissertation. Specializations at: "Elchrom Scientific AG " laboratory at Cham, Switzerland, and at the National microorganisms collection in Budapest, Hungary in order to gain new knowledge regarding molecular methods for identification of bacterial and yeast strains. She had published 16 scientific papers and participated at the large number of international and domestic scientific meetings. As a main investigator, she is involved in many national scientific and applied projects and was a member of one international project as well. Prof. Sikora was the first one in our country to introduce molecular methods for genetic determination of different microbial groups. She was involved in formation of the National collection of symbiotic nitrogen fixers and yeasts. Regarding the area of soil microbiology, she participated in many studies, projects and expertises

Date of last election 03.2003.

Referent publications of lecturer

1. Projekti: Simbiozna fiksacija dušika i ekološka proizvodnja soje (VIP), voditelj: prof.dr. Sanja Sikora, 2004-2006.
2. Projekti: Prirodna raznolikost i selekcija simbioznih fiksatora dušika (MZOS), voditelj: prof.dr. Sanja Sikora, 2002.-2005..
3. Projekti: Učinkovitost primjene bakterizacije u uzgoju lucerne u ekološkim uvjetima Bjelovarsko bilogorske županije (VIP) , voditelj: doc.dr. Sanja Sikora, 1998-2001
4. Mentorstvo/sumentorstvo - magistarski radovi: Mihaela Bradić: Genetička identifikacija i simbiozna učinkovitost autohtonih sojeva *Sinorhizobium meliloti*, 2001 Andrea Skelin Vujić:Karakterizacija autohtonih sojeva kvasaca skupine Saccharomyces sensu stricto izoliranih s kultivara Plavac mali, 2003
5. Mentorstvo - diplomski radovi: Ivana Zebić: Zastupljenost celulolitičkih gljiva i bakterija u pseudoglejnom tlu Posavine, 1998. Gordana Gredičak: Zastupljenost aerobnih i anaerobnih asimbioznih fiksatora dušika u rizosferi pšenice, 1998 Jelena Turković: Utjecaj različitih doza mineralnog dušika na zastupljenost amonifikatora i nitrifikatora, 1998 Snježana Salihović: Utjecaj nejih herbicida na rast različitih sojeva Bradyrhizobium japonicum, 1999 Danijela Pejić: Značaj simbiozne fiksacije dušika u održivoj poljoprivredi, 2001.

List of papers in last 5 years

1. Sikora S**.,** Redžepović S., 2003: Genotypic characterization of indigenous soybean rhizobia by PCR-RFLP of 16S rDNA, rep-PCR, rep-PCR and RAPD analysis. Food Technol. Biotechnol. 41, 1, 61-67.
2. Bradić M., Sikora S., Redžepović S., 2003: Genetic identification and symbiotic efficiency of an indigenous *Sinorhizobium meliloti* field population. Food Technol. Biotechnol. 41, 1, 69-75.

3. Sikora S., Redžepović S., Bradić M., 2002: Genomic fingerprinting of *Bradyrhizobium japonicum* isolates by RAPD and rep-PCR. Microbiological Research 157, 3, 213-219
4. Samaržija D., Sikora S., Redžepović S., Antunac N., Havranek J., 2002: Application of RAPD analysis for identification of *Lactococcus lactis* subsp. *cremoris* strains isolated from artisanal cultures. Microbiological Research 157, 1, 13-17
5. Redžepović, S., Orlić S**.,** Sikora S**.,** Majdak A., Pretorius, I.S., 2002: Identification and characterization of *Saccharomyces cerevisiae* and *Saccharomyces paradoxus* strains isolated from Croatian vineyards. Letters in Applied Microbiology 35, 4, 305-310.

Lecturer data
Name, Surname **Ph.D. Zoltan Racz, Full Professor**
E-mail address zracz@agr.hr
Course **(243) SOIL PROTECTION**
Institution Faculty of Agriculture, Zagreb

Curriculum vitae

Born in Zagreb, in 1930. Graduated in 1953 from the Faculty of Agriculture and Forestry in Zagreb, and in 1962 won his doctor's degree at the same faculty. In the meantime, specialized in the netherlands and in the USA, and then passed the regular appointment procedure for assistant professor, associate professor and full professor. After retiring in 1995, continues with research activities and lecturing in postgraduate courses. During active service, lectured as part of regular study courses at the Faculties of Agriculture, Civil Engineering and Geodesy in Zagreb. Published numerous scientific and professional work in Croatia and abroad, textbooks Ameliorative Soil Science (i and II), and Agricultural Soil Mechanics, Lately, mainly deals with ecological problems for the purposes of sustainable management and protection of soil and water in agriculture. Besides running relevant national projects, served as the representative of Croatia on the Working Committee for Scientific and Technological Cooperation of the Alps-Adria Regional Association, on technical committees for the protection of soil and water in the Danube basin and the Mediterranean, as well as on the FAO and UN/ECE Task Force for the relations between agriculture and the environment. These engagements resulted in international gatherings and publications under the auspices of the Alps-Adria Regional Association in 1992 in Zagreb, and in 1993 in Poreč, and under the auspices of UN/ECE and FAO in 1996 in Zagreb. The Faculty of Agriculture has recently submitted a motion to the Senate of the University of Zagreb to confer the honorary title professor emeritus upon prof.dr. Zoltan Racz, PhD.

Date of last election

Referent publications of lecturer

1. Racz, Z.: **Tlo i ekološki problemi današnjice**. Referat održan na okrugom stolu "Univerzitet i znanost o čovjekovom okolišu", povodom 320-te godišnjice osnutka Sveučilišta u Zagrebu, PZS, **55**(1-2), 183-194, Zagreb, 1990.
2. Racz, Z., Bogunović, M., Martinović, J. Kvastek, K., Bognar, A.: **Soil degradation and potential pollutants on Croatian coast and in surrounding mountain**. CTB Symposium held in Valencia, 1992. Naknadno objavljeno u PZS, **58**(2), 177-187, 1993.
3. Bogunović, M., Vidaček, Ž., Racz, Z., Husnjak, S., Sraka, M.: **Namjenska pedološka karta Republike Hrvatske i njena uporaba**, Agronomski glasnik, 5/6, 363-399, 1997.
4. Racz, Z., Vidaček, Ž., Sraka, M.: **Uloga tla u proizvodnji hrane i očuvanju ljudskog zdravlja**, Zbornik radova XXV stručnog sastanka Hrvatskog farmaceutskog društva "Ekološki pokazatelji i njihovo praćenje", Stubičke toplice, 11-23, 1998.
5. Racz, Z.: **Aktualna pitanja i problemi pedoloških istraživanja u svijetu i kod nas**, PZS, **64**(3), 231-241, 1999.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Ferdo Bašić, Full Professor**
E-mail address	fbasic@agr.hr
Course	**(244) SUSTAINABLE LAND MANAGEMENT-SLM**
Institution	Faculty of Agriculture, Zagreb

Curriculum vitae

Date of Birth: 1. of January 1945.
Education: *Graduated study* - Faculty of Agronomy, University of Zagreb, 1970., *Postgraduate study* - Soil Science: the same Faculty, 1974., *Doctor of sciences* - Soil Science - University of Sarajevo, 1984.
Membership:
Croatian Associations; Croatian Society of Drainage and Irrigation, Society of Soil Science, Croatian Society of Ecology,
International scientific Associations: International Union of Soil Science (IUSS), International Soil Tillage Research Organization-ISTRO, European Society of Soil Conservation-ESSC, International Scientific Centre of Fertilisers - CIEC, Member the ESBN – European Soil Bureau Network,
Professional roles: The member of Working Group of Parliament of Republic Croatia for Soil and Forest Protection, Deputy of Croatia in Working group for Permanent Soil monitoring in Alps, Alps-Adria and Danube river basin countries and National Committee for combat of desertification, National consultant for land resources evaluation of Croatia, National co-ordinator for preparing National report for World Food Summit in Rome - November 1996., personally participated on Summit in the role of co-ordinator of National report. As president of a branch of Croatian Chamber of Commerce "Eco – food", he influenced different activities in development of ecological agriculture, especially legislative base. As a scientist oriented to Sustainable development he influenced on orientation of Croatian agriculture to a sustainable way.
Scientific and expert activities: Active participation on more than 70 international scientific and expert meetings conferences, round tables or symposia with topics connected with land and water management, sustainable agriculture and soil protection; held on all continents. In 1989. founded a scientific project of investigation of soil erosion on lateritic - ferralitic soils of Ethiopian highland in Wollega province within a joint project of formerly Yugoslavia and Peoples Republic Ethiopia. He is one of founders of Agricultural Research Council – ARC in Croatia. Participant "Environmental programme for the Danube river basin", and leader of team of experts for preparing National report. Very reach and fruitful are activities within joint Working group «Soil monitoring» of Alp – Adria association. He was leading organizator more scientific conferences. As "European oriented" he was active member of ICA – Interuniversity Conference of Agricultural and related sciences, which covers different activities of European Agricultural Universities in reform following Bologna process.
Employment: Faculty of Agronomy, University of Zagreb, as full professor with lectures in courses: Soil management and Soil protection, Agroecology with farming systems, Ecological agriculture.
Scientific papers: Author of 6 books, 8 chapters in book, three textbooks, more than 150 scientific papers published in domestic and international journals, 11 of which in CC, as well as more than 400 projects, studies, etc. Speaking, reading and writing English and German language, familiar with "team-work", which illustrates the fact that on list of authors of his papers there is more than 154 co-authors, 19 of them are foreign (Europe, America and Africa) scientists.
He is editor in chief of the oldest scientific journal of Croatia in agriculture ACS – Agriculturae conspectus scientificus. For scientific activities he is winner of Annual award in biotechnical sciences for 2003. Year.

Date of last election 1999.

Referent publications of lecturer

1. Bašić, F., Kisić, I., Mesić, M.: **Statements on problems of soil protection and sustainable land use in Croatia**. Co-operation for Soil protection and Sustainable land use in Central and Eastern European (CEE). Countries, str. 14-18. Beč, Austrija, 2001.
2. Bašić, F., Kisić, I., Nestroy, O., Mesić, M., Butorac, A.: **Particle size distribution of eroded soil material**, J. of Agronomy, and Crop science, **188**, 311-322, 2002.
3. Kisić, I., Bašić, F., Nestroy, O., Mesić, M., Butorac, A.: **Chemical properties of eroded soil material**, J. Agronomy and Crop science, **188**, 311-334, 2002.
4. Bašić,F., **Soil resources of Croatia, country report**, The JRC Enlargement Action - Land Degradation, Workshop 10-B, Ispra, 2003.

5. Bašić,F., Franić Ramona**, Nature and Man in Croatian Agriculture**, Croatian Agriculture, Food and Food Processing Industry, PRO-TIM, p 87, Zagreb, 2003.
6. Mesić,M., Bašić,F., Kisić,I., Butorac,A., Gašpar,I., **Utjecaj gnojidbe mineralnim dušikom na sadržaj nitrata u tlu i na koncentraciju NO_3–N u vodi iz drenskih cijevi**. Zbornik radova: 3. Hrvatska konferencija o vodama – Hrvatske vode u 21. stoljeću. st. 359-368, Zagreb. 2003.
7. Mesić,M., Butorac,A., Bašić,F., Kisić,I., Gašpar,I., **Effect of nitrogen fertilization for oilseed rape on nitrogen leaching with subsurface drainage water**. Proceedings of 12th World Fertilizer Congress of CIEC. Vol. I, st. 540-547. Peking, 2003.
8. Bašić,F., Kisić,I., Mesić,M., Nestroy,O., Butorac,A., **Tillage and crop management effects on soil erosion in Central Croatia**. Soil & Tillage Research. vol. 78/2, 197-206. 2004.
9. Kisić,I., Bašić,F., Nestroy,O., Mesić,M., **Tillage erosion under different tillage systems**. Proceedings of the 4th International Congress of the European Society for Soil Conservation. str. 128-132, Budimpešta, 2004.

List of papers in last 5 years

1. Kisić,I., Bašić,F., Butorac,A., Nestroy,O., Marušić,J., Mesić,M., Sabolić,M., Petraš,J., Zaštita tla od erozije s motrišta održivog gospodarenja tlom, Hrvatske vode, br. 26. str. 15-26, Zagreb, 1999.
2. Bašić,F., Agroekologija, pisana predavanja, Rukopis za studente Prirodoslovno – matematičkog fakulteta, Zavod za OPB, Zagreb, 2000.
3. Bašić,F., Višeznačna uloga tla kao temelj održivog gospodarenja tlom na pragu novog milenija, Znanstveni skup s međunarodnim sudjelovanjem u povodu 140. obljetnice poljoprivrednog školstva u Križevcima, Zbornik radova, 71-87, Križevci, 2000.
4. Bašić,F., Zaštita tla i voda, pisana predavanja, Rukopis za studente Agronomskog fakulteta, Zavod za OPB, Zagreb, 2000.
5. Bašić,F., I.Kisić, Onečišćenost tala županije teškim kovinama, Poglavlje u studiji: Program razvitka poljoprivrede na području Sisačko-moslavačke županije, str. 139-155, Zagreb, 2000.
6. Bašić,F., I.Kisić, M.Mesić, Some aspects of soil degradation in Croatia (in the light of Convention of Danubian Countries). Working community of Danube Basin Countries. 7th Meeting of Soil Conservation working group experts, Kravsko - Czech Republic, 2000.
7. Bašić,F., I.Kisić, M.Mesić, Stanje onečišćenja tala teškim kovinama na širem području šume Žutica. Znanstveno stručni skup povodom Svjetskog dana zaštite okoliša, Nafta-šuma-voda, Zbornik radova, str. 23-27, Zagreb, 2000.
8. Bašić,F., I.Kisić, M.Mesić, Otvorena pitanja razvitka ekološke poljoprivrede, Zimska predavanja za poljoprivrednike Bjelovarsko-bilogorske županije, str. 55-60, Bjelovar, 2000.
9. Bašić,F., I.Kisić, O.Nestroy, M.Mesić, A.Butorac, Influence of soil tillage upon the characteristics of erosional drift on Luvic stagnosols in Central Croatia. Proceedings of 15. ISTRO Conference - p. 8. Fort Worth, Dallas, 2000.
10. Bašić,F., O.Nestroy, I.Kisić, A.Butorac, M.Mesić, M.Sabolić, Stacionarna istraživanja erozije vodom pri različitim načinima obrade na pseudogleju središnje Hrvatske. 140. Obljetnica poljoprivrednog školstva u Hrvatskoj, Križevci, 2000.
11. Bašić,F., Felak,D., Husinec,R., Majdak,I., Todorić,A., Plačko,Lj., Sutrašnjica Visokog gospodarskog učilišta u Križevcima na pragu novog milenija, Znanstveni skup s međunarodnim sudjelovanjem u povodu 140. obljetnice poljoprivrednog školstva u Križevcima, Zbornik radova, 9-16, Križevci, 2000.
12. Bašić,F., I.Kisić, V.Bićanić, R.Tadić, M.Mesić, Soil degradation and soil protection in Croatia. Conference of soils in Central European Countries, New Indenpendent States, Central Asian Countries and in Mongolia. Present situation and future prospects, p. 58-68, Prague, 2000.
13. Bašić,F., Nestroy,O., Kisić,I., Mesić,M., Butorac,A., Erozija tla vodom pri različitim načinima obrade na pseudogleju središnje Hrvatske, Znanstveni skup s međunarodnim sudjelovanjem u povodu 140. obljetnice polj. školstva u Križevcima, Zbornik radova, 151-152, Križevci, 2000.
14. Butorac,A., Lj.Oštrec, I.Turšić, F.Bašić, N.Vuletić, Jasminka Butorac, I.Kisić, M.Mesić, M.Berdin, The Effect of Flue-cured Tobacco Monoculture and Different Types of Crop Rotations on population Densities of Plant-parasitic Nematodes. Polj. zn. smotra, vol. 65, br. 2. str. 61-70. Zagreb, 2000.
15. Kisić,I., F.Bašić, Mogućnosti razvitka ekološke poljoprivrede. Poglavlje u studiji: Program razvitka poljoprivrede na području Sisačko-moslavačke županije, str. 249-274, Zagreb, 2000.
16. Kisić,I., F.Bašić, M.Mesić, Mogućnosti proizvodnje hrane u ekološkoj poljoprivredi, Zbornik radova savjetovanja: Ekološka proizvodnja hrane i ekoturizam., str. 10-15, Zagreb, 2000.
17. Kisić,I., F.Bašić, M.Mesić, A.Butorac, Procjena rizika od erozije na tlima Vinodolske kotline. Unapređenje poljoprivrede i šumarstva na kršu. Znanstveni skup s međunarodnim sudjelovanjem, str. 28-29, Split, 2000.

18. Kisić,I., F.Bašić, M.Mesić, A.Butorac, Soil resistance to penetration in different tillage methods. Proceedings of 15th ISTRO Conference, p. 8. Fort Worth, Dallas, 2000.
19. Kisić,I., F.Bašić, M.Mesić, A.Butorac, Soil Resistance under different tillage methods. 2. Workshop on Subsoil compaction, str. 135-144. Gödöllo Hungary, 2000.
20. Mesić,M., Kisić,I., F.Bašić, A.Butorac, Nada Murgić, Vesna Bradić, Utjecaj kalcifikacije i gnojidbe na kemijske značajke tla i prinos jarog ječma u agroekološkim uvjetima Like. XXXVI znanstveni skup Hrvatskih agronoma, str. 44, Opatija, 2000.
21. Turšić,I., Butorac,A., Bašić,F., Mesić,M., Berdin,M., Kisić,I., Vuletić,N., Effect of twelwe years of tobacco production in monoculture and in crop rotation upon the yield and quality of flue-cured tobacco in agroecological conditions of Croatia, CORESTA, Congress, Lisbon, 2000.
22. Tomić,F., Bašić,F., Husinec,R., Obrazovanje u hrvatskoj poljoprivredi, Znanstveni skup s međunarodnim sudjelovanjem u povodu 140. obljetnice poljoprivrednog školstva u Križevcima, Zbornik, 35-52, Križevci, 2000.
23. Mesić,M., A.Butorac, F.Bašić, I.Kisić, I.Gašpar, Influence of Black Fallow on Nitrate Leaching. Abstracts of the 15th ISTRO Conference, str. 25. Fort Worth, Dallas, 2000.
24. Mesić,M., F.Bašić, I.Kisić, V.Bićanić, Višeznačna uloga poljoprivrede i gospodarenja tlom u Hrvatskoj. str. 16-22. XXXVI znanstveni skup Hrvatskih agronoma, str. 44, Opatija, 2000.
25. Mesić,M., A.Butorac, F.Bašić, I.Kisić, Influence of nitrogen fertilization on NO_3-N concentration in lysimeter water. The 2nd Intern. Nitrogen Conference, Potomac, Maryland, 2001.
26. Mesić,M., F.Bašić, I.Kisić, A.Butorac, Sadržaj teških kovina na mjestu eksplozije vojnog skladišta. IX kongres Hrvatskog tloznanstvenog društva s međun. sudjelovanjem. Brijuni, 2001.
27. Mesić,M., A.Butorac, F.Bašić, I.Kisić, I.Gašpar, Effect of nitrogen fertilization for oil seed rape on nitrate leaching with subsurface drainage water. 12th World Fertilizer Congress, str. 56. Beijing, 2001.
28. Mesić,M., F.Bašić, I.Kisić, A.Butorac, I.Gašpar, Utjecaj gnojidbe mineralnim dušikom na sadržaj nitrata u tlu i na koncentraciju NO_3 u vodi iz lizimetra. Znanstveno-stručni skup: Kako zaštiti vode Hrvatske s gledišta vodoopskrbe i odvodnje. Pula, str. 381-386, 2001.
29. Bašić,F., I.Kisić, M.Mesić, Statements on problems of soil protection and sustainable land use in Croatia. Co-operation for Soil protection and Sustainable land use in Central and Eastern European (CEE). Countries, str. 14-18. Beč, Austrija, 2001.
30. Bašić,F., I.Kisić, A.Butorac, O.Nestroy, M.Mesić, Runoff and soil loss under different tillage methods on Stagnic Luvisols in central Croatia. Soil & Tillage Research, vol. 62, 145-151. Elsevier Science, 2001.
31. Bašić,F., M.Bogunović, M.Božić, S.Husnjak, I.Jurić, I.Kisić, M.Mesić, N.Mirošević, D.Romić, I.Žugec, Regionalizacija hrvatske poljoprivrede, knjiga u rukopisu, Agronomski fakultet Sveučilišta u Zagrebu, 274 str. Zagreb, 2001.
32. Škarić,Z., M.Mesić, F.Bašić, I.Kisić, Influence of nitrogen fertilization on the lettuce yield and NO_3-N concentration in lysimeter water. The 2nd International Nitrogen Conference, Potomac, Maryland, 2001.
33. Kisić,I., F.Bašić, M.Mesić, A.Butorac, Efficiency of organic and mineral fertilization and liming in growing maize and winter wheat on Mollic Gleysols. 12. World Fertilizer Congress, str. 45. Beijing, 2001.
34. Kisić,I., F.Bašić, M.Mesić, A.Butorac, Soil Damages in Croatia and the Actual Problems in its Protection. Assessment of the Quality of Contaminated Soils and Sites in Central and Eastern European Countries (CEEC) and New Independent States (NIS), Sofija, 2001.
35. Kisić,I., F.Bašić, M.Mesić, A.Butorac, M.Sabolić, Otpor tla pri različitim načinima obrade na pseudogleju središnje Hrvatske. IX kongres Hrvatskog tloznanstvenog društva, Brijuni, 2001.
36. Mesić,M., F.Bašić, I.Kisić, Prilagodba poljoprivrede mogućim klimatskim promjenama. XXXVII znanstveni skup Hrvatskih agronoma, str. 43, Opatija, 2001.
37. Mesic,M., F.Bašić, I.Kisic, A.Butorac, D.Blašković, NO_3-N leaching with subsurface drainage water in Central Croatia. First Pedological days, Visoke Tatre, Slovačka, 2002.
38. Mesić,M., Bašić,F., Kisić,I., Butorac,A., Gašpar,I., Gubici NO_3-N pod utjecajem različitih količina dušika primijenjenih u gnojidbi. I Hrvatska konferencija – Ekoinženjerstvo 2002, Zbornik sažetaka, Plitvice, 2002.
39. Kisić,I., Bašić,F., Mesić,M., Sabolić,M., Butorac,A., Utjecaj različitih načina obrade na značajke erozijskog nanosa. I Hrvatska konf. – Ekoinženjerstvo 2002, Zbornik, Plitvice, 2002.
40. Kisić,I., Bašić,F., O.Nestroy, M.Mesić, A.Butorac, Chemical Properties of Eroded Soil Material. Journal Agronomy & Crop Science, 188, p. 323-334, Blackwell Verlag Berlin, 2002.
41. Kisić,I., Bašić,F., M.Mesić, A.Butorac, Soil resistance under different tillage methods. 17th World Congress of Soil Science, Sym. 37, Paper no. 728, CD, Bangkok, 2002.
42. Kisić,I., Bašić,F., M.Mesić, A.Butorac, Utjecaj različitih načina obrade na prinos zrna kukuruza na pseudogleju središnje Hrvatske. Polj. znan. smotra, vol. 67. br. 2, str. 81-89, 2002.
43. Kisić,I., Bašić,F., Mesić,M., Butorac,A., Onečišćenost nekih tala Primorsko-goranske županije teškim kovinama. Zbornik sažetaka – Ekoturizam 2002. Ekološka poljoprivreda i obiteljsko gospodarstvo, Bribir, 2002.

44. Kisić,I., Bašić,F., Mesić,M., Butorac,A., Procjena rizika od erozije na tlima vinodolske kotline. Zbornik sažetaka – Ekoturizam 2002. Ekološka poljopr. i obiteljsko gospodarstvo, Bribir, 2002.
45. Kisić,I., Bašić,F., M.Mesić, A.Butorac, Učinkovitost kalcifikacije i gnojidbe na kemijske značajke tla i prinos zrna kukuruza i ozime pšenice. Polj. znan. smotra, vol. 67. br. 1, str. 25-33, 2002.
46. Mesić,M., Flajsig-Ćosić Gorana, Bašić,F., Kisić,I., Pokazatelji onečišćenja voda iz poljoprivrede. Zbornik radova: 3. Hrvatska konf. o vodama – Hrv. vode u 21. st. str. 599-612, Zagreb, 2003.
47. Kisić,I., Bašić,F., Mesić,M., Butorac,A., Influence of soil tillage on the characteristics of erosional drift. Proceedings of 16. ISTRO Conf. – Soil Management for Sustainability, str. 632-637. Brisbane, 2003.
48. Kisić,I., Bašić,F., Mesić,M., Butorac,A., Procjena erozije tla vodom prema vodnim slivovima Republike Hrvatske, Zbornik rad. 3. Hrvatska konf. o vodama – Hrv. vode u 21.st. st. 301-308, Zagreb, 2003.
49. Kisić,I., Bašić,F., Mesić,M., Sabolić,M., Erozija tla vodom pri različitim načinima obrade. Priopćenja, XXXVIII Znanstveni skup hrvatskih agronoma, str. 311-314, Opatija, 2003.
50. Kisić,I., Bašić,F., Nestroy,O., Mesić,M., Effect of liming on the chemical properties of dystric cambisols. Soil in the Environment, 26. Kongres poljskoga pedološkoga društva. Krakow, 2003.
51. Kisić,I., F.Bašić, M.Mesić, A.Butorac, Efficiency of mineral and organic fertilization and liming in growing maize and winter wheat, Proceedings of 12. World Fertilizer Congr. of CIEC.,–Vol.I, st. 523-530. Peking, 2003.
52. Kisić,I., Bašić,F., Nestroy,O., Mesić,M., Sabolić,M., Održivo gospodarenje na tlima izloženim djelovanju erozije vodom. Gazophylacium, VIII/1-2, str. 25-35, Zagreb, 2003.
53. Kisić,I., Bašić,F., Nestroy,O., Mesić,M., Butorac,A., Soil erosion under different tillage methods in central Croatia. Die Bodenkultur – Austrian Journal of Agricultural Research. Vol. 53/4, 197-204, 2003.
54. Mesić,M., Bašić,F., Kisić,I., Butorac,A., Gašpar,I., Učinkovitost mineralnog dušika u gnojidbi kukuruza i gubici dušika ispiranjem s vodom iz lizimetara. XXXVIII Znanstveni skup hrvatskih agronoma, 315-318, Opatija, 2003.
55. Mesić,M., Bašić,F., Kisić,I., Butorac,A., Gašpar,I., Utjecaj gnojidbe mineralnim dušikom na sadržaj nitrata u tlu i na koncentraciju NO_3–N u vodi iz drenskih cijevi. Zbornik radova: 3. Hrvatska konferencija o vodama – Hrvatske vode u 21. stoljeću. st. 359-368, Zagreb, 2003.
56. Mesić,M., Butorac,A., Bašić,F., Kisić,I., Gašpar,I., Effect of nitrogen fertilization for oilseed rape on nitrogen leaching with subsurface drainage water. Proceed. of 12. Congress of CIEC. Vol. I, st. 540-547. Peking, 2003.
57. Mesić,M., Bašić,F., Kisić,I., Butorac,A., Gašpar,I., Vadic,Z., Nitrogen leaching with subsurface drainage water, Proceedings of 3^{td} Crop production day on Field Crops Nutrient Supply, st. 289-293. Gödöllö, 2003.
58. Bašić,F., Franić Ramona, Nature and Man in Croatian Agriculture, Croatian Agriculture, Food and Food Processing Industry, PRO-TIM, p 87, Zagreb, 2003.
59. BašićF., Šalinović,I., Bašić,I., Kisić,I., Mesić,M., Kellkayyellah,A., Soil erosion caused by different tillage systems in the Ethiopian Highlands. Proceedings of 16. ISTRO Triennial Conference – Soil Management for Sustainability, str. 64-69., Brisbane, 2003.
60. Bašić,F., Soil resources of Croatia, country report, The JRC Enlargement Action - Land Degradation, Workshop 10-B, Ispra, 2003.
61. Bašić,F., Prirodna obilježja lovnog prostora Hrvatske, poglavlje u knjizi „Lovstvo“, posebno izdanje Lovačkog saveza Hrvatske, str. 15-35, Zagreb, 2004.
62. Bašić,F., Kalcifikacija – prijeka potreba naših tala, Mali gospodarski savjetnik - Gospodarski list, god 163, 15. 11., Zagreb, 2004.
63. Bašić,F., Kisić,I., Mesić,M., Nestroy,O., Butorac,A., Tillage and crop management effects on soil erosion in Central Croatia. Soil & Tillage Research. vol. 78/2, 197-206, 2004.
64. Kisić,I., Bašić,F., Mesić,M., The soil particles redistribution by different tillage systems. Proceedings of the III. Alps-Adria Scientific workshop. str. 269-275, Dubrovnik, 2004.
65. Kisić,I., Bašić,F., Nestroy,O., Mesić,M., Tillage erosion under different tillage systems. Proceedings of the 4th International Congress of the European Society for Soil Conservation. str. 128-132, Budapest, 2004.

Lecturer data

Name, Surname	**Ph.D. Željko Knez, Full Professor**
E-mail address	zeljko.knez@uni-mb.si
Course	**(251)WASTE IN CHEMICAL INDUSTRY**
Institution	Faculty of Chemistry and Chemical Technology, Maribor

Curriculum vitae

He was born in 1954 in Maribor, Slovenia. He graduated in 1977 at University of Maribor, achieved his master's degree in 1979 in Ljubljana and was awarded his Ph.D. degree in 1984 in Maribor. 1981-1983 employed as lecturer in high school. 1984-1989 employed as assistant doctor, 1989-1998 worked as associate professor (Chemical Engineering) and since 1995 he works as full professor (Chemical Engineering). He spent 4 months in 1985 at Department of Food Engineering Agricultural University Wageningen, Netherlands.
Scientific fields: High-pressure technologies, phase equilibria with supercritical fluids, mass transfer in systems with supercritical fluids, high-pressure micronisation process, and enzymatic reactions in supercritical fluids. He is a member of: European Federation for Chemical Engineering – a working group for high-pressure engineering (chairman from 2003), executive committee EFCE, American Oil Chemist's Society, Int. Society for Advancement of Supercritical Fluids, Nancy-France and Slovenian Chemist's Society. He leads number of international projects: Bavaria-Slovenia, Germany-Slovenia, COST D10 and 5 EU programme.

Date of last election

Referent publications of lecturer

1. Knez, Ž., Habulin, M.: **Lipase catalysed esterification at high pressure**, Biocatalysis, **9**,115-121,1994.
2. Knez, Ž., Krmelj, V., Habulin, M., Bauman, D.: **Enzymatic synthesis of oleyl oleate in dense fluids**, J. Am. Oil. Chem. Soc., **72**(11), 1345-1349, 1995.
3. Knez, Ž., Rižner-Hraš, A., Fukne-Kokot, K., Bauman, D.: **Solubility of some solid triazine herbicides in supercritical carbon dioxide**, Fluid Phase Equilib, **152**, 95-108, 1998.
4. Knez, Ž., Škerget, M.: **Phase equilibria of the vitamins D2, D3 and K3 in binary systems with CO_2 and propane**, J. Supercrit.Fluid, **20**,131-144,2001.
5. Knez, Ž., Habulin,M.: **Compressed gases as alternative enzymatic-reaction solvents: a short review**, J. Supercrit. Fluid, **23**,29-42, 2002.

List of papers in last 5 years

Lecturer data

Name, Surname	**Ph.D. Branko Salopek, Full Professor**
E-mail address	bsalop@rgn.hr
Course	**(252) RECYCLING AND DISPOSAL OF WASTE**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb

Curriculum vitae

Branko Salopek was born 1942 in Zagreb, Croatia, and graduated as mining engineer (E.M.) from the Faculty of Mining, Geology and Petroleum Engineering at the University of Zagreb. After graduating he was with the Jugokeramika Company for three years, and then joined the Institute of Mineral Dressing at his Alma Mater as scientific Assistant. In 1982 he obtained the degree of Doctor of Sciences (Dr.Sc.), and. in the 1991 he was elected Professor at the mentioned Zagreb Mining Faculty, and since then he has been working there. From 1989 to 1995 he was the Vice-Dean at the Faculty of Mining, Geology and Petroleum Engineering, and from 1997 to 2001. he was the head of the Department of mining and geotechnics.
Up to now he has published more then 70 scientific and professional papers. Most significant scientific paper in the field of mineral processing technology deals with problems of sedimentation, filtration, mathematical modeling of the comminution and classification processes, and crushing and grinding of ores and industrial minerals. In the field of environmental technology the papers mostly deal with problems of red mud disposal, dust emision, and pollutant emision from the thermoenergetic plants, quorries, ect. In reacent time some papers deal with the problems of waste recycling, soil cleaning and reclamation of quorries and gravel-pits in Croatia.
He is the member of Society of Croatian Mining Engineers, CIM – Canadian Institute of Mining, Metallurgy and Petroleum, and SME – Society of the Ameraican Institute of Mining, Metallurgical and Petroleum Eng.,Inc. He is also the full member of Croatian Academy of Engineering.

Date of last election 05.05.1998.

Referent publications of lecturer

1. Muvrin, B., Salopek, B.: **Mechanical methods of wastewater purification**, Nafta, **43** (7), 344-362, 1992.
2. Salopek,B., Stražišar,J.: **The influence of red mud impoundments on the environment.** Light metals, TMS, 41-44, 1993.
3. Salopek, B., Filipović, S., Krasić, D.: **Possibilities of the efficient solid-liquid separation in the hydrocyclone of 25 mm diameter**, Rudarsko-geološko-naftni zbornik, Zagreb, **7**, 71-77, 1995.
4. Salopek, B., Bedeković, G.: **Čišćenje dimnih plinova iz spalionica otpada,** IV. Međunarodni znanstveno-stručni simp. Gospodarenje otpadom ´96, Zagreb, 151-164., 1996.
5. Salopek, B., Bedeković, G.: **Municipal solid waste separation, recovery and energetic valuation**, REWAS'99, San Sebastian, 927-935, 1999.

List of papers in last 5 years

1. Salopek, Branko: Studij rudarstva na početku novog tisućljeća. Rudarsko-geološko-naftni zbornik. 12 (2000.) ; pp. 125-128.
2. Salopek, Branko; Bedeković, Gordan: Sitnjenje - prvi stupanj u oplemenjivanju mineralnih sirovina. Rudarsko-geološko-naftni zbornik. 12 (2000) ; pp. 83-88.
3. Salopek, Branko; Bedeković, Gordan: Air Quality Control in Quarries of Technical Stone. Proceedings of the Ninth International Symposium on Mine Planing and Equipment Selection Athens : A.A.Balkema Publishers, 2000. pp. 951-956.

4. Salopek, Branko; Bedeković, Gordan: Beneficiation of Sand from the Sava-River Bed. Proceedings of the XXI International Processing Congress Rome : Elsevier, 2000. pp. C11-26 - C11-31.
5. Salopek, Branko; Bedeković, Gordan: Mjere zaštite u kamenolomima tehničkog kamena. Work and Safety. 5 (2001) , 3; pp. 141-166.
6. Salopek, Branko; Bedeković, Gordan: The Recycling of Metallic Scrap in Croatia. VI Southern Hemisphere Meeting on Mineal Technology - VOLUME 2 Rio de Janeiro : CETEM/MCT, 2001. pp. 690-693.
7. Salopek, Branko; Jezerčić-Aurer, Indira; Bedeković, Gordan: Law Regulations and Emission Control System in Croatian Thermoenergetic Plants. Proceedings of International Carpathian Control Conference Krynica : Inżynierii Mechanicznej i Robotyki AGH Krakowie, 2001. pp. 531-538.
8. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Vertical Impact Crusher In High-grade Chippings Production. Proceedings of the Tenth International Symposium on Mine Planing and Equipment Selection New Delhi : Mohan Primlani for Oxford & IBH Publishing Co. Pvt. Ltd., 2001. pp. 3-10.
9. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Konstrukcijske značajke i učinkovitost vertikalnih udarnih drobilica. Rudarsko-geološko-naftni zbornik. 14 (2002) ; pp. 65-75.
10. Bedeković, Gordan; Salopek, Branko; Sobota, Ivan: Beneficiation and Utilization of Electric Furnace Slag. 6th Conference on Environment and Mineral Processing (Part II) Ostrava : VŠB - TU Ostrava, 2002. pp. 367-372.
11. Salopek, Branko: Application of the Hydrocyclone in the Fine Tailings Dewatering. Proceedings of the Eleventh International Symposium on Mine Planning and Equipment Selection. Ostrava : VŠB - TU Ostrava, 2002. pp. 211-215.
12. Salopek, Branko; Pfaff, Slavka; Rajić, Rajna: Statistical Experimental Design Approach in Coal Briquetting. Proceedings of Mine Planing and Equipment Selection. The Australasian Institute of Mining and Metallurgy, 2003. pp. 349-352.
13. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Production of Construction Aggregates in Urban Aeras. Proceedings of the International Conference on Sustainable Development Indicators in the Mineral Industries (SDIMI 2003). Milos Island : Milos Conference Cener - George Eliopoulos, 2003. pp. 273-278.
14. Salopek, Branko; Sobota, Ivan; Halle, Radovan; Pfaff, Slavka: The Effect of Attrition in the Quartz Sand Beneficiation. Proceedings of X^th Balkan Mineral Processing Congress Mineral Processing in the 21th century Sofia : DJIEV TREADE LTD, 2003. pp. 565-569.
15. Bedeković, Gordan; Salopek, Branko; Sobota, Ivan: Comparison of Flotation Column and Mechanical Cell in Coal Flotation. Proceedings of the 8th Conference on Environment and Mineral Processing. Ostrava : VŠB TU Ostrava, 2004. pp. 23-28.
16. Rumenjak, Damir; Salopek, Branko; Rajković, Damir: Change of decision-making principles in environmental impact assessment applied on screening matrices. Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Technology. Hania : Heliotopos Conferences, 2004. pp. 751-754.
17. Salopek, Branko; Sobota, Ivan; Halle, Radovan; Bedeković, Gordan: Improvement of quartz sand quality using attrition cleaning. Proceedings of the Thirteenth International Symposium on Mine Planing and Equipment Selection. Lieden : A.A.Balkema Publishers, 2004. pp. 303-308.
18. Salopek, Branko: Mining Engineering Education - A Vision for the Future. Annual 2004 of the Croatian Academy of Engineering. Zagreb : Croatian Academy of Engineering, 2004. pp. 33-41.
19. Salopek, Branko; Galić, Mile: Ljevaonički otpad i zaštita okoliša. Znanstveno-stručni ljevački skup Zagreb 2004. Zagreb : Hrvatsko udruženje za ljevarstvo, 2004. pp. 81-85.
20. Premur, Vitomir; Salopek, Branko: Recycling of Waste Mineral Wool. Proceedings of the "Rewas'04": Global Symposium on Recycling, Waste Treatment and Clean Technology VOLUMEN III. San Sebastian : TMS & Inasmet, 2004. 2789-2790.
21. Salopek, Branko; Sobota, Ivan; Bedeković, Gordan: Application of Mineral Processing Techniques in Soil Washing. Book of Abstracts Zagreb : Faculty of Chemical Engineering and Technology, University of Zagreb, 2004. pp. 50.

Lecturer data

Name, Surname	**Ph.D. Zlata Hrnjak-Murgić, Associate Professor**
E-mail address	zhrnjak@fkit.hr
Course	**(253) POLYMER WASTE AND MANAGEMENT**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Dr. sc. Zlata Hrnjak Murgić, associated professor, born 1958, in Karlovac, Croatia. Graduated in 1982 study of Chemical Technology, University of Zagreb Faculty of Technology, (B.Sc.Chem.Eng), master degree in 1988 and doctor's degree in 1996, University of Zagreb Faculty of Chemical Engineering and Technology. Teaching and lecturing at graduate study: Coatings (1999-), Elastomers (1999-2003), Polymer waste management (2003-), Natural and synthetic polymers (2003-) and at postgraduate study: Degradation and recycling of polymers. She was a supervisor of teen diploma work, and currently supervises one PhD student. Research work: published 24 scientific papers, gave 8 invited lectures. Active researcher at 9 scientific projects, tow International project ALIS LINK, 1997, and project leader of the project "Application of Coated PCC Nanofiller in Immiscible SAN/EPDM Blend" 2003. Postdoctoral study at the Deutschen Kunststoff-Institut, Darmstadt, Germany and short visit as researcher at the University of Bath, UK, ALIS link Project.
Field of research interest: degradation of polymers, study of miscibility of blend polymers, synthesis of graft copolymers and recycling of polymers.

Date of last election 21.06.2004.

Referent publications of lecturer

1. Hrnjak-Murgić,Z., Jelenčić,J., Murgić,L.: **The mechanism of triallylcyanurate as a coagentin EPDM peroxide vulcanization,** Poly. Eng. Sci., **38**, 689, 1998.
2. Hrnjak-Murgić,Z., Jelenčić,J.: **Change of network structure of natural rubber vulcanizatewith thermal aging** , Macromol. Mater. Eng., **283**, 21, 2000.
3. Hrnjak Murgić, Z., Jelčić,Ž., Kovačević,V., Mlinac Mišak,M., Jelenčić,J.: **Molecular and morphological characterization of immiscible SAN/EPDM blends filled by nano filler**, Macromol.Mater.Eng., **287**, 684, 2002.
4. Z. Hrnjak- Murgić, Lj. Kratofil, Ž.Jelčić, J. Jelenčić, Z. Janović, **Reaktive Extrusion of SAN/EPDM Blends**, Int. Polym. Proc., 02 (2004)139-146.
5. J. Vugrinec, Lj. Kratofil, Z.Hrnjak-Murgić, J. Jelenčić, **New Materials from Degraded Styrene-acrylonitrile and Ethylene-propylene-diene Copolymers**, e-Polymers, 035 (2004).
6. Lj. Kratofil, I. Čović, Z. Hrnjak-Murgić, J. Jelenčić, **Glycolysis and Hydrolysis: Methods for Chemical Recycling of Poly(ethylene terephtalate)**, Vela Luka, lipanj, 2004.(CD).

List of papers in last 5 years

1. Z. Hrnjak-Murgić, J. Jelenčić, **Change of Network Structure of Natural Rubber Vulcanizate with Thermal Aging**, Macromol. Mater. Eng., 283 (2000) 21-25.
2. Z. Hrnjak-Murgić, Ž. Jelčić, V. Kovačević, M. Mlinac Mišak, J. Jelenčić, **Molecular and Morphological Characterization of Immiscible SAN/EPDM Blends Filled by Nano Filler**, Macromol. Mater. Eng., 287 (2002) 684-692.
3. Z. Hrnjak-Murgić, G. P. Hellmann, J. Jelenčić, **Utjecaj udjela i vrste kompatibilizatora na morfologiju polimerne mješavine PS/PC**, Kem. u ind. 51(2002)1-6.
4. A. Ptiček, Ž. Petrinec, Z. Hrnjak-Murgić, J. Jelenčić, **Study of Optimal Conditions of In-situ Polymerization of Graft Copolymer EPDM-g-PS and Its Role in Polymer Blends**, Matrib

2003, Vela Luka, 2003. str. 215-221.
5. V. Kovačević, S. Lučić Blagojević, Z. Hrnjak-Murgić, M. Leskovac, D. Vrsaljko, **Surface Engineering Of Nanofillers**, Matrib 2003, Vela Luka, 2003. str. 107-115.
6. V. Kovačević, I. Sutherland, Z. Hrnjak-Murgić, S. Lučić Blagojević, M. Leskovac, **Interfacial Phenomena in Particulate Filled Blends and Composites**, Interfaces and Interphases in Multicomponent Materials, Balatonfured, Mađarska, 2003.
7. Z. Hrnjak- Murgić, Lj. Kratofil, Ž.Jelčić, J. Jelenčić, Z. Janović, **Reaktive Extrusion of SAN/EPDM Blends**, Int. Polym. Proc., 02 (2004)139-146.
8. J. Vugrinec, Lj. Kratofil, Z.Hrnjak-Murgić, J. Jelenčić, **New Materials from Degraded Styrene-acrylonitrile and Ethylene-propylene-diene Copolymers**, e-Polymers, 035 (2004).
9. A. Ptiček, Z. Hrnjak-Murgić, J. Jelenčić, T. Kovačić, **Characterization of Modified Graft Copolymers**, Matrib 2004, Vela Luka, lipanj, 2004. (CD).
10. Lj. Kratofil, I. Čović, Z. Hrnjak-Murgić, J. Jelenčić, **Glycolysis and Hydrolysis: Methods for Chemical Recycling of Poly(ethylene terephtalate)**, Vela Luka, lipanj, 2004.(CD).
11. A. Ptiček, Z. Hrnjak-Murgić, J. Jelenčić, T. Kovačić, **Structure-Properties Relationships of Graft Copolmyers EPDM-g-PS, PE-g-HH, EPDM-g-HH**, Third International Conference on Polymer Modification, Degradation and Stabilisation, MoDeSt 2004, Lyon, France,August 2004. (CD)

Lecturer data

Name, Surname	**Ph.D. Savka Kučar-Dragičević**
E-mail address	savka.kucar-dragicevic_apo.hr
Course	**(254) MANAGEMENT OF INDUSTRIAL/TECHNOLOGICAL WASTE**
Institution	Croatian Environment Agency, Zagreb

Curriculum vitae

B.Sc. in Chemical Technology, Faculty of Chemical Engineering, University of Zagreb 1977; M.Sc. in Chemical Engineering, University of Zagreb, 1983; Ph.D. in Technical Sciences, University of Zagreb 1999; Certificate as Responsible Design Engineer, Zagreb, 1987; 1992-1994. International training courses in radioactive waste management in Canada, US, Finland, and Switzerland; since 1995. International Atomic Energy Agency expert on radioactive waste management; BVQI Certificate as Envirnom. Lead Acessoor since 1997.
Research in Polymer and Analytical Chemistry; Project Designing in Environm. Protection projects (WWT, Flue Gas Cleaning, Radioactive Waste Repository); Implementation and co-ordination of hazardous waste management projects; Environmental Impact Studies; remidiation and cleaner production projects; Author or co-author more than 50 papers, 46 Studies, 15 project design documents, bulletins; At the moment deputy director for Systems and Technologies in APO Hazardous Waste Management Agency.

Date of last election

Referent publications of lecturer

1. Kučar Dragičević, S.: **Problems realted to the transport of I/II radioactive waste in Republic of Croatia**, Ramtrans, **4**(3/4), 237-241, 1994.
2. Meteš, A., Koprivanac, N., Kučar Dragičević, S.: **Water re-use in the printing ink industry**, Innovation 2000, Proceedings of International conference treatment innovation for the next century, Cambridge, GB, 1998.
3. Schaller, A., Lokner, V., Kučar Dragičević,S.: **Characterization plan L/ILW repository candidate sites in Croatia**, Inter. conf. nuclear options in countries with small and medium el. gird, Dubrovnik, 438-445, 1998.
4. Kučar Dragičević, S., Subašić, D., Lokner, V.: **Integrated coverage of radioactive and hazardous issues in developing countries**, HAWA '98, Proceedings of International conference on hazardous waste, Cairo, Egypt, 1998.
5. Kučar Dragičević, S., Fink, K., Širola, P.: **New rad waste packaging type and storage system at the Krško**, NPP, Ramtrans, Nuclear Technology Publishing, **9**(1), 35-38, 1998.
6. Kučar Dragičević, S., Subašić, D., et al.: **Croatian repository construction project-Present status and main obstacles**, Proceedings of International conference nucl. energy in central Europe, Portorož, Slovenia, 529-533, 1999.

List of papers in last 5 years

Lecturer data

Name, Surname	**Ph.D. Davorin Kovačić, Associate Professor**
E-mail address	dkovacic@gtfvz.hr
Course	**(255) SANITARY LANDFILLS**
Institution	Geotechnical Faculty, Varazdin

Curriculum vitae

Davorin Kovačić was born 29. 03. 1945 in Zagreb. He graduated at Faculty of Civil Engineering, University of Zagreb 1969. He obtained Master degree at University of Wales, Swansea. He obtained Ph.D. in technical sciences at Faculty of Civil Engineering, University of Zagreb. In the period 1970 - 2003 he was employed by Faculty of Civil engineering, Institute Geoexpert, Faculty of Mining, Geology and Petroleum Engineering, BBR Conex Ltd. Starting from 01. 11. 2003. he is employed by Faculty of Geotechnical Engineering at Varaždin.
In the period from 1996 until 1998 he was a leading researcher of research project JF150 "Applicability of the materials from flysch coastal regions of Croatia for the construction of impervious barriers in sanitary landfills" within U.S. - Croatian Science and Technology Program. From 1997 until 2001 he was a leading researcher of the research project "Geotechnology of Environmental Protection" (Ministry of Science and Technology of Republic of Croatia). He is a member for Croatian Society of Soil Mechanics and Geotechnical Engineering, Croatian Society for Rock Mechanics, International Society for Soil Mechanics and Geotechnical Engineering, International Society for Rock Mechanics, Collaborating member of Croatian Academy of Engineering.

Date of last election 7. 10. 2003.

Referent publications of lecturer

1. Kovačić, D., (1994): **Materials for the final cover of sanitary landfills**, Rudarsko-geološko-naftni zbornik, Vol. 6, 11-15, Zagreb.
2. Kovačić, D., Kvasnička, P., Znidarčić, D. (1994): **Nepropusnost glinene barijere u sanitarnimodlagalištima**, III. simpozij "Gospodarenje otpadom -Zagreb 94", 296-305.
3. Kovačić, D., Mayer, D., Muhovec, I. (1995): **Geotechnical characteristics of zagreb waste disposal site and possibiloities of its reclamation**, Waste Disposal by Landfill - GREEN'93, (Sarsby (ed.), 543-547, Balkema, Rotterdam.
4. Znidarčić, D., Kovačić, D., Kvasnička, P., Mulabdić, M. (1995): **Geotehnologija pri odlaganju otpada**, Građevinski godišnjak '96, Hrvatsko društvo građevinskih inženjera, Zagreb, 161-233.
5. Kovačević Zelić, B., Kovačić, D., Znidarčić, D. (2002): **Determination of internal shear strength parameters of geocomposite clay liners**, Geologica Carpathica, 53, 2, Bratislava, April 2002, 127-132.

List of papers in last 5 years

1. Čorko, D., Kovačić, D., Lovrenčić, D. (2000): Prikaz primjene traka od karbonskih vlakana pri sanaciji svodova, Sabor hrvatskih graditelja 2000, Cavtat, 373-379.
2. Čorko, D., Kovačić, D., Vrkljan M. (2000): Prikaz temeljenja mosta Dubrovnik, Sabor hrvatskih graditelja 2000, Cavtat, 158-16379.
3. Kovačević-Zelić, B., Kovačić, D., Znidarčić, D., Sesar, S. (2000): Laboratorijsko ispitivanje posmične čvrstoće bentonitnih tepiha, VI. međunarodni simpozij Gospodarenje otpadom Zagreb 2000, Zagreb, 315-322.
4. Kovačević-Zelić, B., Kovačić, D., Znidarčić, D. (2001): Determination of shear strength parameters of bentonitic blankets, Proc. Mid-European Clay Conference, Stara Lesna, Book of Abstracts, 74.

5. Kovačić, D., Uzelac, B. (2001): Prednapete stropne ploče, Peti opći sabor HDGK, Brijunski otoci, 567-574.
6. Uzelac, B., Kovačić, D., Mesek, Z., Drenški, K. (2001): Ojačanje stupa broj IX srušenog mosta preko Save u Slavonskom Brodu, Peti opći sabor HDGK, Brijunski otoci, 451-457.
7. Čorko, D., Čorko, D., Kovačič, D., Uzelac, B. (2001): Dubrovnik bridge – permanent ground anchors, Rock Mechanics – a Challenge for Society, Särkkä&Eloranta (eds.), 677-682.
8. Kovačević-Zelić, B., Kovačić, D., Znidarčić, D. (2002): Determination of internal shear strength parameters of geocomposite clay liners, Geologica Carpathica, 53, 2, Bratislava, April 2002, 127-132.
9. Čorko D., Čagalj M., Kovačić, D. (2002): Osvrtna neke odredbe EN 12715 – izvođenje specijalnih geotehničkih radova - injektiranje, Geotehnika kroz Eurocode 7, 3. Savjetovanje Hrvatske udruge za mehaniku tla i geotehničko inženjerstvo, Hvar, 149-155.
10. Kovačić, D. (2002): Europske norme za izvođenje geotehničkih radova, Geotehnika kroz Eurocode 7, 3. Savjetovanje Hrvatske udruge za mehaniku tla i geotehničko inženjerstvo, Hvar, 167-176.
11. Kovačić, D., Drenški, K., Mesek, Z., Uzelac, B., Čorko, D., Čorko D. (2002): Most Dubrovnik – trajna geotehnička sidra, Geotehnika kroz Eurocode 7, 3. Savjetovanje Hrvatske udruge za mehaniku tla i geotehničko inženjerstvo, Hvar, 265-273.
12. Kovačević Zelić B., Znidarčić, D., Kovačić, D. (2002): Osobine bentonitnih tepiha iskazane u nekim laboratorijskim pokusima, Geotehnika kroz Eurocode 7, 3. Savjetovanje Hrvatske udruge za mehaniku tla i geotehničko inženjerstvo, Hvar, 265-273.
13. Kovačević-Zelić, B., Kovačić, D., Vrkljan, I. (2004): Bentonitni tepisi u odlagalištima otpada, Razprave četrtega posvetovanja slovenskih geotehnikov, Rogaška Slatina, 227-236.
14. Kovačić, D., Kovačević-Zelić, B. (2004): Visokoškolsko tehničko obrazovanje za zaštitu okoliša, VIII. međunarodni simpozij Gospodarenje otpadom Zagreb 2004, Zagreb, 755-768.

Lecturer data

Name, Surname	**Ph.D. Helena Jasna Mencer, Full Professor**
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Course	**(261) BIODEGRADABLE POLYMER MATERIALS**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Born in Zagreb. *Education:* B.Sc. 1966., M.Sc. 1973. and Ph.D. 1976. , University of Zagreb, Faculty of Technology . *Employment and duties*: From 1966.-1971, assistant collaborator at the Institute of Chemical Technology, University of Zagreb,1971-1978, assistant at the Faculty of technology, University of Zagreb, 1978-1986, assistant professor ,1986-1991. associate professor at the Faculty of technology, University of Zagreb, 1992- full professor at the Faculty of Chemical Engineering and Technology, University of Zagreb. 1993. –1994. Vice dean of the Faculty of Chemical Engineering and Technology, 1994. - 2002. Vice rector of the University of Zagreb. 2002-Rector of the University of Zagreb.
Specialization: Center de recherches sur les macromolecules, Strasbourg, France (1978-1979), Technical University, Eindhoven, the Netherlands (1991.), Catholic University Leuven, Belgium (1992).
The main fields of her research interest are physical chemistry of polymers, thermodynamics of polymer solutions, polymerization engineering, materials engineering.
Current scientific project: Novel Materials for Specific Purposes
*Publications:*author and co-author of 70 scientific and professional papers.
Membership: Croatian Society of Chemical Engineers, Society of Plastic and Rubber Engineers, Scientific Council for Petroleum of Croatian Academy of Arts and Sciences (HAZU), European Polymer Federation.
Awards: «Fran Bošnjaković» Award by the University Senat, Zagreb, 1995; Society of Plastic and Rubber Engineers Diploma, Zagreb,1995; «Priroda» Journal Award by the Croatian Natural Science Society, 1994.

Date of last election 16.09.1997.

Referent publications of lecturer

1. H. J. Mencer , **Efficiency of Polymer Fractionation - A Review**, Polym.Eng. Sci., **28**, (8) 497 (1988).
2. M. Opalički and H. J. Mencer, **Viscometric Behaviour of Dilute Solutions of Copolymers of Ortho and Para Halogenated Styrene**, Eur. Polym. J., **27**, (7), 713 (1991).
3. M. Opalički and H. J. Mencer, **Estimation of the Compatibility of Poly (2,6 - dimethyl 1,4 - Phenylene Oxide) and Poly(fluorostyrene-co-bromostyrene) from Dilute Solution Viscosity Measurements**, Eur. Polym. J., **28**, (1) 5 (1992).
4. H. J. Mencer and Z. Gomzi**, Swelling Kinetics of Polymer-Solvent System**, Eur. Polym. J., **30**, (1) 33 (1994).
5. H. J. Mencer, Z. Gomzi and M. Rogošić, **Change of Molecular Weight Distribution of Statistical Poly(styrene-co-acrylonitriles) with Composition of Copolymer**, Polym. Eng. Sci., **35** (17), 1348 (1995).

List of papers in last 5 years

1. B. Pintaric, M. Rogosic and H. J. Mencer, **Dilute Solution Properties of Cellulose Diacetate in Mixed Solvents**, J. Molecular Liquids, 85 (2000) 331-350.
2. M. Ivanković, N. Džodan, I. Brnardić and H.J. Mencer, **DSC Study on Simultaneous Interpenetrating Polymer Network Formation of Epoxy Resin and Unsaturated Polyester**, J.

Appl. Polym. Sci., 83 (2002)2689-2698.
3. M. Ivanković, J. Macan, H. Ivanković i H. J. Mencer, **Priprava organsko-anorganskih hibrida epoksid/SiO2 sol-gel procesom**, Polimeri 23 5-9 (2002).
4. M.Rogošić, I. Gusić, B. Pintarić and H.J. Mencer, **The Ellipsoidal Model of the Solubility Volume**, J. Mol. Liquids, 108 (2003) 135-150.
5. J. Macan, H. Ivanković, M. Ivanković and H.J. Mencer, **Synthesis and Characterization of Organic-Inorganic Hybrids Based on Epoxy Resin and 3-Glycidyloxypropyltrimethoxysilane**, J. Appl. Polym. Sci., 92 (2004) 498-505.
6. J. Macan, H. Ivanković, M. Ivanković and H.J. Mencer, **Study of Cure Kinetics of Epoxy-Silica Organic-Inorganic Hybrid Materials**, Thermochim. Acta, 414 (2) (2004) 219-225.

Lecturer data

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Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Jasenka Jelenčić, PhD born 1946 in Zagreb, where in 1965 she completed secondary school, graduated 1969, master degree 1971, and doctor's degree in 1975 at Faculty of Technology, University of Zagreb, obtained at the same Faculty. After graduation she took a job on Faculty of Technology as assistant on Department of Polymer Engineering and Organic Chemical Technology and her positions are assistant professor from 1977, associated professor from 1982 and full professor from 1987.
She lectures the courses: Process of Polymerization and Nature and Synthetic Polymers on graduated study, and Modification of Polymeric Materials on postgraduate study.
The scientific interest of Jasenka Jelenčić is field of the polymeric materials, degradation and stabilization of polymers, including the processes of polymerization. She published more than fifty scientific papers.
From 1997 she was a Vice-dean of science and education, and from 2001 she is a dean of Faculty of Chemical Engineering and Technology University of Zagreb.

Date of last election 16.09.1997.

Referent publications of lecturer

1. Mlinac-Mišak, M., Jelenčić, J., Bravar, M.,: **Thermal and UV-degradation of impact-resistant polystyrene**, Angew. Makromol. Chem., **173**, 153, 1989.
2. Mlinac-Mišak, M., Jelenčić, J., Bravar, M., Dejanović, R.: **Thermal and UV-degradation of impact-resistant polystyrene (II)**, Angew.Makromol. Chem., **176/177**, 105, 1990.
3. Jelenčić, J., Mlinac-Mišak, M., Parač, I., Bravar, M., Sišul, N.: **Thermal and UV- degradation of modified impact-resistant polystyrene**, Polimeri, **14**, 3, 1993.
4. Jelčić, Ž., Mlinac-Mišak, M., Jelenčić, J., Bravar, M.: **Photooxidative ageing of low density polyethylene**, Angew. Macromol. Chem., **208**, 25-38, 1993.
5. Hrnjak-Murgić, Z., Jelenčić, J., Murgić, L.: **The mechanism of triallylcyanurate as a coagent in EPDM peroxide vulcanization**, Polym.Eng.Sci., **38**, 689-692, 1998.
6. Hrnjak-Murgić, Z., Jelenčić, J.: **Change of network structure of natural rubber vulcanizate with thermal aging**, Macromol.Mater.Eng., **283**,21-25,2002.

List of papers in last 5 years

1. Z. Hrnjak-Murgić, J. Jelenčić, **Change of Network Structure of Natural Rubber Vulcanizate with Thermal Aging**, Macromol. Mater. Eng., 283 (2000) 21-25.
2. Z. Hrnjak Murgić, Ž. Jelčić, V. Kovačević, M. Mlinac Mišak, J. Jelenčić, **Molecular and Morphological Characterization of Immiscible SAN/EPDM Blends Filled by Nano Filler**, Macromol. Mater. Eng., 287 (2002) 684-692.
3. B. Cerinski, J. Jelenčić, **Modeling of High-Pressure Ethylene Polymerization**. **I. Kinetic Parameters of Oxygen Initiation,** J. Applied Polym. Sci., 83(2002) 2043-2051.
4. Z. Hrnjak – Murgić, G. P. Hellmann, J. Jelenčić, **Utjecaj udjela i vrste kompatibilizatora na morfologiju polimerne mješavine PS/PC**, Kem. u ind. 51(2002)1-6.
5. Z. Hrnjak- Murgić, Lj. Kratofil, Ž.Jelčić, J. Jelenčić, Z. Janović, **Reaktive Extrusion of SAN/EPDM Blends**, Int. Polym. Proc., 02 (2004)139-146.
6. J. Vugrinec, Lj. Kratofil, Z.Hrnjak-Murgić, J. Jelenčić, **New Materials from Degraded Styrene-**

acrylonitrile and Ethylene-propylene-diene Copolymers, e-Polymers, 035 (2004).

Lecturer data

Name, Surname	**Ph.D. Vesna Rek, Full Professor**
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Course	**(263) DEGRADATION OF POLYMERIC MATERIAL**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Vesna Rek is professor at Faculty of Chemical Engineering and Technology, University of Zagreb. She is born in Zagreb. She obtained her B.Sc. degree (1965), M.Sc. degree (1972) and PhD degree (1997) from Faculty of Technology, University of Zagreb in the field of Chemical (Polymer) Engineering. Since 1965- 1967. she was working in industry. From 1967. she works at Faculty of Chemical Engineering and Technology, FKIT, in Department of Polymer Engineering and Organic Chemical Technology. From 1992. Vesna Rek is professor in technical science in the field of chemical (polymer) engineering. Her scientific work is connected with polymeric materials, with interrelation between structure and properties in production and processing and its changes in degradation processes. She is teaching at ungraduated and graduated study at FKIT-u. She works at Project supported by Ministry of Science of Croatia. She published over fifty scientific and professional papers. Vesna Rek took part at many international and domestic meetings and conference, with papers and invited paper and took part in many elaborates for industry. She was mentor of a grate number diplomas works and many magistrate work and dissertations. She was a member of organising committee and scientific committee and leader of many meetings and conferences. She is a member of the Scientific Council for Petroleum of the Croatian of Science and Arts, Polymer Processing Society and MoDeSt Society, the Society of Plastics and Rubber Engineers and Society of Croatia Chemists and Chemical Engineers. With her scientific and professional work and activities she contributed to the materials development, polymer materials in the field of chemical engineering. Professor V. Rek was Head of the Department of Polymer Engineering and Organic Chemical Technology of Faculty of Chemical Engineering and Technology, University of Zagreb.

Date of last election 16.09.1997.

Referent publications of lecturer

1. Rek, V., Hace, D., Bravar, M., Jagodar, A.: **The thermal stability of rigid polyurethane foam in insulating pipes**, Angew.Makromol.Chem., **176/177**, 135,1990.
2. Rek, V., Govorčin, E.: **The morphological changes in segmented polyurethane under thermal tretment**, Adv.Urethan.Sci.Tech., **11**,173,1992.
3. Rek, V., Govorčin, E., Sendijarević, A., Sendijarević, V., Frisch, K.C.: **Photostability of polyurethane elastomers based on two types of diisocyanates**, J. Elasto.Plast., **26**(2), 143,1994.
4. Rek, V., Holjevac-Grgurić, T., Jelčić, Ž.: **Effect of styrene-butadiene-styrene block copolymer on dynamic mechanical properties high-impact polystyrene**, J.Macrom.Sci.Pure and Appl.Chem. **A 35** 1385,1998.
5. Holjevac-Grgurić, T., Rek, V., Jelčić, Ž., Hace, D., Gomzi, Z.: **Determination of the kinetic parameters of the thermal oxidative degradation of styrene butadiene copolymers**, Polym.Eng.Sci., **39**(8), 1394,1999.

List of papers in last 5 years

1. V. Rek, T. Holjevac-Grgurić, Ž. Jelčić, D. Hace, **Dynamic Mechanical Behaviour of Styrene/Butadiene Copolymers and their Blends**, Macromolecular Symposia, Polymer Characterization,148 (1999.) 425-436.
2. T. Grgurić-Holjevac, V. Rek, Ž. Jelčić, D. Hace, Z. Gomzi, **Determination of the Kinetic Parameters of the Thermal Oxidative Degradation of Styrene/Butadiene Copolymers**,

Polymer Engineering & Science. 39 (8) (1999) 1394-1397.
3. E. Govorčin-Bajsić, V. Rek, A. Sendijarević, V. Sendijarević, K. Frisch, **DSC Study of Morphological Changes in Segmented Polyurethane Elastomers**, Journal of Elastomers and Plastics. 32 (2) (2000.) 162-182.
4. E. Govorčin Bajsić, V. Rek, **Thermal Stability of Polyurethane Elastomers Before and After UV Irradiation**, Journal of Applied Polymer Science., 79 (2001.) 864-873.
5. V. Rek, Z. Barjaktarović, **Dynamic Mechanical Behaviour of Polymer Modified Bitumen**, Material Researh Innovation, 6 (2002) 2, 39-43.
6. E. Govorčin Bajsić, V. Rek, A. Agić, **Thermal Degradation of Polyurethane Elastomers: Determination of Kinetic Parameters**, Journal of Elastomers and Plastic, 35 (4) (2003), 311-323.
7. V. Rek, T. Holjevac-Grgurić, Ž. Jelčić, **Creep Relaxation and Stress Relaxation of PS-HI/SEBS Blends**, Macromolecular Symposia, 202 (2003) 127-141.
8. V. Rek, T. Holjevac-Grgurić, Ž. Jelčić, **Processing and Dynamic Mechanical Properties of PS-HI/SEBS**, Macromolecular Symposia, 202 (2003) 143-150.
9. V. Rek, Z. Barjaktarović, T. Holjevac Grgurić, **The Rheological Properties of Aged Polymer Bitumen, Natural and Artifical Ageing of Polymers/Reichert**,Thomas(ur.). Pfinztal: Gesellschaft fur Umweltsimulation e V. GUS, 2004.
10. E. Govorčin Bajsić, V. Rek, **Dynamic mechanical study of thermoplasti polyurethane/ polypropylene blends**, e-Polymers, 073 (2004) 1-10.
11. V. Rek, T. Holjevac Grgurić, Ž. Jelčić, D. Hace, **Effect of styrene/ethylene/buthylene/ styrene blockcopolymer on dynamic mechanical behaviour and processability of high impact polystyrene**, e-Polymers, 034 (2004)1-13.
12. Ž. Jelčić, T. Grgurić-Holjevac, V. Rek, **Mechanical Properties and Fractal Morphology of HIPS/SBS Blends**, Polym. Degrad. Stab. In press (2005).

Lecturer data

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Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb

Curriculum vitae

Mladen ŠERCER, D.Sc. was born on 29 September 1953 in Zagreb. After having completed the primary and secondary schooling he enrolled in 1972 at the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb and graduated in 1977. He acquired the title of Master of Science in 1984. He has worked at the Faculty of Mechanical Engineering and Naval Architecture since 1978, first as an assistant, from 1985 as scientific research assistant, from 1989 as assistant professor, from 1996 as associate professor, and since 2001 as full professor in the field of mechanical engineering, section of *Mechanical Technologies and Processing Systems* at the Department of Technology. Since 2001 Mr. Šercer is also the head of the Section of Polymer Processing.. In the period from 1984 and 1985 he stayed for thirteen months at the Institut für Kunststoffverarbeitung an der RWTH Aachen, as DAAD scholarship holder. He published as author and co-author two books, two monographs and more than 50 articles in scientific journals and at international symposia, 25 scientific and technical projects and studies. He was the head of the development of the original expert system for fault removal on injection moulded thermoplastic products. He was the editor of the column *From the World of Plastics and Rubber,* editor for *Categorised Works*, and is at present editor-in-chief of the journal *Polimeri (Polymers)*.

Date of last election 13.3.2001.

Referent publications of lecturer

1. M. Šercer, D. Opsenica, G. Barić: Oporaba plastike i gume, mtg topgraf, Zagreb, 2000.
2. M. Šercer, D. Opsenica, M. Rujnić-Sokele: Normizacija ambalaže i oporabe ambalažnog otpada, VII. međunarodni simpozij Gospodarenje otpadom Zagreb 2002, Zagreb, 13.-15.11.2002., 219-227.
3. M. Šercer, M. Rujnić-Sokele: Waste Management of PET Bottles in Croatia, ANTEC 2001, Society of Plastics Engineers, Dallas, Texas, May 6-10, 2001, 3409-3413.
4. M. Šercer: Plastics Waste Management, Annual of the Croatian Academy of Engineering, Zagreb, 2000., 67-70.
5. M. Rujnić-Sokele, M. Šercer, I. Čatić: Automotive Plastics Recycling, Conference Innovative Automotive Technology, ZSITS SVM i Fakulteta za strojništvo - LAVEK, Nova Gorica, 08. i 09.04.1999., 307-314.
6. M. Šercer: Polymers and the environment, MATEH 1996, Hrvatsko društvo za materijale i tribologiju, Opatija, 02-05. listopada 1996, str. 433/440.

List of papers in last 5 years

1. M. Šercer, G. Barić: *Proizvodnja plastičnih i gumenih tvorevina u Hrvatskoj*, Polimeri 23(2002)3, 53-58.
2. M. Šercer, G. Barić: Production and Processing of Polymers in the Republic of Croatia, Plasty a kaučuk, 40(2003)2, 40-44.
3. M. Šercer: Smjerovi razvoja ubrizgavalica za injekcijsko prešanje plastomera, Polimeri 24(2003)2-4, 74-78.
4. M. Šercer: *Micro- and nanotechnology*, Proceedings of the 7th International Research/Expert Conference: Trends in the development of machinery and associated technology TMT 2003, Mašinski fakultet Zenica i Universitat Politecnica de Catalunya, Lloret de Mar, Španjolska, 15. i 16.09.2003, 477-480.

5. M. Rujnić-Sokele, M. Šercer, B. Bujanić: Utjecaj recikliranja na mehanička svojstva drvno-plastomernoga kompozita, Polimeri 25(2004)1-2, 12-19.

Lecturer data

Name, Surname	**Ph.D. Tomislav Filetin, Full Professor**
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Course	**(265) RECYCLING OF MATERIALS**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb

Curriculum vitae

Tomislav Filetin graduated in 1973 from the Faculty of Mechanical Engineering and Naval Architecture (FEMA), earned the master of science degree in 1979 and the Ph.D. degree in 1986 at the FEMA. Since 1974 he has been working at the FEMA as assitant, associated professor, assistant professor and full professor (1997). He lectures the courses titled “Materials”, “Aerospace Materials“, "Selection of Materials” and “Recycling of Materials” in the undergraduate studies. In the postgraduate study of "Materials" at FEMA he lectures the courses titled: “Methods of Materials Selection”, as well as partially the couses: “Modelling in Materials Research”, “Expert Systems”, "Advanced Materials and Processes" and “Special Materials”.
His scientific and professional interests are in the following fields: application of computers in development, selection and optimal use of materials – information and expert systems, simulation and modelling of material properties and the heat treatment processes. He is the author, coauthor or editor of ten books, more then 110 scientific or professional papers, more then 70 testings, elaborates and expertises for the industry as well as 18 computer programmes, data bases and expert systems. He was head of 6 scientific, two technological projects and collaborator at the 9 projects financed by Ministry of science, education and sport the Republic of Croatia. As a coauthor he has two registred patents.
From 1992 to1996 and from 2001 to 2003 he has been the head of the Department for Materials at FEMA. From 1996 to 2002 he was the head editor of all FEMA editions. He is the member of the Technical Committee for Metals at the National Office for Standardization and Measurement, and also one of the founders of Croatian Society for Materials and Tribology and its first president, a member of Croatian Society for Systems, and collaborative member of the Croatian Academy of Science and Arts. He is the full member and vice-president of Croatian Academy of Engineering (2001-2005).
In 2001 he won the award from Croatian Academy of Science and Arts for scientific achievements in technical science in Croatia and the award "Fran Bošnjaković" from University of Zagreb (2003).

Date of last election 13.01.2003.

Referent publications of lecturer

1. D. Lisjak, T. Filetin: **ABRex - Description of the Abrasion Wear Expert System**, Proceedings of 8th Int. Conference and Workshop on Database and Expert Systems Applications (DEXA), IEEE Computer Society, Toulouse, 576-581, 1997.
2. T. Filetin, A. Pintarić: **Recikličnost kao kriterij pri izboru materijala**, Zbornik III. među. "Gospodarenje otpadom - Zagreb 94", 88-99, 1994.
3. A. Pintarić, T. Filetin: **Analiza recikličnosti proizvoda**, Zbornik III. među. simpozija "Gospodarenje otpadom Zagreb 94", 59-68, 1994.
4. A. Pintarić, T. Filetin: **Assesment of recyclability for electrical equipment**, Proceedings of the European Conf. on the Future of Waste Management in Europe, Strassbourg, 2002, p. 373-376.

List of papers in last 5 years

1. T. Filetin: **Izbor materijala pri razvoju proizvoda**, Sveučilišni udžbenik, Fakultet strojarstva i brodogradnje, Zagreb, 2000, 247 str.
2. T. Filetin, F. Kovačiček, J, Indof: **Svojstva i primjena materijala**, Sveučilišni udžbenik, FSB, Zagreb, 2002, 302 str.

3. T. Filetin, I. Kramer, G. Marić: **Metalne pjene**, Hrv. društvo za materijale i tribologiju, Zagreb 2003, 126 str.
4. T. Filetin, I. Kramer (prevodioci i urednici): **Tehnička keramika - Priručnik za primjenu**, Hrv. društvo za materijale i tribologiju, Zagreb, 2004. 147 str.
5. T. Filetin, K. Grilec (autori i urednici): **Postupci modificiranja i prevlačenja - Priručnik za primjenu**, Hrv. društvo za materijale i tribologiju, Zagreb, 2004, 257 str.
6. T. Filetin (urednik): **Suvremeni materijali i postupci**, Hrv. društvo za materijale i tribologiju, Zagreb, 2005, 225 str.
7. T. Filetin, I. Žmak, D. Novak: **Nitriding parameters analyzed by neural network and genetic algorithm**, Journal de Physique IV France 120 - Proceedings of 2nd Inter. Conference on Thermal Process Modelling and Computer Simulation, Les Ulis, EDP Sciences, 2004, p. 355-362.
8. D. Landek, F. Cajner, T. Filetin: **Computer simulation of induction hardening for axiallysymmetric workpieces,** Journal de Physique IV France 120 - Proceedings of 2nd Inter. Conference on Thermal Process Modelling and Computer Simulation, Les Ulis, EDP Sciences 2004, p. 499-506.
9. D. Novak, D. Lisjak, T. Filetin: **Determination of Carburizing Parameters using Genetic Algorithms**, Transactions of FAMENA (1333-1124),28 (2004)2, p. 11-18.
10. T. Filetin, I. Žmak, D. Novak: **Determining Nitriding Parameters with Neural Networks**, Journal of ASTM Int. May 2005, Vol. 2, No. 5
11. T. Filetin: **Smjerovi razvoja novih materijala**, Proceedings of EUROJOIN 4, Cavtat, 2001, p. 1-9.
12. T. Filetin, I. Žmak, D. Markučič, D. Novak: **Determination of the physical properties of heat treatable steels**, Proceedings of the 8th Seminar of IFHTSE - Integration of Heat Treatment and Surface Eng. in the Manufacture of Eng. Components, Cavtat, 2001, p. 399-406.
13. A. Pintarić, T. Filetin: **Assesment of recyclability for electrical equipment**, Proceedings of the European Conf. on the Future of Waste Management in Europe, Strassbourg, 2002, p. 373-376.
14. T. Filetin, I. Žmak: **Artificial neural networks as a tool in predicting mechanical and thermal properties of steels**, 1st International Conference on Materials & Technology, Dublin Institute of Technology and Hrvatsko društvo za materijale i tribologiju, Dublin, 2002, Book of Abstracts, p. 46 (full text on CD)
15. T. Filetin, D. Novak, M. Stupnišek: **The knowledge bases for selecting the surface modification treatment**, 1st Internatinal Conference on Materials & Technology, Dublin Institute of Technology and Hrv. društvo za materijale i tribologiju, Dublin, 2002, Book of Abstracts, p. 15 (full text on CD)
16. T. Filetin, I. Kramer, G. Papić: **Croatian web portal for the materials – MATNET®** , Proceedings of the DAAAM Conference"Advanced Technologies for Developing Countries", Split-Trogir, lipanj 2004, s. 19 (full text on CD, p. 83-89.)

Lecturer data

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Course	**(266) BUILDING ECO MATERIALS**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Born, September 5th 1942 in Zagreb, Croatia. B. Sc. Graduation, 1965. M. Sc. Degree, 1969. Ph. D. 1974. Faculty of Technology, University of Zagreb, Croatia. Postdoctoral study, 1975-1976, University of Chicago, Chicago, USA. Research Associate, 1976-1977, Research Professor 1977-1978, Northwestern University, Evanston, USA. Assistant and Associate Professor 1968-1978. 1979-1987 Associate director, "CHROMOS-PREMAZI", Zageb, Croatia. 1988-1992 Associate Professor of Chemical Engineering. 1993- Professor of Chemical Engineering, Faculty of Chemical Engineering and Technology, Univeristy of Zagreb, Zagreb, Croatia.

Date of last election 02.02.1999.

Referent publications of lecturer

1. Mazur,S., Matusinović,T., Camman,K.: **Organic reactions of oxide free carbon surfaces. An electroactive derivate**, J. Am. Chem. Soc., **99**, 3888, 1977.
2. Matusinović,T., Smith,D.E.: **Kinetic of reduction some cobalt (III) compounds by Europium (II)**, Inorganic Chem., **20**, 3121, 1981.
3. Matusinović,T., Vrbos,N.: **Alkali metal salts as set accelerators for high alumina cement**, Cem. Concr. Res., **24**, 177, 1993.
4. Matusinović,T., Čurlin,D.: **Lithium salts as set accelerators for high alumina cement**, Cem. Concr. Res., **24**, 885, 1993.
5. Matusinović,T., Vrbos,N., Čurlin, D.: **Lithium salts in rapid setting high aluminia cement materials**, Ind.Eng.Chem.Res., **33**, 2795, 1994.

List of papers in last 5 years

1. T. Matusinović, J. Šipušić, N. Vrbos, **Porosity-strength Relation in Calcium Aluminate Cement Pastes**, Cem. Concr. Res. 33 (2003) 1801.
2. T. Matusinović, S. Kurajica, J. Šipušić, **The Correlation Between Compressive Strength and Ultrasonic Parameters of Calcium Aluminate Cement Materials**, Cem. Concr. Res. 34 (2004) 1451.
3. T. Matusinović, N. Vrbos, J. Šipušić, **The Strength of Rapid Setting and Hardening Cement Materials**, The Third International Scientific and Expert Symposium, Zenica, BiH, 2000, Conference Proceedings 239-247.
4. T. Matusinović, J. Šipušić, D. Markučič, J. Stepanić, **Analysis of Ultrasonic Impulse's Information Content in Characterisation of Cement Materials**, MATEST 2003, Zagreb 2003, Conference Proceedings 101-108.
5. T. Matusinović, S. Kurajica, J. Šipušić, **Thermal Analysis of Calcium Aluminate Cement Hydration Products Nonmetal Inorganic Materials, Manufacturing-Processing- Applications**, Zenica 2004, BiH, Conference Proceedings 221-232.

Lecturer data

Name, Surname	**Ph.D. Dunja Mikulić, Full Professor**
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Course	**(267) QUALITY ASSURANCE FOR STRUCTURE MATERIALS**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

B.S., Physics-Experimental Physics, Faculty of Natural Sciences & Mathematics, University of Zagreb, Croatia, 1977
M.S., Faculty of Information Sciences, University of Zagreb, Croatia, 1985
Ph.D., Civil Engineering, Faculty of Civil Engineering, University of Zagreb, Croatia, 1993"Theoretical model of Concrete Quality Assurance", Thesis, pp. 168. (in Croatian)
Research Areas: Physical and mechanical properties of construction materials, Quality Control and Quality Assurance, Durability of concrete structures, Application of artificial neural networks, fuzzy systems and expert systems in Civil Engineering Materials.
- Visiting Research Scholar in the Centre d'Etudes et de Recherches de l' Industrie des Liant Hydrauliques (CERILH), Paris, France, 1986/1987. Worked on a Concrete Durability project, and a sub-project: Influence of the Components Properties on the Mechanical and Microstructure Properties of Paste, Mortar and Concrete.
-Visiting Research Scholar – Assistant Professor in the Rutgers, The State University of New Jersey, Department of Civil and Environmental Engineering, USA, 04.01.1998. – 04.01.1999. Investigator on "Overlaying of Bridge Decks" and in Asphalt Research.
01-04.1999-01.09.2000. Assistant Director for Quality Assurance of the Civil Engineering Institute of Croatia, joint stock company (IGH,d.d.), working on: general criteria for the operation of testing laboratories according to European standards, development of Croatian standards, development of construction regulations with an aim of making our work uniform with European.
1999-2000 President of the Scientific Council in Civil Engineering Institute of Croatia.
1999-2003 Associate Professor, taught undergraduate level courses: Construction Materials, and 2002 postgraduate level at the Faculty of Civil Engineering, University of Josip Juraj Strossmayer in Osijek.
Since October 1, 2003, Professor at the Faculty of Civil Engineering, University of Zagreb and Head of the Department of Construction Materials, lectures subjects: construction materials, quality and protection, and .at post-graduate study course Rheology of materials

Date of last election 13.05.2003.

Referent publications of lecturer

1. Bjegović, Dubravka; Šelih, Jana; Mikulić, Dunja; Stipanović, Irina. Models for service life prediction, *Proceedings of the 2nd International RILEM Workshop PRO29: Life Prediction and Aging Management of Concrete Structures*, RILEM Publications S.A:R.L., 2003. 13-20
2. Sekulić, Dalibor; Veža, Damir; Bjegović, Dubravka; Mikulić, Dunja. Corrosion monitoring in concrete structures with fibre optical sensors, *Proceedings of the 10th International Conference Structural faults + Repair, London, UK, July 01-03, 2003.*, Engineering Technics Press, 2003.
3. Mikulić, Dunja; Dolaček, Zlata; Bjegović, Dubravka. Application of a New Approach for Controlling Construction Products, Bucharest, Romania , 2003.
4. Dolaček, Z.; Mikulić, D.; Radujković, M.: Quality Management in Construction Projects, *3rd IC TECHSTA 2002 – Technology for Sustainable Development in Building Industry*, Prague, Czech Republic, October 16-18 2002, Congress Proceedings, page 307-309, ISBN 80-01-02629-9
5. Sekulić, Dalibor; Bjegović, Dubravka; Mikulić, Dunja. Non-destructive Methods for Monitoring of Reinforcing teel in Concrete, Proceedings of the 9 th International Conference and Exhibition, London, United Kingdom, 4-6 July 2001

List of papers in last 5 years

1. Dolaček, Zlata; Mikulić, Dunja; Radujković Mladen. THE ROLE OF STANDARDIZATION IN CONSTRUCTION PROJECT MANAGEMENT // Book of Abstracts & Proceedings on CD-ROM, 3rd SENET PM Conference / Travnik, Igor (ur.). Bratislava : International Cost Engineering Council, Project Management Association of Slovakia, Slovak University of Technology, Faculty of Civil Engineering, 2004. 9 (1-5).
2. Stipanović, Irina; Barišić, Emilija; Beslać, Jovo; Mikulić, Dunja: Condition Survey of Reinforced Concrete in Hydroelectric Power Plant Vinodol // Proceedings of the International Symposium "Durability nad Maintenance of Concrete Structures" / Radić, Jure (ur.). Zagreb : SECON HDGK, 2004. 591-598.
3. Bjegović, Dubravka; Šelih, Jana; Mikulić, Dunja; Stipanović, Irina. Models for service life prediction // Proceedings of the 2nd International RILEM Workshop PRO29: Life Prediction and Aging Management of Concrete Structures / D.J. Naus (ur.). Pariz : RILEM Publications S.A:R.L., 2003. 13-20.
4. Dolaček, Zlata; Mikulić, Dunja; Bogičević, Željko; Radujković, Mladen. Implementing Quality System in Construction Companies // Proceedings of 6th International Conference Organisation, Technology and Management in Construction / Radujković, Mladen ; Završki, Ivica (ur.) Zagreb : Hrvatska udruga za organizaciju građenja, 2003. 63-70.
5. Meyer Jackson, Jessica; Bjegović, Dubravka; Mikulić, Dunja; Sekulić, Dalibor. Corrosion monitoring in concrete structures with different sensor techniques, San Diego, 2003.
6. Mikulić, Dunja; Dolaček, Zlata; Bjegović, Dubravka. Application of a New Approach for Controlling Construction Products //. Bucharest, Romania : , 2003.
7. Sekulić, Dalibor; Veža, Damir; Bjegović, Dubravka; Mikulić, Dunja. CORROSION MONITORING IN CONCRETE STRUCTURES WITH FIBRE OPTICAL SENSORS // Proceedings of the 10th International Conference Structural faults + Repair, London, UK, July 01-03, 2003. / Forde, Michael (ur.).London : Engineering Technics Press, 2003.
8. Sekulić, 18.D.; Bjegović, D., 18. Mikulić, D., Veža, D.: Corrosion Monitoring in Reinforced Concrete Structures with Fibre Optical Sensors, International Conference MATEST 2003, Brijuni, 28-30. 09. 2003.
9. Dolaček, Z.; Mikulić, D.; Bogičević, Z.; Radujković, M.:Implementing quality systems in construction companies, Proceedings of the 6th International Conference Organisation, Technology and Management in Construction, Mošćenička Draga, 17-20 September 2003, Book of Abstracts ISBN 953-96245-5-X, page 9
10. Dolaček, Z.; Mikulić, D.; Radujković, M.: Quality Management in Construction Projects, 3rd IC TECHSTA 2002 – Technology for Sustainable Development in Building Industry, Prague, Czech Republic, October 16-18 2002, Congress Proceedings, page 307-309, ISBN 80-01-02629-9
11. Dolaček, Z.; Mikulić, D.; Radujković, M.: Harmonization of Croatian Building Regulations with European Union Regulations, 2nd SENET Conference on Project Management, Cavtat, April 17-19 2002, Proceedings of Abstracts, page 22, ISBN 953-98870-0-3
12. Sekulić, D.; Bjegović, D.; Mikulić, D.: Nondestructive Testing Methods for Concrete Structures Assesment, Proceedings of the International Conference MATEST 2001, Cavtat, Croatia, 23-25 09. 2001, pp. 114-120.
13. Sekulić, D.; Bjegović, D.; Mikulić, D.: Non-destructive Reinforced Concrete Corrosion Monitoring Techniques, Proceedings of the 6 th International Conference of the Slovenian Society for Non-destructive Testing", Portorož, Slovenia, 13-14 September 2001
14. Sekulić, D.; Bjegović, D.; Mikulić, D.: Non-destructive Methods for Monitoring of Reinforcing teel in Concrete, Proceedings of the 9 th International Conference and Exhibition, London, United Kingdom, 4-6 July 2001
15. Bjegović D.; Mikulić D.; Skazlić M.: Assessment of Durability for RC Structures by Corrosion Rate Monitoring, ICSF 2000, Proceedings of the 6th. International Conference on Structural failure, Durability and Retrofitting, Singapore 14-15 September 2000, pp. 58-65
16. Bjegović D.; Mikulić D.; Sekulić D.: Nondestructive Corrosion Rate Monitoring for Reinforced Concrete Structures, Proceedings of 15th World Conference on Non-Destructive Testing, Rome, Italy, October 15-21, 2000
17. Bjegović D., Mikulić D., Mikšić B.: Service Life Prolongation by Rebar Corrosion Inhibition, Proceedings of the 16th Congress of IABSE, Structural Engineering for Meeting Urban Transportation Challenges, Lucern 2000, Switzerland, September 18-21, 2000.
18. Bjegović, D.; Mikulić, D.: Concrete Penetrability Testing, Proceedings of the Fifth CANMET/ACI International Conference on Durability of Concrete, Barcelona, Spain 2000, June 4-9, 2000, pp.287-299.

Lecturer data

Name, Surname	**Ph.D. Mladen Radujković, Full Professor**
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Course	**(268) CONSTRUCTION WASTE MANAGEMENT**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

Mladen Radujković was born in April 5th 1952 in Piran, Republic Slovenia. He graduated in 1978. at University of Zagreb, Faculty of Civil Engineering within construction management and technology topics. From 1978 to 1980. he was employed by construction firm Hidrelektra Zagreb. In 1980. he joined to Civil Engineering Institute Zagreb, and since 1991. he is member of permanent staff of Faculty of Civil Engineering. He finished MSc in 1986. and in 1993. he got PhD degree at the Faculty by dissertation «Analyze of factors that influence construction duration». In 1986. he was engaged as part-time assistant at the Faculty for construction management area, and after that he passed all positions in lecturing, until finally in 2003. he was appointed as full-time professor for construction and project management. During past time he was also involved in development of new curriculums. He was supervisor for many student thesis, and several MSc or PhD. He has published more than 80 papers, from which number more than 30 at abroad, so as ten in different journals. He was principle researcher for two research projects, while also he was engaged in several others as researcher. On international scene he delivered presentations in public at several scientific events in Dundee, Glasgow, Hong Kong, Helsinki, Berlin, Paris, Ljubljana, Cape Town, Budapest and Bucharest. Presently he is member of several international associations like: International Project Management Association, Project Management Institute USA, Council International du Batiment pour Reserche l'Etude et la Documentation (CIB). Beside the lecturing and research, he is permanently engaged as consultant for project and construction management. From 2002. he is vice dean for research and science at the Faculty.

Date of last election 16.12.2003.

Referent publications of lecturer

1. Radujković M., Bezak S. – Investment Modelling on a Water Polution Control Projects, Proceedings of 15th IPMA World Congress on Project Management, International Project Management Association, London 22-25 May 2000, pp 633-638.
2. Mikulić D., Dolaček Z., Radujković M., Paladančič D., Kvaliteta u graditeljskim projektima, Zbornik općeg sabora HDGK, Brijunski otoci, 26-28.4.2001., pp 73-78
3. Mlinarić V., Radujković M., The application of technics and technology to industrial floors in Croatia, proceedings of 2nd international conference TECHSTA 2001 – Industrial floors, Prague Czech R., November 21-23 2001, pp 104-108
4. Slaviček. R., Radujković M., Model for Management of Costs in Projects of Road Construction, proceedings of 2. SENET Conference., organized by SENET & IPMA & CIB, Cavtat, Croatia, April 17-19. 2002., pp 436 – 442
5. Linaric Z., Radujkovic M., Technological Component of Construction Chain Management, proceedings of 3rd International Conference TECHSTA 2002., organized by CVUT, Prag, Czech R., October 16.-18. 2002., pp 290 -299
6. Burcar I., Radujković M. – Maintaince model survey for residential buildings in Croatia, proceedings of 4rd International Conference TECHSTA 2004., organized by CVUT, Prag, Czech R., February 18.-20. 2004., pp 165 -171
7. Radujkovic M., Ceric A. - Project managers role in transitions countries, Proceedings of CIB (W 55, W65, W107), International Council for Research and Innovation in Building and Construction), Singapore 22. –24. 10. 2003, vol. 3, pages 82 – 88
8. Zavrski I., Radujković M., Linarić Z. – Reconstruction of Old Buildings – Project Approach, , proceedings of 4rd International Conference TECHSTA 2004., organized by CVUT, Prag, Czech R., February 18.-20. 2004., pp 172 -177

List of papers in last 5 years

1. Radujkovic M. , Zupancic D., Parova M., Project performance aspects in transition economies, Procedings of 2001 CIB World Building Congress, April 2-6 2001, Wellington, New Zealand, pp nov19.1-19.10

2. Mikulić D., Dolaček Z., Radujković M., Paladančič D., Kvaliteta u graditeljskim projektima, Zbornik općeg sabora HDGK, Brijunski otoci, 26-28.4.2001., pp 73-78
3. Radujković M. , Predicting of project cash flow curve, proceedings of SPPR technical meeting "Project management – tools and changes", Smolenice, Slovak R., june 11-13 2001., pp xv1-xv5
4. Mikulić D., Dolačak Z., Radujković M., Paladinčič D., Potpuno upravljanje kvalitetom u obrazovanju inženjera, Hrvatsko društvo za kvalitetu, zbornik 3. hrvatske konferencije o kvaliteti, Cavtat 25-27.4.2001., pp 87-90
5. Inal F., Radujković M., Construction project monitoring, proceedings of International conference on developments in building and technology, Slovak University Bratislava, Bratislava , September 12-14 2001, pp 59-63
6. Mlinarić V., Radujković M., The application of technics and technology to industrial floors in Croatia, proceedings of 2nd international conference TECHSTA 2001 – Industrial floors, Prague Czech R., November 21-23 2001, pp 104-108
7. Semolič B., Radujković M., New economy trends and transition economies, key note paper at 2. SENET Conference,. organized by SENET & IPMA & CIB, Cavtat, Croatia, April 17-19. 2002, proceedings pp 122 - 127
8. Dolaček. Z., Mikulić D., Radujković M., Harmonization of Croatian Building Reagulations with European Union Regulations, 2. SENET Conference., organized by SENET & IPMA & CIB, Cavtat, Croatia, April 17-19. 2002., proceedings pp 162 –168.
9. Slaviček. R., Radujković M., Model for Management of Costs in Projects of Road Construction, proceedings of 2. SENET Conference., organized by SENET & IPMA & CIB, Cavtat, Croatia, April 17-19. 2002., pp 436 – 442
10. Radujkovic M. – Developing regional capacity for better PM profession in south-east Europe, Proceedings of SIG of 16th IPMA World Congress on Project Management (on CD) , International Project Management Association, Berlin 4.-6. June 2002., pp MR1-9
11. Radujkovic M., Management of qualitative transition changes in construction sector, proceedings of 10th Joint Symposium of W65 & W55 with TG23, TG31 & TG 47 "The Organization & Management of Construction" , organized by International Council for Research and Innovation in Building and Construction, CRC Press, USA Cincinati, September 2002. USA, pp 450-461
12. Linaric Z., Radujkovic M., Technological Component of Construction Chain Management, proceedings of 3rd International Conference TECHSTA 2002., organized by CVUT, Prag, Czech R., October 16.-18. 2002., pp 290 -299
13. Dolacek Z., Mikulic D., Radujkovic M., Quality management in Construction Projects, proceedings of 3rd International Conference TECHSTA 2002., organized by CVUT, Prag, Czech R., October 16.-18. 2002., pp 307 – 309.
14. Dolaček Z., Mikulić D., Radujković M. – Norme niza HRN EN ISO 9000 u upravljanju građevinskim projektima, savjetovanje Hravatska normizacija i srodne djelatnosti – Tehničko usklađivanje na putu prema EU, u organizaciji Hrvatskog inženjerskog saveza i Državnog zavoda za normizaciju i mjeriteljstvo, Cavtat 10.-12. travnja 2003., zbornik radova stranice 555 – 561.
15. Radujkovic M. – Management gap – understanding the supportive role of PM tools, 17th World Congress on Project Management, organized by International Project Management Association, Moscow 4-6 June 2003, the Conference proceedings on CD s. 4.14.
16. Parova M., Radujkovic M. - New Trends in the Building Industry – An Integrated Approach, u organizaciji Hrvatskog društva građevinskih konstruktora, Brijunski otoci 26. – 28. lipnja 2003., zbornik radova stranice 67 – 74.
17. Burcar I., Radujkovic M. – A comparasion of two scheduling methods, 6th International Conference Organisation, Technology and Management in Construction, u organizaciji SENET-a, CAPM-a, i Građevinskog fakulteta Sveučilišta u Zagrebu, Moščenička Draga Hrvatska, 17. –20. 09. 2003., zbornik radova ISBN 953-96245-5-x, (editors : M. Radujkovic & I. Zavrski) , str. 40 – 47 , (UDK 69:65.012>4(063)(048)) ; (65.012.4:69> (063)(048))
18. Dolacek Z., Mikulic D., Bogicevic Z., Radujkovic M. – Implementing quality system in construction companies, 6th International Conference Organisation, Technology and Management in Construction, u organizaciji SENET-a, CAPM-a, i Građevinskog fakulteta Sveučilišta u Zagrebu, Moščenička Draga Hrvatska, 17. –20. 09. 2003., zbornik radova ISBN 953-96245-5-x, (editors : M. Radujkovic & I. Zavrski) , str. 63 – 70 , (UDK 69:65.012>4(063)(048)) ; (65.012.4:69> (063)(048))
19. Inal F., Radujkovic M. – Equipment issues in design phase of monitoring contruction project life cycle, 6th International Conference Organisation, Technology and Management in Construction, u organizaciji SENET-a, CAPM-a, i Građevinskog fakulteta Sveučilišta u Zagrebu, Moščenička Draga Hrvatska, 17. –20. 09. 2003., zbornik radova ISBN 953-96245-5-x, (editors : M. Radujkovic & I. Zavrski) , str. 122 – 129 , (UDK 69:65.012>4(063)(048)) ; (65.012.4:69> (063)(048))

20. Radujkovic M., Ceric A. - Project managers role in transitions countries, Proceedings of CIB (W 55, W65, W107), International Council for Research and Innovation in Building and Construction), Singapore 22. –24. 10. 2003, vol. 3, pages 82 – 88
21. Zavrski I., Radujković M., Linarić Z. – Reconstruction of Old Buildings – Project Approach, , proceedings of 4rd International Conference TECHSTA 2004., organized by CVUT, Prag, Czech R., February 18.-20. 2004., pp 172 -177
22. Burcar I., Radujković M. – Maintaince model survey for residential buildings in Croatia, proceedings of 4rd International Conference TECHSTA 2004., organized by CVUT, Prag, Czech R., February 18.-20. 2004., pp 165 -171
23. Burcar I., Radujković M. – Usporedba tri metode mrežnog planiranja, Sabor hrvatskih graditelja , organizator Hrvatski savez građevinskih inženjera, Cavtat 22-24. travanj 2004, zbornik radova str. 617-623
24. Radujkovic M. – The integration of Strategy, People and Tools, 18th IPMA World Congress on Project Management, organized by International Project Management Association, Budapest 19-20 June 2004, Conference proceedings on CD, stream 2, paper 2, pages1-5,
25. Arar V., Burcar I. , Radujkovic M. – PM in Multicultural Environment : the Landfill Remediation Project Case, 18th IPMA World Congress on Project Management, organized by International Project Management Association, Budapest 19-20 June 2004, Conference proceedings on CD, stream 2, paper 23, pages1-5,
26. ***Inal, F. & Radujkovic, M. (2004) "***Earthmoving equipment production efficiency***" in Pantouvakis, J.P. (ed)*** "Proceedings of the 3rd Scientific Conference on Project Management (PM-03) "Clustering in Construction Project Management***", 24-25 September 2004, Thessaloniki, Greece, ISBN 960-254-642-5, pp. 308-315.***
27. Dolaček Z., Mikulić D., Radujković M. – The Role of Standardization in Constructtion Project Management, proceedings 3. SENET Conference on CD, organized by SENET & International Cost Engineering Council, Bratislava, Slovak Republic, 22.-24. September 2004, ISBN:80-960212-0-7, Stream : PM New Methods and Best Practices
28. Završki I., Izetbegović J., Radujković M. – Best Construction Project Practice in the Region, 3. SENET Conference on CD, organized by SENET & International Cost Engineering Council, Bratislava, Slovak Republic, 22.-24. September 2004, ISBN:80-960212-0-7, Stream : PM New Methods and Best Practices
29. Radujković M. , Car-Pušić D. – The Attributes of Risk Sources and Drivers in the Construction Projects, 3. SENET Conference on CD, organized by SENET & International Cost Engineering Council, Bratislava, Slovak Republic, 22.-24. September 2004, ISBN:80-960212-0-7, Stream : PM New Methods and Best Practices

Lecturer data

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Course	**(268) CONSTRUCTION WASTE MANAGEMENT**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

Anita Cerić was born on 3 Aug 1969 in Prijedor, BiH. She graduated at the University of Zagreb with a B.Sc. in Civil Engineering in 1994. She was awarded her M.Sc. in Civil Engineering at the same University in 1999.
In 2003 she received her Ph.D. at the University of Salford, School of Construction and Property Management. She also, holds two ASCE-American Society of Civil Engineering diplomas: Site Investigations (1997) and Design-Build-Contracting (1999).
Since 1995 to date she works at the Faculty of Civil Engineering, Department of Construction management, University of Zagreb. She has published more than twenty papers in journals and conference proceedings in the field of construction management. She is a reviewer for the Construction management and Economics, which is one of the leading journals in construction management. She has delivered several invited lectures. Anita Cerić research interest are in: risk management, maintenance management and human resource management. She is a member of: CIB - Conseil International du Batiment pour la recherche l'etude et la documentation, W55 Working Commission on Building Economics;HUUP - Croatia Association for Project Management, IPMA - International Project Management Association.

Date of last election 24.3.2004.

Referent publications of lecturer

1. Orešković, M., Cerić, A. (2004), *Ocjena napretka graditeljskog projekta*, Građevinar, Vol56, br. 11, 675-681
2. Radujković, M., Cerić, A. (2003), *Project Managers' Role in Transition Countries*, Joint International Symposium of CIB Working Commissions, Singapore, pp.82-88.
3. Cerić, A.., Katavić, M. (2002), Popravci i rekonstrukcije skuplji od izgradnje, Graditelj 1-2, 37-41.
4. Cerić, A., Katavić, M., Mlinarić, V. (2000), *Decision making in Building Maintenance*, South East Europe Regional Conference on Project Management, Ljubljana, Slovenija, pp.103-111.
5. M.Katavić, I.Završki, A.Cerić: *Sustainable Maintenance in Transition Ecnomies,* CIB World Building Congress - Construction and the Environment., Gavle, Sweden 7-12 june 1998,pp1871-1877.

List of papers in last 5 years

1. Orešković, M., Cerić, A. (2004), *Ocjena napretka graditeljskog projekta*, Građevinar, Vol56, br. 11, 675-681
2. Cerić, A., Brandon, P.S. (2004), *An IT toolokit for managing risk in construction projects*, International Conference on Construction Information Technology (INCITE 2004): World IT For Design & Construction, Langkawi, Malaysia
3. Radujković, M., Cerić, A. (2003), *Project Managers' Role in Transition Countries*, Joint International Symposium of CIB Working Commissions, Singapore, pp.82-88.
4. Katavić, M., Cerić, A.(2003), *MBA in Construction? Dream or Fact*, VI International Conference Organisation Technology and Management in Construction, Mošćenička Draga pp.23-30

5. Katavić M., Cerić A., Šimac M. (2002), *In a pursiut of a Perfect Manager*, Book of Abstracts (integralni teks objavljen na CD–Rom-u) 2nd SENET Conference on Project Management, pp.. 73-83.
6. Cerić, A., Katavić, M. (2002), Popravci i rekonstrukcije skuplji od izgradnje, Graditelj 1-2, 37-41.
7. Katavić, M., Cerić, A. (2002), *Why Croatian companies do not implement a marketing concept?* Construction Innovation and Global Competitivness, Cincinnati, USA, pp.973-981.
8. Cerić, A., Katavić, M. (2001), Upravljanje održavanjem zgrada, Građevinar 53, 2,83-89, 2001
9. Cerić, A., Katavić, M., Mlinarić, V. (2000), *Decision making in Building Maintenance*, South East Europe Regional Conference on Project Management, Ljubljana, Slovenija, pp.103-111.

Lecturer data

Name, Surname	**Ph.D. Zvonko Seletković, Full Professor**
E-mail address	seletkovic@sumfak.hr
Course	**(281) FOREST ECOLOGY**
Institution	Faculty of Forestry, Zagreb

Curriculum vitae

Born in Donji Andrijevci in 1944. Completed Secondary Forest School in Karlovac and graduated from the Faculty of Forestry, University of Zagreb, where he was appointed assistant in the subject of Forest Ecology in 1978. Earned a master's degree in 1983 and in 1990 obtained a doctorate in the field of ecological problems in forest ecosystems of Slavonian Mountains. From 1995 to 1997 held the post of Head of Department of Silviculture, and since 1995 has held the post of Head of Department of Research in Forestry. At the post-graduate level runs a course in Phyotological Bioclimatology, Forest Ecology and Torrent and Water Management at the Faculty of Forestry in Zagreb. Since 1997 has taught Forest Ecology as a part-time lecturer at the Faculty of Natural Sciences, University of Zagreb. At the post-graduate level he is head of the stream Landscaping Park and Natural Facilities. Runs spefialist study in Ecological Landscaping, Nature Protection and Horticulture. Since 1997, has been associate member of the Academy of Forest Sciences. He is a member of the following associations: the International East-Alpine Society for Vegetacion Study, the Section for Soil Study and Protection within the Alpe-Jadran Association, the Croatian Ecological Society, the Croatian Biological Society and the Croatian Forestry Society. Currently holds the post of Dean at the Faculty of Forestry, University of Zagreb.

Date of last election

Referent publications of lecturer

1. Seletković, Z., Tikvić, I., Anić, I.: **Propadanje šuma kao pokazatelj promjena ekoloških uvjeta u atmosferi**, Šum. list CXIX (11-12),361-371, 1994.
2. Seletković, Z., Prpić,B., Vukelić, J.: **Der Urwald Čorkova Uvala - ein Modell für den multifunktionalen Buchen/Tannen-Plenterwald**, 7. IUFRO Tannensymposium, 250-256, Altensteig, 1994.
3. Seletković, Z.: **Klima lužnjakovih šuma**. **Hrast lužnjak (*Quercus robur)* u Hrvatskoj**, HAZU, Centar za znanstveni rad Vinkovci - "Hrvatske šume", p.o. Zagreb, 71-82, 1996.
4. Seletković,Z.: **Ekološka konstitucija obične jele**, Obična jela u Hrvatskoj, Akademija šumarskih znanosti, Zagreb, 255–276, 2001.
5. Seletković, Z.: **Sušenje obične jele i promjene kemijske klime**, Obična jela u Hrvatskoj, Akademija šumarskih znanosti,Zagreb, 299–312, 2001.

List of papers in last 5 years

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Lecturer data

Name, Surname	**Ph.D. Milan Glavaš, Full Professor**
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Course	**(282) FOREST PROTECTION**
Institution	Faculty of Forestry, Zagreb

Curriculum vitae

Milan Glavaš was born on 3 November, 1945 in Krasno where he finished primary school. He finished secondary school of forestry in Delnice in 1965, He graduated from the Faculty of Forestry in Zagreb in 1971. In the same year he was employed as an assistant from Forest Phytopathology at the same faculty. He completed his master's degree in 1980 and his doctoral thesis in 1988. He was elected a scientific assistant in 1981 and the scientific associate in 1989. In 1990 he was elected an Assistant Professor, Senior Scientific Associate in 1991, Associate Professor in 1992, a full-time professor in 1997 and a permanent full-time professor in 2003.
Since 1988 he has been teaching Forest phytopathology and since 1993 Forest protection, which he has been teaching also today. Since 1991 he has been leading and teaching several subjects at the post-graduate study from the Forest protection.
Since 1993 he has been the leader of the Programme for forest protection and since 1995 of the Institute for protection of forests and hunting. From 1990 to 1995 he was a head of the Institute for the research in forestry and from 1994 to 1996 a vice–dean of the Forestry department. He has been a member of several domestic scientific and professional and two international associations, the editor and the member of the editorial board in 2 professional journals, and the editor of some chapters in a few books. He is also a reviewer of several books and dozen papers. He was a mentor of 4 Master's and 2 Doctoral thesis. He has written 2 university textbooks, two course materials and more than 100 scientific and professional papers. He has held more than 400 public lectures on the profession popularisation.

Date of last election 28.03.2003.

Referent publications of lecturer

1. Glavaš, M., J. Margaletić, 2001: Relativna brojnost sitnih glodavaca i njihovo suzbijanje u G.j. "Požeška gora". 4. Znanstveno stručni skup iz DDD-a s međunarodnim sudjelovanjem "Zdravo održati zdravim u novom tisućljeću. Zagreb, 253-267.
2. Glavaš, M., 1986: Prilog poznavanju mikološkog kompleksa bukve. Kolokvij o bukvi, Zbornik radova. šumarski fakultet Zagreb, 53-60.
3. Glavaš, M. 2003: Zdravstveno stanje biljaka i mjere zaštite u šumskim rasadnicima u Hrvatskoj u 2002. godini. Šumarski list 5 – 6, 257-268.
4. Glavaš, M. 2003: Crveno srce i trulež bukovine. U Obična bukva u Hrvatskoj 561-567.
5. Glavaš, M., 2003: Zaštita bilja u šumskim rasadnicima u Hrvatskoj od bolesti; kukaca i korova u 2002. godini. Fragmenta Phytomedica et Herbologica 28, 1-2, 69 – 79.
6. Glavaš, M., 2003: Šumski požari i protupožarna zaštita na području Uprave šuma podružnice Senj od 1994 – 2003. Šumarski list 127, Suplement, 79 – 91.
7. Glavaš, M. i J. Margaletić, 2003: Zaštita šuma hrasta lužnjaka. Retrospektiva i perspektiva gospodarenja šumama hrasta lužnjaka u Hrvatskoj HAZU – Centar za znanstveni rad u Vinkovcima, 167 – 181.

List of papers in last 5 years

1. Glavaš, M., 2000: Rasprostranjenost, biologija i štetnost gljive *Mycosphaerella dernesii* Barr. Unapređenje poljoprivrede i šumarstva na kršu. HAZU Split, 102 - 103.
2. Glavaš, M. 2000: Krasnarski šumari. Šumarski list 124 (11-12), 715-716
3. Glavaš, M. 2001: Seminar iz zaštite šuma u Koprivnici. Šumarski list (3-4) 228 str.
4. Glavaš, M. 2001: Lovstvo u integriranoj Europi. Šumarski list 125 (3-4), 229-230.

5. Glavaš, M., i D. Diminić, 2001: Mikološki kompleks obične jele. Obična jela u Hrvatskoj. Akademija šumarskih znanosti i Hrvatske šume, p. o. Zagreb, 606 - 625.
6. Glavaš, M. i J. Margaletić, 2001: Štete od životinja. Obična jela u Hrvatskoj. Akademija šumarskih znanosti i Hrvatske šume, p. o. Zagreb, 626-629.
7. Glavaš, M. i J. Margaletić, 2001: Smeđa pjegavost iglica alepskoga bora i mjere zaštite. Znanstvena knjiga, Znanost u potrajnom gospodarenju Hrvatskim šumama. Zagreb, 277-284.
8. Margaletić, J. i M. Glavaš, 2001: Istraživanje dinamike populacije sitnih glodavaca metodama minimalnog kvadrata u Gospodarskoj jedinici "Slatinske nizinske šume". Znanstvena knjiga, Znanost o potrajnom gospodarenju Hrvatskim šumama. Zagreb, 317-326.
9. Glavaš, M., J. Margaletić, 2001: Relativna brojnost sitnih glodavaca i njihovo suzbijanje u G.j. "Požeška gora". 4. Znanstveno stručni skup iz DDD-a s međunarodnim sudjelovanjem "Zdravo održati zdravim u novom tisućljeću. Zagreb, 253-267.
10. Glavaš, M., 2001: 325. obljetnica Šumarije Krasno i 110. obljetnica rođenja prof. dr. sc. Josipa Balena. Drvna industrija 1, 33-36.
11. Glavaš, M., B., Cvjetković i J., Margaletić: 2001: Suzbijanje hrastove pepelnice u šumskim rasadncima. Glasilo biljne zaštite (1), 37. str.
12. Margaletić, J., M., Glavaš, Z., Janicki, N., Turk i Z., Milas, 2001: Glodavci u šumskim ekosustavima kao prenosnici bolesti. Glasilo biljne zaštite (1) 39-40.
13. Cvetnić, Ž., Margaletić, J., Đikić, M., Glavaš, M., D. Špičić, S., Jurić, I., Salajpal, K. 2002: Glodavci kao mogući rezervoari leptospiroze u otvorenim sustavima držanja svinja. U: Đikić, M., Jurič, I. & Kos, F. (ur.), Turopoljska svinja, 165-172.
14. Glavaš, M., Margaletić, J., Grubešić, M. & Krapinec, K., 2002: The fat dormouse (*Myoxus glis* L.) as a cause of damage to the common spruce (*Picea abies* L.) Karst in te gorests of Gorski kotar (Croatia). Vth International Conference on Dormouse (*Mypxidae*). Abstracts, str. 5.
15. Grubešić, M., Krapinec, K., Glavaš, M. & Margaletić, J. 2002: Some morphological parameters and density of the fat dormouse (*Myoxus glis* L.) hunted in the mountain area of Croatia. Vth International Conference on Dormouse (*Mxoxidae*). Abstracts, str. 6.
16. Margaletić, J., M. Glavaš & W. Bäumler, 2002: The development of nice and voles in an oak forest with a surplus of acorns. Anzeiger für Schädlingeskunde, Journal of Pests Science, 75 (4), 95-98.
17. Bäumler, W., M. Glavaš, i J. Margaletić, 2002: Schäden des Siebenschlāfers an Waldbäumen. AFZ Der Wald, Allgemeine Forst Zeitschrift für Waldwirtschaft und Umweltversorgen 57 (4): 204-206.
18. Bäumler, W., M. Glavaš, i J. Margaletić, 2002: Schäden des Siebenschlāfers an Waldbäumen. AFZ Der Wald, Allgemeine Forst Zeitschrift für Waldwirtschaft und Umweltversorgen 57 (4): 204-206.
19. Margaletić, J., i M., Glavaš, 2002: Metode utvrđivanja brojnosti populacija sitnih glodavaca u šumskim ekosustavima. Glasilo biljne zaštite (1), 55 str.
20. Kauzlarić, Ž. i M., Glavaš, 2002: Štete na smrekovim kulturama od puha velikog (*Mxoxus glis* L.) na području Uprave šuma Delnice. Glasilo biljne zaštite (1), 55 str.
21. Glavaš, M., A., Vukadin i J., Margaletić, 2002: Štetočinje u šumskim rasadnicima i zaštitne mjere u 2001. godini. Glasilo biljne zaštite (1) , 56 str.
22. Arač, K., i M., Glavaš, 2002: Kolonizacija gljiva na crveno srce bukovine. Glasilo biljne zaštite (1), 59-60.
23. Glavaš, M., M., Grubešić, V., Kušan i B. Prpić, 2000: Obilježen 5. lipanj - svjetski dan zaštite okoliša. Šumarski list 124 (7-8), 484-486.
24. Glavaš, M., M., Grubešić i J. Margaletić, 2002: Znanstveno-istraživačka i stručna djelatnost s Bosnom i Hercegovinom. Šumarski list 126 (11-12) 653-655.
25. Glavaš, M. 2002: Lovstvo - prikaz knjige. Šumarski list 126 (1-2) 100-102.
26. Glavaš, M. 2003: Zdravstveno stanje biljaka i mjere zaštite u šumskim rasadnicima u Hrvatskoj u 2002. godini. Šumarski list 5 – 6, 257-268.
27. Glavaš, M. 2003: Jak napad gljive *Rosselinia mycophila* (Fr.:Fr.) Sacc. na smrekovim sadnicama u rasadniku «Kuželj» (sažetak). Glasilo biljne zaštite 3, 1, 63-64.
28. Vukadin, A. i M. Glavaš, 2003: Rezultati zdravstvenog pregleda šumskih rasadnika u 2002. godini (sažetak). Glasilo biljne zaštite 3, 1, 45. str.
29. Glavaš, M. i J. Margaletić, 2003: Štetnici i bolesti u šumskim rasadnicima u Hrvatskoj u 2002. godini i mjere zaštite. Prvi simpozij poljoprivrede, veterinarstva i šumarstva. Poljoprivredni, Veterinarski i Šumarski fakultet Sarajevo, 322 – 323. (5).
30. Glavaš, M. 2003: Crveno srce i trulež bukovine. U Obična bukva u Hrvatskoj 561-567.
31. Diminić, D., Hrašovec, B., M., Glavaš, N. Potočić, 2003: Štete na jeli od niskih temperatura. Glasilo biljne zaštite, 1 – dodatak, 63. str.
32. Margaletić, J., M. Glavaš i M. Grubešić, 2003: Štetnost i morfološke karakteristike sivoga puha (*Myoxus glis* L.) u šumama Gorskoga kotara. Prvi simpozij poljoprivrede, veterinarstva i šumarstva. Poljoprivredni, veterinarski i Šumarski fakultet Sarajevo 326.

33. Margaletić, J. i M. Glavaš, 2003: Nove spoznaje o štetama od sivog puha na stablima obične smreke u šumama Gorskog kotara. Glasilo biljne zaštite 47. str.
34. Glavaš, M., 2003: Analiza zdravstvenog stanja i prijedlozi za provedbu mjera zaštite crvene bukve u Mallinovom parku, te smreka i breza u Park šumi Jelenovac u Zagrebu. Elaborat, 8 str. Šumarski fakultet Zagreb.
35. Glavaš, M. & Margaletić, J., 2003: Zaštita šuma hrasta lužnjaka. U: Klepac, D. & Čorkalo-Jemrić, K., (ur.), Retrospektiva i perspektiva gospodarenja šumama hrasta lužnjaka u Hrvatskoj, 167–183.
36. Grubešić, M., Krapinec, K., Glavaš, M., Margaletić, J., 2004: Body measurements and harvesting dynamics of the Fat Dormouse (*Glis glis* L.) in the mountainous part of Croatia. Acta Zoologica Academiae Scientiarum Hungaricae, 50(4): 271–282.
37. Margaletić, J. & Glavaš, M., 2004: Laboratorijska istraživanja odabira žira u ishrani sitnih glodavaca. 5. znanstveno stručni skup iz DDD-a s međunarodnim sudjelovanjem "Pouzdan put do zdravlja životinja, ljudi i njihova okoliša", 249–263.
38. Vukadin, A. i M. Glavaš, 2004: Rezultati zdravstvenog pregleda šumskih rasadnika u 2002. godini. Glasilo biljne zaštite 4, 232-236.
39. Glavaš, M. i J. Margaletić, 2004: Štetočinje glavnih vrsta šumskog sjemana i mjere zaštite. II simpozij poljoprivrede, veterinarstva, šumarstva i biotehnologije. Bihać, 143 str.
40. Glavaš, M., 2004: Kemijska sredstva za zaštitu bilja u šumarstvu. Šumarski fakultet Zagreb. Skripta 60 str.

Lecturer data

Name, Surname	**Ph.D. Slavko Matić, Full Professor**
E-mail address	slavko.matic@zg.tel.hr
Course	**(283) SUSTAINABLE FOREST MANAGEMENT**
Institution	Faculty of Forestry, Zagreb

Curriculum vitae

Born on 20 January 1938 in Livno. Completed primary and grammar school in Knin. He is a Croatian national. Graduated in 1962, obtained a Master's degree in 1972 and a Doctorate degree in 1980 in the field of forest silviculture and ecology at the Faculty of Forestry, University of Zagreb. Made study sojourns at the Faculties of Forestry in Brno and Zvolen and at the Institute of Geobotanics of Saint Petersburg University. Visited scientific and specialist institutions of forestry and ecological provenance (Florence, Zurich, Rasttat, Brussels, Sopron, Oslo, Thessalonica, Athens, Lvov, Istanbul and others) on several occasions. The focus of his scientific work is on forest silviculture and horticulture, branches of natural forest silviculture, forest cultures and plantations, forest seeds and nursery production, forest karst improvement and forest ecology. Held the positions of Dean and Vice-dean at the Faculty of Forestry in Zagreb. One of the founders of the Croatian Ecological Society. Currently president of the Academy of Forestry Sciences, president of the state organisation Croatian Forestry Society, vice-president of the HAZU Council of Agriculture and Forestry, Croatian representative in the IUFRO (International Union of Forest Research Organisations) international board and leader of the Floodplain Forest Ecosystems group, member of expert team for implementing Helsinki Resolutions and leader of Resolution H1 (Directives for Sustainable Management with European Forests), head of the Institute of Silviculture at the Faculty of Forestry in Zagreb. Holder of an honorary doctorate (*honoris causa*) at Mendel's University of Agriculture and Forestry in Brno. Published 118 scientific papers, co-author of several monographs in the field of forestry, participated in a large number of scientific gatherings in the country and abroad, worked on a number of projects for the needs of forestry, water management and others.

Date of last election

Referent publications of lecturer

1. Gračan, J., Anić, I., Matić, S.: **Potrajno gospodarenje i očuvanje biološke raznolikosti hrvatskih šuma**, Šum. list CXXII(9–10), 437–442,1998.
2. Matić, S.: **The forests of Croatia - country report**, Virgin forests and forest reserves in Central and East European Countries, Department of forestry and renewable forest resources, Biotechnical faculty,Ljubljana, 17–24,1999.
3. Matić, S., Oršanić, M., Baričević, D.: **Natural regeneration of pedunculate oak in floodplain forests of Croatia**, Ekologia, **18**(1), 111–119,1999.
4. Matić, S., Vukelić, J., Anić, I.: **Sucession and sylvicultural treatments in riparian forests of the Croatian Podunavlje region,** Ekologia, **18**(1), 39–46, 1999.
5. Matić, S., Anić, I., Oršanić, M.: **Uzgojni postupci u prebornim šumama**, **Obična jela (*Abies alba* Mill.) u Hrvatskoj**, Akademija šumarskih znanosti Zagreb, 407–460, 2001.
6. Prpić, B., Matić, S., Vukelić, J., Seletković, Z.: **Bukovo-jelove prašume hrvatskih Dinarida**, **Obična jela (*Abies alba* Mill.) u Hrvatskoj**, Akademija šumarskih znanosti Zagreb, 479 – 494, 2001.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data
Name, Surname **Ph.D. Nenad Starc, Senior Research Fellow**
E-mail address nstarc@eizg.hr
Course **(2710) SUSTAINABLE DEVELOPMENT**
Institution The Institute of Economics, Zagreb

Curriculum vitae

Education:
1997. Defended doctoral thesis on sustainable island development at the Depart-ment of Economics of the University of Zagreb.
1978. Graduated at the Department of City and Regional Planning, University of California, Berkeley.
1972. Graduated at the Department of Economics, University of Zagreb
Carrier:
1973. Started working at the Institute of Economics in Zagreb. Dealt with investment project appraisal, and urban, regional and environmental economics till mid 1980-ies. Have been focusing on regional and, in particular, island development issues since 1987.
1974. Two months in Netherlands - physical planning course
1984 Three month at the Aberdeen University, Scotland - environmental economics course.
1987. One of the founders of the Island Development Centre in Mali Lošinj, Croatia
1989. One of the founders of the Interna-tional Scientific Council for Island Development - INSULA, a non-govern-ment organisation for promotion of small island research and development. Took part in about ten island development projects and studies mainly in the north Adriatic. Produced the first Sustainable Island Development Programme in Croatia in 1999.
1997 – 1999 Adviser to the Ministry of Development and Reconstruction with a particular task of producing the National Island Development Programme (passed in 1997) and the Island Act (passed in 1999).
since 2000. Adviser to the Ministry for Public Works, Reconstruction and Construction (since 2004: Ministry of the Sea, Tourism, Transport and Development).
2001. Initiated a four years cooperation of the Institute of Economics and Geselschaft fuer Technische Zusammenarbeit (GTZ) in the field of regional development particulary aimed at strenghtening local government development capacity.
since 2003. Main methodological coordinator for the preparation of 26 Island Sustainable Development Programs.
since 2003. Member of the Central Bureau of Statistics working group for defining Croatian NUTS classification.
since 2004. President of the Scientific Council of the Institute of Economics in charge for proposing Institute's scientific research policy
Have been giving lectures in regional and environmental economics as a guest lecturer at the Department of Economics of the University of Zagreb and at the Department of Economics of the University of Split. Presented papers on some 30 internati-onal seminars and conferences on various regional and environmental issues.
Homeland War:
One of the three organizers of the Convoy LIBERTAS that broke through the military blockade of Dubrovnik in 1991. Fought on the first line in Sunja in 1991/1992. Fought in the operation OLUJA in 1995. Decorated.

Date of last election 24.9.2004.

Referent publications of lecturer

1. Starc, N.: **Development of project appraisal methodology in air polluting industries in Eastern Europe**, in Environmental Consequences of energy Production: problems and Prospects, Eds.: Majumdar,S.K., Brenner,F.J., Miller,E.W., Pensylvania Academy of Science, 1987.

2. Starc, N.: **Čovjekov okoliš i ekonomska znanost**, Ekonomski pregled, (10),(11),(12), 1991.
3. Starc, N.: **Razvoj, održivost i ocjena ulagačkih pothvata**, Znanstveni skup "Prema održivom razvitku turizma u Hrvatskoj – Zbornik radova, Institut za turizam Zagreb, Zagreb, 1994.
4. Starc, N.: **Environmental assessement in Croatia, in Environmental Assessment in Countries in Transition**, Papers and Proceedings of the Central European University, Eds.: Belinger, E. et al., CEU, Budapest, 1997.
5. Starc, N.: **Financiranje održivog razvitka**, Međunarodno savjetovanje: "Financiranje zaštite okoliša", Mljet 3.i 4. lipnja 1998., Zbornik radova, Državna uprava za zaštitu prirode i okoliša, Zagreb, 1998.
6. Starc, N.: **Održivi razvoj i ocjena ulagačkih pothvata**, u: Hrvatsko gospodarstvo u tranziciji, Ekonomski institut Zagreb, Zagreb, str. 345 - 360 ,1999.
7. Starc, N.: **Priroda, čovjek i figa u džepu**, Društvena istraživanja Zagreb 65-66 god. 12 (2003) br. 3-4, str. 335-359, 2003.

List of papers in last 5 years

1. STARC, Nenad (2000): Managing Sustainable Development on the Croatian Islands – Documents, Problems and Perspectives, Periodicum Biologorum, Vol 102, Supplement 1, Zagreb, September, str. 199-208
2. STARC, Nenad (2001): Managing Island Development: the Croatian Case, Sociologija sela, broj ¼, str. 15-36
3. STARC, Nenad (urednik) (2001): Izvješće o društvenom razvoju – Hrvatska 2001, UNDP, Zagreb. 76 stranica
4. STARC, Nenad (2001): Planirati, odlučivati, upravljati, Izvješće o društvenom razvoju – Hrvatska 2001, UNDP, Zagreb, str. 45-69.
5. STARC, Nenad (2001): Fascination with the Future - Planning, Decision Making, Managing, Human Development Report – Croatia 2001,UNDP, Zagreb, pp. 44-72
6. STARC, Nenad (2002): Hrvatsko prostorno planiranje i Europska unija, Izvješće o društvenom razvoju – Hrvatska 2002, UNDP, Zagreb, str. 99-121.
7. STARC, Nenad (2002): Croatian Spatial Planning System and the EU Standards, Human Development Report – Croatia 2002,UNDP, Zagreb, pp. 107-131.
8. FILIPIĆ, Petar - STARC Nenad (2002): Application of Participative Methodology in Designing Sustainable Development Program for Islands - Croatian Case, Litoral 2002, The Changing Coast. EUROCOAST/EUCC, Porto - Portugal , Ed. EUROCOAST - Portugal, ISBN 972-8558-09-0 pp 159 – 168
9. STARC, Nenad (urednik) (2002): Izvješće o društvenom razvoju – Hrvatska 2002, UNDP, Zagreb. 148 stranica.
10. STARC, Nenad (2003): From Politics to Policy in Four Acts, CARDS 2002 - Capacity Building for Regional Development of the Republic of Croatia: Strategic Planning, Technical Ddocument 4.1., Zagreb, July, 43 pages
11. STARC, Nenad (2003): Towards Programming, CARDS 2002 - Capacity Building for Regional Development of the Republic of Croatia: Strategic Planning, Technical Ddocument 4.2., Zagreb, July, 47 pages
12. STARC, Nenad (2003): Preparing a Strategic Development Programme - a Methodological Proposal, CARDS 2002 - Capacity Building for Regional Development of the Republic of Croatia: Strategic Planning, Technical Ddocument 4.3., Zagreb, July, 48 pages
13. Analiza gospodarstva u područjima posebne državne skrbi (2003), Nenad Starc (urednik) ...et al. Ekonomski institut Zagreb, Zagreb, travanj, str. 5 - 25 i 68 - 77
14. RAŠIĆ, Ivana - STARC, Nenad (2003): Nevolje s regionalnom politikom, Privredna kretanja i ekonomska politika br. 95 Vol. 13, Ekonomski institut Zagreb i Ministarstvo financija Republike Hrvatske, str 47 – 85
15. SUMPOR, Marijana - STARC, Nenad (2003): Pro-Active Regional Development Policy - the Croatian Case, 43rd Congress of the European Regional Science Association, 27-30 August 2003, University of Jyväskylä, Finland (compact disc)

16. DRAEGER, Stefan - SUMPOR, Marijana - STARC, Nenad (2003): Basic Guidelines for the Elaboration of Strategic Development Programs at the Local Level, Ministry of Public Works, Re-Construction and Construction, Deutsche Gesellschaft für Technische Zusammenarbeit and Institute of Economics Zagreb, September, 85 stranica
17. DRAEGER, Stefan - SUMPOR, Marijana - STARC, Nenad (2003): Vodič za izradu strateških razvojnih programa na lokalnoj razini, Ministarstvo mora, turizma, prometa i razvitka, Deutsche Gesellschaft für Technische Zusammenarbeit i Ekonomski institut Zagreb, rujan, 103 stranice
18. STARC, Nenad (2003): Priroda, čovjek i figa u džepu, Društvena istraživanja Zagreb 65-66 god. 12 (2003) br. 3-4, str. 335-359
19. STARC, Nenad (2004): Local Community, Development Management and Transition, proceedings from the 44th European Congress of the European Regional Science Association - Regions and Fiscal Federalism, Porto, Portugal, 25 - 29 August 2004 (Congress CD - ROM)
20. KORDEJ-De VILLA, Ž. - RAŠIĆ-BAKARIĆ, I. - STARC, N. - STUBS, P. - SUMPOR, M. - ŠIŠINAČKI, J. (2004): The Spatial Dimensions of Development in Croatia – from Theory to Policy Vacuum, 65th Anniversary Conference of the Institute of Economics, Zagreb, Institute of Economics, Zagreb, Zagreb, Croatia, November 18-19, 2004

Lecturer data

Name, Surname	**Ph.D. Olivera Lončarić-Horvat, Full Professor**
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Course	**(2711) ENVIRONMENTAL LAW-CIVIL LAW ASPECT**
Institution	Faculty of Law, Zagreb

Curriculum vitae

Prof.dr.Olivera Lončarić-Horvat
Born: 15 November 1932, Belgrade.
Education: 1966-Degree in Law, University of Zagreb, 1968 – Post- graduate studies at the Economic Faculty, University of Skopje, 1974- Doctorate at the Economic Faculty, University of Skopje.
Longer periods of professional upgrading: Munich, Mainz, Hamburg, Cologne, Graz.
Academic career: 1961 – Assistant in Financial Law, University of Zagreb, 1974 – Associate professor of Financial Law, University of Zagreb, 1979-1981 – Vice-dean for financial affairs at the Law Faculty, University of Zagreb, 1987-2003 – Full professor of Financial Law, University of Zagreb.

Date of last election

Referent publications of lecturer

1. Lončarić-Horvat, O.: **Problemi ekološki orijentiranih poreznih sistema članica Evropske zajednice**, Financijska praksa, (4-5), 216-222, 1990.
2. Lončarić-Horvat, O.: **Ekološka davanja u pravnom sustavu Europske zajednice,** Zbornik Pravnog fakulteta u Zagrebu, (1), 55-63, 1991.
3. Lončarić-Horvat, O.: **Zaštita okoliša fiskalnom politikom**, Ekonomija, (2), 1996.
4. Lončarić-Horvat, O.: **Suvremeni trgovački sustav i zaštita okoliša,** Pravo i porezi, (6), 1997.
5. Lončarić-Horvat, O.: **Europska unija-pravna osnova i ograničenja ekologizacije poreznih sustava,** Pravi i porezi, (5), 1999.
6. Lončarić-Horvat, O.: Budućnost ekoloških davanja, Znanost i društvene promjene, Zagreb, 305-315, 2000.

List of papers in last 5 years

1. O. Lončarić-Horvat, **Budućnost ekoloških davanja**, Znanost i društvene promjene, Zagreb, 305-315, 2000.

Lecturer data

Name, Surname	**Ph.D. Fedor Valić, Professor Emeritus**
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Course	**(2712) ENVIRONMENT AND HEALTH**
Institution	Faculty of Medicine, Zagreb

Curriculum vitae

Fedor Valić, doctor of science, scientific advisor, full professor of Medical Faculty in Zagreb in the period of over 30 years and vice-dean of the same Faculty in two periods, assistant director and director of the Andrija Štampar School of Public Health in the period of 14 years, founder and longterm head of the Division of Environmental Health of the Medical Faculty. Vice-rector of the Zagreb University 1998-1993, elected professor at universities in London, Alexandria and Singapore, member of expert panel of World Health Organization and consultant of the same Organization in the period of over 30 years, acting in 39 countries of the world. Consultant of International Labour Organization in four countries and Head of its International Centre for Safety at Work in a period of 10 years. Cofounder of the first departments for health related ecology in Alexandria, Khartoum, Lahore, Singapore and Santiago. Director of four international 2-semester postgraduate courses of the World Health Organization in Zagreb and of 11 international teaching programmes in countries of Africa, Asia and South America. Currently, scientific advisor of World Health Organization in its programme 'International Programme on Chemical Safety'. Author of 282 published titles, of which 151 abroad; 82 published in journals indexed in CC and/or SCI, and 56 in secondary indexes. Actively participated in over 150 congresses, symposia and other scientific or professional meetings in the country or abroad. Editor of 29 internationational monographs and author of 24 international reports of the World Health Organization. Corresponding member of Croatian Academy of Sciences and Arts from 1977 and member of the Academy of Medical Sciences of Croatia from 1994. State Award for Life Achievement in 1992. Longterm president of the Croatian Clean Air Association, president of Croatian University Sports Association and member of Croatian Olympic Committee. Member of the Executive Board of Association of Croatian members of United Nations. Member of Technical Committee for Air Quality of the State Institute for Standardization and president of Subcommittee for Work Environment. Honorary member of Egyptian Public Health Association and of Association of Occupational Health of Argentina.

Date of last election

Referent publications of lecturer

1. Valić, V.: **Asbestos and health**, World Health Organization, Copenhagen, 1-24, 1998.
2. Valić, F.: **Cancer and risk assessment - quantitative approach**, Arh hig rada toksikol, **51**, 31-42, 2000.
3. Valić, F., Beritić Stahuljak, D., Cigula, M.: **Inhaled insoluble fibres - an important health problem**, Liječn. Vjesn. 124 (supl.2), 48-55,2002.
4. Valić, F.: **Asbestos dilemma. I. Assessment of risk**, Arh hig rada toksikol, **53**, 153-167,2002.
5. WHO/IPCS. Palladium. Valić, F.: **Responsible officer**, Environmental Helth Criteria 226. Geneva: World Health Organization, 1-201,2002.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Ivan Cifrić, Full Professor**
E-mail address	icifric@ffzg.hr
Course	**(2713) SOCIAL ECOLOGY**
Institution	Faculty of Philosophy, Zagreb

Curriculum vitae

Born in 1946, Petrijevci. In 1965 received education at gymnasium, Osijek. Graduated at the Faculty of Philosophy, Zagreb, Sociology and Philosophy course of study. Won a master's degree in 1973, and a doctor's degree in 1980. Was awarded scholarship from *Alexander von Humboldt-Stiftung*. Employed at the *Faculty of Philosophy*, Zagreb, *Department of Sociology*. Lectured on the following subjects: statistics, rural sociology, Croatian society, sociology of education – at present time - social ecology, and sociology of religion. Head of the department, from 1981 to 1983, then from 1996 to 1998, and head of the *Institute of Sociology*, from 1986 to 2002. Manager of postgraduate studies at the Department of Sociology. Initiator and editor-in-chief of the journal *Socijalna ekologija* (*Social Ecology*) (1992), as well as of the book collection *Razvoj i okoliš* (*Development and Environment*). Editor of several collected papers, organizer and participant of several home and international scientific gatherings. Manager of several projects, and since 2002,, manager of the project *Modernisation and Identity of the Croatian Society* (0130400). Supervised the work of four junior researchers. President of the *Croatian Sociological Society*, from 1986 to 1988, and from 1988 to 1990. Published seven books, in the field of social ecology, about a hundred research papers and reports, and editor of several collections of papers. Recipient of the *State Annual Award for Scientific Achievement*, for the year 2000.

Date of last election 16. 09.1977.

Referent publications of lecturer

1. Cifrić, I.: **Socijalna ekologija (Social Ecology)**, Globus, Zagreb,,1989.
2. Cifrić, I.: **Ekološka adaptacija i socijalna pobuna (Environmental Adaptation and Social Rebellion)**, Radničke novine, Zagreb, 1990.
3. Cifrić, I.: **Napredak i opstanak (Progress and Survival)**, HSD, Zagreb, 1994.
4. Cifrić, I.: **Bioetika i ekologija (Bioethics and Ecology)**, MH, Zaprešić, 2000.
5. Cifrić, I.: **Moderno društvo i svjetski etos (Modern Society and World Ethos)**, HSD, Zagreb, 2000.
6. Cifrić, I.: **Okoliš i održivi razvoj (Environment and Sustainable Development)**, HSD, Zagreb,2002.

List of papers in last 5 years

1. Ruralni razvoj i modernizacija. IDIS, Zagreb, 2003. (502 str.)
2. Okoliš i održivi razvoj. HSD i Zavod za sociologiju, Zagreb, 2002. (261 str.)
3. Moderno društvo i svjetski etos. HSD i Zavod za sociologiju, Zagreb, 2000. (262 str.)
4. Bioetika i ekologija. Matica hrvatska, Zaprešić, 2000. (222 str.)
5. Orijentacijski identitet. Socijalna ekologija, 13(3-4):221-255, 2004.
6. Globalizacija i svjetski etos. Filozofska istraživanja, 24(2):355-368, 2004.
7. Religija i svjetski poredak (koautor: Nikodem K.) Informatologija, 37(2):104-109, 2004.
8. Značaj iskustva seljačke poljoprivrede za ekološku poljoprivredu. Sociologija sela, 41(1- 2):5-27, 2003.
9. Seoska domaćinstva o zagađivanju okoline. Sociologija sela, 40(3-4):443-458, 2002.
10. Prilog tradicijskog iskustva paradigmi održivog razvoja. Socijalna ekologija, 11(4):297- 316, 2002.

11. Dubinski ekološki pokret. «Ekozofija T» Arne Naessa. Socijalna ekologija, 11(1-2):29-55, 2002.
12. Ruralni metabolizam. Socijalna ekologija, 10(1-2):27-41, 2001.
13. Bioetika i sociologija. Filozofska istraživanja, 21(4):599-608, 2001.
14. Konfliktne perspektive suvremenog svijeta. Informatologija, 34(3-4):213-216, 2001.
15. Ekskurs o održivom razvoju. Socijalna ekologija, 10(3):157-170, 2001.
16. Održivi razvoj i strategija zaštite okoliša. Socijalna ekologija, 9(3):233-248, 2000.
17. Ekozofija – zaboravljena mudrost Zemlje. Informatologija, 33(1-2):13-16, 2000.
18. Percepcija nekih odnosa crkve i države i uloga crkve i religije u društvu. Sociologija sela, 38(1-2):227-270, 2000.
19. Mir među religijama kao pretpostavka mira u svijetu. Religijski identitet, konflikti i dijalog (koautor Nikodem, K.). U: Mitrović, Lj. / Đorđević, B. D. / Todorović, D. /ur/. Društvene promene, kulturni i etnički odnosi i evrointegracijski procesi na Balkanu. Sven; institut za sociologiju F. F. u Nišu, Niš 2004. Str. 127-150.
20. Modernizacija i ruralni razvoj. U: Plenković, J. /ur/. Društvo i tehnologija. Građevinski fakultet u Rijeci, Rijeka 2003. Str. 25-18.
21. Iskustva mješovite poljoprivrede: Obiteljsko gospodarstvo u tranzicijskim promjenama i novim izazovima. U: Štambuk, M. / Šundalić, A. /ur/. Razvojne perspektive ruralnog svijeta Slavonije i Baranje. Institut «Ivo Pilar», Zagreb, 2003. Str. 127-143.
22. Zagađivanje i ugrožavanje seoskog okoliša. U. Štambuk, M. / Rogić, I. / Mišetić, A. /ur/. Prostor iza. Institut «Ivo Pilar», Zagreb, 2002. Str. 267-284.
23. Globalizacijski izazovi i protuslovlja. U: Plenković, J. /ur/. Društvo i tehnologija. Građevinski fakultet u Rijeci, Rijeka, 2002. Str. 36-38.
24. Znakovi nade i tendencije beznađa u današnjem hrvatskom društvu. U: Ančić, N. A. / Bižaca, N. /ur/. Kršćanska nada na početku novoga stoljeća, Crkva u Svijetu, Split, 2001. str. 47-62.
25. Edukacija za život na zemlji. U: Vuleta, B. / Vučković, A. /ur/. Odgovornost za život. Franjevački institut za kulturu mira, Split, 2000. Str. 603-620.
26. Bios i ethos – okoliš u bioetičkoj paradigmi. U: Čović, A. /ur/. Izazovi bioetike. Pergamena, Zagreb, 2000. Str. 169-181.
27. Moderno društvo i pretpostavke vizija svijeta. U: Budin, L. / Roić, S. /ur/. Znanost za 21. stoljeće. Klub hrvatskih humboldtovaca, Zagreb, 2000. Str. 19-33.
28. Čovjekov planetarni izazov. U: Cifrić, I /ur/. Znanost i društvene promjene. HSD i Zavod za sociologiju F. F., Zagreb, 2000. Str. 413-426.

Lecturer data

Name, Surname	**Ph.D. Natalija Koprivanac, Full Professor**
E-mail address	nkopri@marie.fkit.hr
Course	**(2714)ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Dr.sc.Natalija Koprivanac was born in Zagreb. Bachelor degree 1967, Faculty of Technology in Zagreb. Master of Science degree 1974, Faculty of Natural Science. Ph.D. 1981, Faculty of Technology. From 1967-1968 collaborator, Faculty of Agriculture and Forestry, Zagreb From 1968-assistant-, Faculty of Technology, -1982 assistant professor, 1987 associate professor. From 1996-2002 full professor, Faculty of Chemical Engineering and Technology Zagreb and from 2002 œ full professor (permanent position), University of Zagreb. Publishing: 50 papers in scientific journals with international referees, and 28 publications in other scientific and professional journals. Other activities, over 20 studies and projects, innovations and technological improvements. Leadership of more than 50 diploma works, 6 master of degree thesis, 5 disertations. 1999/2000 visiting professor at FAMU-FSU College of Engineerig, Tallahassee, Florida, USA, Fulbright fellow. From 2002. coordinator of international academic postgraduate —«Environmental Management Study».

Date of last election 12.12.2000.

Referent publications of lecturer

1. Koprivanac,N., Meteš,A., Papić,S. and Kralj,B.: **The solid complexes of Ni(II), Co(II), Mn(II) and Cu(II) with 2-(2-pyrrolylmethilene)amino)phenol as a ligand**, J.Environ.Sci. Health **A 30** A(7), 1489-1501, 1995 and Spectroscopy Letters, **30**(2), 181-192, 1997.
2. Koprivanac, N., Lončarić Božić, A., Papić, S.; Meixner, J.: **Organic halides removal from dye wastewater, physical nad thermal technologies**: Remediation of Chlorinated and Recalcitrant Compounds / Wickramanayake, B.G. ; Gavaskar, Ar. (ur.). Columbus, Ohio : Battelle Press, 215-220, 2000.
3. Meteš, A., Koprivanac, N., Glasnović, A.: **Flocculation as a treatment method of printing ink wastewater**,Water Environment Research. **72**,6, 680-688,2000.
4. Papić, S., Koprivanac, N., Meteš, A.: **Optimizing polymer-induced flocculation process to remove reactive dyes from wastewater**, Environmental Technology, **21**, 97-105, 2000.
5. Koprivanac, N., Lončarić Božić, A., Papić, S.: **Cleaner production processes in the synthesis of blue anthraquinone reactive dye**, Dyes and Pigments, **44** , 33-40, 2000.

List of papers in last 5 years

1. N.Koprivanac, A.Lončarić Božić, S.Papić, **Cleaner Production Processes in the Synthesis of Blu Anthraquinone Reactive Dyes**, Dyes&Pigm., 44 (2000) 33-40.
2. A.Meteš, N.Koprivanac,A.Glasnović, **Flocculation as a Treatment Method of Printing Ink Wastewater**, Water Environment Research, 72 (6) (2000) 680-688.
3. S.Papić, N.Koprivanac, A.Lončarić-Božić, **Removal of Reactive Dyes from Wastewater using Fe(III) Coagulant**, Journal of the Society of Dyers and Colourists, 116 (2000) 352-358.
4. S.Papić, N.Koprivanac, A.Meteš, **Optimizing polymer-included flocculation process to Remove Reactive dyes from wastewater**, Environmental Technology, 21 (2000) 97-105.
5. S.Papić, N.Koprivanac, A.Lončarić Božić,A.Meteš, **Removal of Some Reactive Dyes from Synthetic Wastewater by Combined Al(III) Coagulation/Carbon Adsorption Process**, Dyes

and Pigments, 62 (2004) 291-298.
6. A. Lončarić Božić, N. Koprivanac, P. Šunka, M. Člupek, V. Babicky, **Organic Synthetic Dye Degradation by Modified Pinhole Discharge**, Czechoslovak Journal of Physics, 54 (2004) 1-6.
7. N. Koprivanac, H. Kušić, D. Vujević, I. Peternel, B.R. Locke, **Influence of Iron on Degradation of Organic Dyes in Corona, Journal of Hazardous Materials**, 117 (2004) 113-119.
8. D.Vujević, N.Koprivanac, A.Lončarić Božić, R.B.Locke,**The Removal of Direct Orange 39 by Pulsed Corona Duscharge from model Wastewater**, Environmental Technology. 25(7) (2004) 791-800.
9. H. Kušić, N. Koprivanac, I. Peternel, B.R. Locke, **Hybrid Gas/Liquid Electrical Discharge Reactors with Zeolites for Colored Wastewaters Degradation**, Journal of Advanced Oxidation Technologies, u tisku 2005.
10. S. Papić, N. Koprivanac, A.Lončarić Božić, D. Vujević, S. Kučar Dragičević, H. Kušić, I. Peternel, **AOPs in Azo Dye Wastewater Treatment**, Water Environment Research, u tisku 2005.

Lecturer data

Name, Surname	**Ph.D. Roko Andričević, Full Professor**
E-mail address	
Course	**(2714) ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT**
Institution	Civil and Architectural Engineering Faculty, Split

Curriculum vitae

PhD Roko Andričević, professor, was born 1955. in Split. Graduated 1980. at Civil Engineering faculty in Zagreb, Dissertation 1988. at Civil and Environmental Engineering Department, University of Minnesota, USA. 1981. employed as assistant at Civil Engineering Faculty,University of Split. 1991. assistant professor at Civil Engineering Department, University of Nevada, Las Vegas, USA, associate professor1994, full professor 1998- at Civil and Architectural Engineering Faculty, University of Split. Lecturing from 1991-1998 as assistant professor and associate professor on graduate and postgraduate studies at Department of Geoscience and Engineering Hydrology and Hydraulic Structure, Civil Engineering Department, University of Nevada, Las Vegas, USA.From 1998- at Civil and Architectural Engineering Faculty, University of Split. From 2002-2004 position as assistant Minister, Ministry of Environmental protection and Physical Planning, Division for Environmental Protection. Published over 75 scientifical and other papers. Leadership and participation in several international and domestic projects.

Date of last election 1998.

Referent publications of lecturer

1. Jacobson, E., R. Andričević and J. Morrice, Probabilistic capture zone delineation based on an analytic solution,Groundwater, Vol.40(1), pp. 85-97, 2002.
2. Hassan, A.E., R. Andričević and V. Cvetković, Evaluation of analytical solute discharge moments using numerical modeling in absolute and relative dispersion frameworks,Water Resources Research, 38(2), pp. 259-267, 2002.
3. Purvance, D.T. and R Andričević,Geo-electric characterization of the hydraulic conductivity field and its spatial structure at variable scales,Water Resources Research, 36(10), pp. 2915-2924, 2000.
4. Zhang, D., R. Andričević, A.Y. Sun, X. Hu and G. He,Solute flux approach to transport through spatially non-stationary flow in porous ˙ media,Water Resources Research, 36(8), pp. 2107-2120, 2000.
5. Andričević, R. Effects of local dispersion and sampling volume on the evolution of concentration fluctuations in aquifers, Water Resources Research, 34(5), pp. 1115-1129, 1998.

List of papers in last 5 years

1. Jacobson, E., R. Andričević and J. Morrice, Probabilistic capture zone delineation based on an analytic solution,Groundwater, Vol.40(1), pp. 85-97, 2002.
2. Hassan, A.E., R. Andričević and V. Cvetković, Evaluation of analytical solute discharge moments using numerical modeling in absolute and relative dispersion frameworks,Water Resources Research, 38(2), pp. 259-267, 2002.
3. Purvance, D.T. and R Andričević,Geo-electric characterization of the hydraulic conductivity field and its spatial structure at variable scales,Water Resources Research, 36(10), pp. 2915-2924, 2000.
4. Zhang, D., R. Andričević, A.Y. Sun, X. Hu and G. He,Solute flux approach to transport through spatially non-stationary flow in porous ˙ media,Water Resources Research, 36(8), pp. 2107-2120, 2000.
5. H. Gotovac, R. Andričević, B. Gotovac, V. Kozulic, M. Vranjeł, An improved collocation

method for solving the Henry problem, Journal of Contaminant Hydrology, Volume 64, Issues 1-2, June (2003),129-149
6. A. E. Hassan, R. Andričević, V. Cvetković,Computational issues in the determination of solute discharge moments and implications for comparison to analytical solutions, Advances in Water Resources, Volume 24, Issue 6, June (2001), 607-619
7. H. Gotovac, R. Andričević, M. Vranjeł, Effects of aquifer heterogeneity on the intrusion of sea water, First International Conference on Saltwater Intrusion and Coastal Aquifers - Monitoring, Modeling, and Management. Essaouira, Morocco., 1 (2001),1;20-26
8. H. Gotovac, R. Andričević, B. Gotovac, M. Vranjeł, Collocation method in solving saltwater intrusion problems, Second International Conference on Saltwater Intrusion and Coastal Aquifers– Monitoring, Modeling, and Management / Luis E. Marin (ur.),Merida, Mexico: USGS, (2003),153-156

Lecturer data

Name, Surname	**Ph.D. Natalija Koprivanac, Full Professor**
E-mail address	nkopri@marie.fkit.hr
Course	**(2715) SYSTEMS OF ENVIRONMENTAL MANAGEMENT**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Dr.sc.Natalija Koprivanac was born in Zagreb. Bachelor degree 1967, Faculty of Technology in Zagreb. Master of Science degree 1974, Faculty of Natural Science. Ph.D. 1981, Faculty of Technology. From 1967-1968 collaborator, Faculty of Agriculture and Forestry, Zagreb From 1968-assistant-, Faculty of Technology, -1982 assistant professor, 1987 associate professor. From 1996-2002 full professor, Faculty of Chemical Engineering and Technology Zagreb and from 2002 ć full professor (permanent position), University of Zagreb. Publishing: 50 papers in scientific journals with international referees, and 28 publications in other scientific and professional journals. Other activities, over 20 studies and projects, innovations and technological improvements. Leadership of more than 50 diploma works, 6 master of degree thesis, 5 disertations. 1999/2000 visiting professor at FAMU-FSU College of Engineerig, Tallahassee, Florida, USA, Fulbright fellow. From 2002. coordinator of international academic postgraduate —«Environmental Management Study».

Date of last election 12.12.2000.

Referent publications of lecturer

1. Koprivanac, N., Lončarić Božić, A., Papić, S.; Meixner, J.: **Organic halides removal from dye Wastewater**, **physical nad thermal technologies: Remediation of chlorinated and recalcitrant compounds** / Wickramanayake, B.G. ; Gavaskar, Ar. (ur.). Columbus, Ohio : Battelle Press, 215-220, 2000.
2. Meteš, A., Koprivanac, N., Glasnović, A.: **Flocculation as a treatment method of printing ink wastewater**,Water Environment Research. **72**,6, 680-688,2000.
3. Papić, S., Koprivanac, N., Lončarić-Božić, A.: **Removal of reactive dyes from wastewater using Fe(III) coagulant**, Journal of the Society of Dyers and Colourists., **116,** 352-358,2000.
4. Papić, S., Koprivanac, N., Meteš, A.: **Optimizing polymer-induced flocculation process to remove reactive dyes from wastewater**, Environmental Technology, **21,** 97-105, 2000.
5. Koprivanac, N., Lončarić Božić, A., Papić, S.: **Cleaner production processes in the synthesis of blue anthraquinone reactive dye**, Dyes and Pigments, **44** , 33-40, 2000.

List of papers in last 5 years

1. N.Koprivanac, A.Lončarić Božić, S.Papić, **Cleaner Production Processes in the Synthesis of Blu Anthraquinone Reactive Dyes**, Dyes&Pigm., 44 (2000) 33-40.
2. A.Meteš, N.Koprivanac,A.Glasnović, **Flocculation as a Treatment Method of Printing Ink Wastewater**, Water Environment Research, 72 (6) (2000) 680-688.
3. S.Papić, N.Koprivanac, A.Lončarić-Božić, **Removal of Reactive Dyes from Wastewater using Fe(III) Coagulant**, Journal of the Society of Dyers and Colourists, 116 (2000) 352-358.
4. S.Papić, N.Koprivanac, A.Meteš, **Optimizing polymer-included flocculation process to Remove Reactive dyes from wastewater**, Environmental Technology, 21 (2000) 97-105.
5. S.Papić, N.Koprivanac, A.Lončarić Božić,A.Meteš, **Removal of Some Reactive Dyes from Synthetic Wastewater by Combined Al(III) Coagulation/Carbon Adsorption Process**, Dyes and Pigments, 62 (2004) 291-298.
6. A. Lončarić Božić, N. Koprivanac, P. Šunka, M. Člupek, V. Babicky, **Organic Synthetic Dye**

Degradation by Modified Pinhole Discharge, Czechoslovak Journal of Physics, 54 (2004) 1-6.
7. N. Koprivanac, H. Kušić, D. Vujević, I. Peternel, B.R. Locke, **Influence of Iron on Degradation of Organic Dyes in Corona, Journal of Hazardous Materials**, 117 (2004) 113-119.
8. D.Vujević, N.Koprivanac, A.Lončarić Božić, R.B.Locke,**The Removal of Direct Orange 39 by Pulsed Corona Duscharge from model Wastewater**, Environmental Technology. 25(7) (2004) 791-800.
9. H. Kušić, N. Koprivanac, I. Peternel, B.R. Locke, **Hybrid Gas/Liquid Electrical Discharge Reactors with Zeolites for Colored Wastewaters Degradation**, Journal of Advanced Oxidation Technologies, u tisku 2005.
10. S. Papić, N. Koprivanac, A.Lončarić Božić, D. Vujević, S. Kučar Dragičević, H. Kušić, I. Peternel, **AOPs in Azo Dye Wastewater Treatment**, Water Environment Research, u tisku 2005.

Lecturer data

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Course	**(2716) QUALITY CONTROL OF ENVIRONMENT**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Graduated at University of Zagreb, Faculty of Technology 1962., Master's degree 1968., PhD 1973. At Faculty of Chemical Engineering and Technology assistant 1963.-75, assistant professor 1975.-82., associated professor 1982.-88., university professor from 1987.
Courses: Quality management, Analytical chemistry, Environmental chemistry (graduated studies); Quality assurance of analytical system, Monitoring of environmental quality (PhD studies).
Research area: analytical chemistry, chromatography and enviromental protection.
Published 9 books, 13 chapter in books, 90 scientific contributions, mostly in CC cited journals, about 80 professional and popularizing papers. Co-ordinator of scientific projects financed by croatian Ministry of science from 1987, and co-ordinator of EU FP6 project 2004-2007.
First dean of faculty of chemical engineering and technology 1991-1993.

Date of last election 12.01.1999.

Referent publications of lecturer

1. S.Babić, M.Kaštelan-Macan, M.Petrović, **Determination of Agrochemical Combinations in Spiked Soil Samples**, Wat. Sci. Technol. **37:**8 (1998)243-250.
2. M.Petrović, S. Babić, M.Kaštelan-Macan, **Quantitative Determination of Pesticides in Soil by Thin-layer Chromatography and Video Densitometry**, Croat. Chem. Acta **73:**1(2000)197-207.
3. A.Horvat, M. Kaštelan-Macan, M. Petrović i Ž. Barbarić, **Study of MCPA and MCPP Herbicides Mobility in Soils from North-West Croatia as affected by Presence of Fertilizers**, J. Environm. Science and Health B, **38** :3(2003)305-316.
4. S. Babić, D. Mutavdžić and M. Kaštelan-Macan, **SPE Preconcentration and TLC Determination of Alachlor, Atrazine and alpha-Cypermethrin in Water Samples, JPC Journal of Planar Chromatography** , Modern TLC **16**(2003)160-164.
5. M. Kaštelan-Macan, S. Babić, **Pesticides in: Handbook of Thin-Layer Chromatography** (ur. J.Sherma I B. Fried), Marcel Dekker, Inc. New York, 2003., str. 767-80.

List of papers in last 5 years

1. M. Petrović, S. Babić i M.Kaštelan-Macan, **Quantitative Determination of Pesticides in Soil by Thin-layer Chromatography and Video Densitometry**, *Croat. Chem. Acta* **73** (1)(2000)197-207.
2. M.Kaštelan-Macan and B.Klaić, **Analytical Chemistry in Croatia**, *Croat. Chem. Acta* **73**(1)(2000)1-21.
3. M.Petrović, M.Kaštelan-Macan, D.Ivanković and S.Matečić, **Video-Densitometric Quantitation of Flurescence Quencing on Totally Irradiated Thin-Layer Chromatographic Plates**, *J. AOAC Int* **83**(6)(2000)1457-1462.
4. A. J. M. Horvat, J. Živko-Babić, D. Ivanković, S. Babić i M. Kaštelan-Macan, **Anodic Sampling and TLC Identification of Dental Alloys**, *J. Planar Chromatogr.* **14**(2001)426-429.

5. A. J. M. Horvat, M. Kaštelan-Macan, M. Petrović i Ž. Barbarić, **Study of MCPA and MCPP Herbicides Mobility in Soils from North-West Croatia as Affected by Presence of Fertilizers**, *J. Environm. Science and Health B* **38**(3)(2003)305-316.
6. S. Babić, D. Mutavdžić and M. Kaštelan-Macan, **SPE Preconcentration and TLC Determination of Alachlor, Atrazine and alpha-Cypermethrin in Water Samples**, *JPC J.Planar Chromatogr., Modern TLC* **16**(2003)160-164.
7. M. Kaštelan-Macan, S. Babić, **Pesticides in: Handbook of Thin-Layer Chromatography** (ur. J.Sherma I B. Fried), Marcel Dekker, Inc. New York, 2003., str. 767-80.
8. M. Kaštelan-Macan, D. Mutavdžić i S. Babić, **Novi postupci priprave uzorka za određivanje organskih tvari u vodama**, *Hrvatske vode* **12**(47)(2004)115-124.
9. A. Zelenika, S. Babić i M. Kaštelan-Macan, **Kromatografsko određivanje atrazina i fenarimola u tlima**, *Znanstveni glasnik* **14**(2004)33-47.
10. I. Rezić, A.J.M.Horvat, S. Babić and M. Kaštelan-Macan, **Determination of pesticides in honey by ultrasonic solvent extraction and thin-layer chromatography**, *Ultrasonics Sonochemistry* **12** (6)(2005).
11. S. Babić, A.J.M. Horvat, M. Kaštelan-Macan, **Application of genetic algorithm in optimisation of TLC separation**, *J. Planar Chromatogr.* **18**(2)(2005.
12. D. Mutavdžić, A.J.M. Horvat, S. Babić and M. Kaštelan-Macan, **SPE-MASE coupled system for extraction of pesticides from water samples**, J.Sep.Science (2005)(in press)
13. M. Kaštelan-Macan, S. Babić, A. Zelenika, J. Macan, **Determination of atrazine and fenarimol extraction efficiency ba TLC**, *Agrochimica* 2005 (in press)

Lecturer data

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Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Born 19. September 1939. in Zagrebu, Croatia.
B.C.E.: 19. April 1963, Faculty of Technology, University of Zagreb. Mentor: Ph.D. Aleksandar Bezjak, professor, "Determination of bemit structure".
M.Sc.: 16. December 1968. Faculty of Technology, University of Zagreb. Mentor: Ph.D. Vjera Marjanović - Krajovan, professor, "Comparation of methods for determination of free CaO in clinkers".
Ph.D.: 11. december 1973. Faculty of Technology, University of Zagreb, Mentor: Ph.D. Vjera Marjanović - Krajovan, professor, "Distribution of some chemical elements in iron materials".
Work experience: From 1. December 1963. until now work at Laboratory for Analytical Chemistry, Faculty of Chemical Engineering and Technology, University of Zagreb, as follows: assistant 1975. - 1977.; Docent 1977.-1983.; 1983. until now professor.
Post doctoral studies: 1985. and 1987. Department of Analytical Chemistry, L. Eotvos, University - Budapeste. Mentor: Ph.D. I. Incedya, professor.
Scientific publications: 70 scientific publications in journals, 50 internationl conferences, 50 conferences in Croatia.
Projects: President of projects: "Ion Exchangers in Prevention of Pollution of Chemical Industry Waters", and "Chromatography in Water Analysis (CRO-SLO colaboration)", financed by Ministry of Science and Technology, Republic of Croatia.
Social activities: President of AMACIZ, member of CCS, CSCI, Academy of Science NY and IAWQ.

Date of last election 10.11.1998.

Referent publications of lecturer

1. Cerjan-Stefanović, Š., Grubiša,D., Šmid, V.: **Separation of copper, nickel, tin and lead on ion exchanger from plating rinsewater**, Plating and Surface Finishing., **4**,74, 1996.
2. Rastovčan, Cerjan-Stefanović,Š., Novosel-Radović,V.: **Mechanical properties of cement addition of blast furnace slage**, Metallurgy, **36** (2), 93, 1997.
3. Ćurković,L., Cerjan-Stefanović,Š., Filipan,T.: **Metal ion exchange by natural and modified zeolites**, Wat. Res., **31**(6), 1379, 1997.
4. Rastovčan - Mioč, Cerjan-Stefanović,Š., Ćurković,L.: **Aqueous leachate form eletric furnace slag**, Croatica Chemica Acta, **73** (2), 615, 2000.
5. Rastovcan-Mioč, Cerjan-Stefanović,Š., Novosel-Radović,V., Mioč,B., Sofilić,T.: **Influence of X-ray radiation on the phase composition and morphology of electric furnace slag, clinker, and plaster**, Croatica Chemica Acta, **74** (2), 419,2001.
6. Rožić,M., Cerjan – Stefanović,Š., Ćurković,L.: **Evaluation of Croatian clinoptilolite and montmorillite – rich tuffs for ammonium remuval**, Croatica Chemica Acta, **75** (1), 255-269,2002.

List of papers in last 5 years

1. Š. Cerjan-Stefanović, T. Bolanča, L. Ćurković, **Selection of Criteria for Comparing and Evalueting the Optimization of Separation in Ion Chrmatography**, Journal of Liquid Chromatography & Related Technologies, 23 (14) (2000) 2169.

2. Š. Grahek, I. Eškinja, K. Košutić, Š Cerjan-Stefanović, **Isolation of Yttrium and Strontium from Soil Samples and Rapid Determination of 90Sr**, Croatica Chemica Acta, 73 (3) (2000) 795.
3. S.Leaković, I. Mijatović, Š Cerjan-Stefanović, E. Hodžić, **Nitrogen Remuval from Fertilizer Wastewater by Ion Exchange**, Water Research A Journal of the International Water Association, 34 (1) (2000) 185.
4. A. Rastovčan - Mioč, Š. Cerjan-Stefanović, L. Ćurković, **Aqueous Leachate form Eletric Furnace Slag**., Croatica Chemica Acta, 73 (2) (2000) 615.
5. M. Rošić, Š. Cerjan-Stefanović, S. Kuraica, V. Vančina, E. Hodžić, **Ammoniacal Nitrogen Remuval from Water by Treatment with Clays and Zeolites**, Water Research A Journal of the International Water Associationm, 34 (14) (2000) 3675.
6. Š.Cerjan-Stefanović, T.Bolanča, L.Ćurković, **Simultaneous Determination of six Inorganic Anions in Drinking Water by Non-Suppressed Ion Chromatography**, Journal of Chromatography A, 918 (2001)325.
7. L. Ćurković, Š. Cerjan-Stefanović, **Batch Pb2+ and Cu2+ Removal by Eletric Furnace slag, Water Research**, 35 14 (2001) 3436-3440.
8. M. Novič, Š. Cerjan-Stefanović, M. Prošek, J. Turšić, T. Bolanča, **Međulaboratorijski Krušni testovi za analize aniona ionskom kromatografijom**, Hrvatska vodoprivreda, X 102, 2001, 49-53.
9. M. Rošić, Š. Cerjan-Stefanović, L. Ćurković, **Evaluation of Croatian Clinoptilolite and Montmorillite œrich Tuffs for Ammonium Remuval**, Croatica Chemica Acta, 75 (1) (2002) 255-269.
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11. G. Srečnik, Š. Debeljak, Š. Cerjan-Stefanović, M. Nović, T. Bolanča, **Optimization of Artificial Neural Networks Used for Retention Modelling in Ion Chromatography**, Journal of Chromatography A, 973 (2002) 47-59.
12. T. Sofilić, A. Rastovčan-Mioč, Š. Cerjan-Stefanović, V. Novosel-Radović, M. Jenko, **Characterization of steel mill electric-arc furnace dust**, Journal of Hazardous Materials, 109(1-3) (2004) 59-70.
13. T. Bolanča, Š. Cerjan-Stefanović, G. Srečnik, Š. Debeljak, M. Novič, **Development o an Ion Chromatographic Method for Monitoring Fertilizer Industry Wastewater Quality**, Journal of Liquid Chromatography & Related Technologies, 27 17 (2004) 2781-2798.
14. Š. Cerjan-Stefanović, T. Bolanča, M. Novič, J. Turšić, M. Regelja, **Krušni testovi u analizi aniona i kationa ionskom kromatografijom**, Hrvatske vode, 49 (2004) 313.
15. T. Bolanča, Š. Cerjan-Stefanović, M. Regelja, D. Štanfel, **Development of Ion Chromatographic Method for Determination of Inorganic Cations in Sea Water used in OTC Pharmaceutical Industry**, Journal of Liquid Chromatography & Related Technologies, 28 (2), 2005, 233-145.
16. T. Bolanča, Š. Cerjan-Stefanović, M. Novič, **Application of Artificial Neural Network and Multiple Linear Regression Retention Models for Optimization of Separation in Ion Chromatography by Using Several Criteria Functions**, Chromatographia, 61 (3-4), 2005.
17. T. Bolanča, Š. Cerjan-Stefanović, G. Srečnik, Š. Debeljak, M. Novič, **Comparison of Retention Modelling in Ion Chromatography by Using Multiple Linear Regression and Artificial Neural Networks**, Separation Science and Technology, 40 (6), 2005
18. T. Bolanča, Š. Cerjan-Stefanović, M. Regelja, H. Regelja, S. Lončarić, **Development of an Inorganic Cations Retention Model in Ion Chromatography by Means of Artificial Neural Networks with Different Two Phase Training Algorithms**, Journal of chromaotography A, 2005.

Lecturer data

Name, Surname	**Ph.D. Damir Kalpić, Full Professor**
E-mail address	damir.kalpic@fer.hr
Course	**(2718) DATABASES**
Institution	Faculty of Electrical Engineering and Computing, Zagreb

Curriculum vitae

Damir Kalpić graduated in 1970, received his M.Sc. in 1974 and his Ph.D. degree at the Faculty of Electrical Engineering in 1984. Since January 1970, he has been employed at the Faculty of Electrical Engineering, nowadays Electrical Engineering and Computing, first as assistant, 1984 assistant professor, 1996 associate professor and since 2002 as full professor. He has been teaching courses belonging to the group of Computer Science at the Department of Applied Mathematics. His professional interest has been with computer applications in different fields, system analysis and embedding of mathematical modelling and operational research into database supported information systems. He is a member of the R&D team working on applications for business, industry, administration and other institutions. He was deputy dean and vice dean. He authored a larger number of papers. He can speak and write English, German, Italian, Spanish, French and Portuguese, listed in descending order of fluency.

Date of last election 12.3.2002.

Referent publications of lecturer

1. D. Kalpić, V. Mornar: Student Administration System, European review conference proceedings "University-Enterprise Information Systems" Graz, September 15-16, 1994, pp 124-131.
2. D. Kalpić, M. Baranović, V. Mornar: Two-Period Production Planning and Simulation by Linear Programming with Multiple Objectives, Proceedings of 18th International Conference on Computers & Industrial Engineering, ICC&IE'95, Shanghai, China, October 25-27, 1995, pp 339-343.
3. Tatjana Listeš, Damir Kalpić: Using the Enterprise Application Integration tools to support the emergency warning system, SoftCOM, Split, Dubrovnik, Venice, 2004.
4. D. Kalpić, K. Fertalj, I. Richter: Project of computerization and internetization of the Ministry of Environmental Protection and Physical Planning, Zagreb, 2002.
5. Radović, Sanja ; Dundović, Ana ; Mijić, Goran ; Nikolić, Stjepan ; Milanović, Zlatko ; Mornar, Vedran ; Richter, Ines ; Milanović, Nadža ; Kalpić, Damir. Programski sustav za evidenciju izdvojenog prikupljanja otpada. // *Gospodarstvo i okoliš*. 1 (2000), 46; 469-473.

List of papers in last 5 years

1. Domijan, Predrag; Kalpić, Damir; Petrović, Ivan. Speculative trading strategy of buying crude oil for refinery on spot market // CD-ROM Proceedings of Forecasting Financial Markets, Paris, June 2004.
2. D. Kalpić, V. Mornar, K. Fertalj: An Algorithm for Corrugated Paper Cutting, in Mastorakis, N.E. ed.: Advances in Multimedia, Video and Signal Processing Systems, ISBN: 960-8052-72-6, WSEAS Press, 2002, pp.292-296.
3. Mornar, V.,.Fertalj, K., Kalpic, D., Krajcar S: Credit Card System for Subsidized Nourishment of University Students (2002), In Khosrow-Pour, M., ed.: Annals of Cases on Information Technology 2002/4, Idea Group Publishing, Hershey, PA, USA, pp. 468-486.
4. Trad, Antoine; Kalpić, Damir; Trad, Catherine. Applying the ISRQCC Method in a Web Reengineering Process, The SwissInsurances (SWI) Web Engineering Audit. // Journal of Computing and Information Technology CIT. 10 (2002) , 3; 219-224

5. Fertalj, Krešimir; Kalpić, Damir; Hadjina, Nikola. On-the-Scene Education of Information Technology Staff // Challenges of Information Technology Management in the 21st Century / Khosrow-Pour, Mehdi (ur.). Hershey PA, USA : Idea Group Publishing, 2000. 942-943
6. Kalpić, Damir; Baranović, Mirta; Mornar, Vedran; Krajcar, Slavko. Development of an Integral University Management System // International Conference on System Engineering, Communications and Information Technologies, ICSECIT 2001 Proceedings / Magaš, Bedrich
7. Kalpić, Damir ; Fertalj, Krešimir ; Mornar, Vedran. Analysis of Reasons for Failure of a Major Information System Projecthttp://bib.irb.hr/cgi-bin/prikazi-rad.pl?rad=71687&table=zbornik&chset=WIN-CE http://bib.irb.hr/cgi-bin/prikazi-rad.pl?rad=71687&table=zbornik&chset=WIN-CE// BITWorld 2001 Conference Proceedings, CD-ROM, ISBN 0 905304 36 5 / Kamel, Sherif (ur.). Kairo : The American University in Cairo, 2001. 1-8
8. K. Fertalj, D. Kalpić: "ERP Software Evaluation and Comparative Analysis", Journal of Computing and Information Technology- CIT, Zagreb, Vol. 12. No. 3, 2004, pp 195-209

Lecturer data

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Course	**(2719) ION EXCHANGERS IN ENVIRONMENTAL ANALYSIS**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Born 19. September 1939. in Zagrebu, Croatia.
B.C.E.: 19. April 1963, Faculty of Technology, University of Zagreb. Mentor: Ph.D. Aleksandar Bezjak, professor, "Determination of bemit structure".
M.Sc.: 16. December 1968. Faculty of Technology, University of Zagreb. Mentor: Ph.D. Vjera Marjanović - Krajovan, professor, "Comparation of methods for determination of free CaO in clinkers".
Ph.D.: 11. december 1973. Faculty of Technology, University of Zagreb, Mentor: Ph.D. Vjera Marjanović - Krajovan, professor, "Distribution of some chemical elements in iron materials".
Work experience: From 1. December 1963. until now work at Laboratory for Analytical Chemistry, Faculty of Chemical Engineering and Technology, University of Zagreb, as follows: assistant 1975. - 1977.; Docent 1977.-1983.; 1983. until now professor.
Post doctoral studies: 1985. and 1987. Department of Analytical Chemistry, L. Eotvos, University - Budapeste. Mentor: Ph.D. I. Incedya, professor.
Scientific publications: 70 scientific publications in journals, 50 internationl conferences, 50 conferences in Croatia.
Projects: President of projects: "Ion Exchangers in Prevention of Pollution of Chemical Industry Waters", and "Chromatography in Water Analysis (CRO-SLO colaboration)", financed by Ministry of Science and Technology, Republic of Croatia.
Social activities: President of AMACIZ, member of CCS, CSCI, Academy of Science NY and IAWQ.

Date of last election 10.11.1998.

Referent publications of lecturer

1. Cerjan-Stefanović, Š., Grubiša,D., Šmid, V.: **Separation of copper, nickel, tin and lead on ion exchanger from plating rinsewater**, Plating and Surface Finishing., **4**,74, 1996.
2. Ćurković,L., Cerjan-Stefanović,Š., Filipan,T.: **Metal ion exchange by natural and modified zeolites**, Wat. Res., **31**(6), 1379, 1997.
3. Leaković, S., Mijatović, I., Cerjan-Stefanović, Š., Hođić,E.: **Nitrogen remuval from fertilizer wastewater by ion exchange** , Water Research A Journal of the International Water Association, **34**(1),185, 2000.
4. Cerjan-Stefanović,Š., Bolanča,T., Ćurković, L.: **Selection of criteria for comparing and evalueting the optimization of separation in ion chrmatography**, Journal of Liquid Chromatography & Related Technologies, **23** (14), 2169, 2000.
5. Srečnik,G., Debeljak,Ž., Cerjan-Stefanović,Š., Bolanča,T., Novič, M., Lazarić,K., Gumhalter – Lulić,Ž.: **Use of artificial neural networks for retention modelling in ion chromatography**, Croatica Chemica Acta, **75** (3), 713-725, 2002.

List of papers in last 5 years

1. Š. Cerjan-Stefanović, T. Bolanča, L. Ćurković, **Selection of Criteria for Comparing and Evalueting the Optimization of Separation in Ion Chrmatography**, Journal of Liquid Chromatography & Related Technologies, 23 (14) (2000) 2169.

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4. A. Rastovčan - Mioč, Š. Cerjan-Stefanović, L. Ćurković, **Aqueous Leachate form Eletric Furnace Slag**., Croatica Chemica Acta, 73 (2) (2000) 615.
5. M. Rošić, Š. Cerjan-Stefanović, S. Kuraica, V. Vančina, E. Hodžić, **Ammoniacal Nitrogen Remuval from Water by Treatment with Clays and Zeolites**, Water Research A Journal of the International Water Associationm, 34 (14) (2000) 3675.
6. Š.Cerjan-Stefanović, T.Bolanča, L.Ćurković, **Simultaneous Determination of six Inorganic Anions in Drinking Water by Non-Suppressed Ion Chromatography**, Journal of Chromatography A, 918 (2001)325.
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17. T. Bolanča, Š. Cerjan-Stefanović, G. Srečnik, Š. Debeljak, M. Novič, **Comparison of Retention Modelling in Ion Chromatography by Using Multiple Linear Regression and Artificial Neural Networks**, Separation Science and Technology, 40 (6), 2005
18. T. Bolanča, Š. Cerjan-Stefanović, M. Regelja, H. Regelja, S. Lončarić, **Development of an Inorganic Cations Retention Model in Ion Chromatography by Means of Artificial Neural Networks with Different Two Phase Training Algorithms**, Journal of chromaotography A, 2005.

Lecturer data
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Curriculum vitae

Born 19. September 1939. in Zagrebu, Croatia.
B.C.E.: 19. April 1963, Faculty of Technology, University of Zagreb. Mentor: Ph.D. Aleksandar Bezjak, professor, "Determination of bemit structure".
M.Sc.: 16. December 1968. Faculty of Technology, University of Zagreb. Mentor: Ph.D. Vjera Marjanović - Krajovan, professor, "Comparation of methods for determination of free CaO in clinkers".
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Projects: President of projects: "Ion Exchangers in Prevention of Pollution of Chemical Industry Waters", and "Chromatography in Water Analysis (CRO-SLO colaboration)", financed by Ministry of Science and Technology, Republic of Croatia.
Social activities: President of AMACIZ, member of CCS, CSCI, Academy of Science NY and IAWQ.

Date of last election 10.11.1998.

Referent publications of lecturer

1. Cerjan-Stefanović, Š., Kaštelan-Macan, M.: **Ion Exchange characterization of modified zeolite**, Wat. Sci. Tech. **2269**, 26, 1992.
2. Cerjan-Stefanović, Š., Grubiša,D., Šmid, V.: **Separation of copper, nickel, tin and lead on ion exchanger from plating rinsewater**, Plating and Surface Finishing., **4**,74, 1996.
3. Ćurković,L., Cerjan-Stefanović,Š., Filipan,T.: **Metal ion exchange by natural and modified zeolites**, Wat. Res., **31**(6), 1379, 1997.
4. Leaković, S., Mijatović, I., Cerjan-Stefanović, Š., Hođić,E.: **Nitrogen remuval from fertilizer wastewater by ion exchange** , Water Research A Journal of the International Water Association, **34**(1),185, 2000.
5. Rožić,M., Cerjan-Stefanović,Š., Kuraica,S., Vančina,V., Hodžić,E.: **Ammoniacal nitrogen remuval from water by treatment with clays and zeolites**, Water Research A Journal of the International Water Associationm, **34** (14), 3675, 2000.
6. Rožić,M., Cerjan–Stefanović,Š., Ćurković,L.: **Evaluation of Croatian clinoptilolite and montmorillite – rich tuffs for ammonium remuval**, Croatica Chemica Acta, **75**(1), 255-269,2002.

List of papers in last 5 years

1. Š. Cerjan-Stefanović, T. Bolanča, L. Ćurković, **Selection of Criteria for Comparing and Evalueting the Optimization of Separation in Ion Chrmatography**, Journal of Liquid

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2. Š. Grahek, I. Eškinja, K. Košutić, Š Cerjan-Stefanović, **Isolation of Yttrium and Strontium from Soil Samples and Rapid Determination of 90Sr**, Croatica Chemica Acta, 73 (3) (2000) 795.
3. S.Leaković, I. Mijatović, Š Cerjan-Stefanović, E. Hodžić, **Nitrogen Remuval from Fertilizer Wastewater by Ion Exchange**, Water Research A Journal of the International Water Association, 34 (1) (2000) 185.
4. A. Rastovčan - Mioč, Š. Cerjan-Stefanović, L. Ćurković, **Aqueous Leachate form Eletric Furnace Slag**., Croatica Chemica Acta, 73 (2) (2000) 615.
5. M. Rošić, Š. Cerjan-Stefanović, S. Kuraica, V. Vančina, E. Hodžić, **Ammoniacal Nitrogen Remuval from Water by Treatment with Clays and Zeolites**, Water Research A Journal of the International Water Associationm, 34 (14) (2000) 3675.
6. Š.Cerjan-Stefanović, T.Bolanča, L.Ćurković, **Simultaneous Determination of six Inorganic Anions in Drinking Water by Non-Suppressed Ion Chromatography**, Journal of Chromatography A, 918 (2001)325.
7. L. Ćurković, Š. Cerjan-Stefanović, **Batch Pb2+ and Cu2+ Removal by Eletric Furnace slag, Water Research**, 35 14 (2001) 3436-3440.
8. M. Novič, Š. Cerjan-Stefanović, M. Prošek, J. Turšić, T. Bolanča, **Međulaboratorijski Krušni testovi za analize aniona ionskom kromatografijom**, Hrvatska vodoprivreda, X 102, 2001, 49-53.
9. M. Rošić, Š. Cerjan-Stefanović, L. Ćurković, **Evaluation of Croatian Clinoptilolite and Montmorillite œrich Tuffs for Ammonium Remuval**, Croatica Chemica Acta, 75 (1) (2002) 255-269.
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11. G. Srečnik, Š. Debeljak, Š. Cerjan-Stefanović, M. Nović, T. Bolanča, **Optimization of Artificial Neural Networks Used for Retention Modelling in Ion Chromatography**, Journal of Chromatography A, 973 (2002) 47-59.
12. T. Sofilić, A. Rastovčan-Mioč, Š. Cerjan-Stefanović, V. Novosel-Radović, M. Jenko, **Characterization of steel mill electric-arc furnace dust**, Journal of Hazardous Materials, 109(1-3) (2004) 59-70.
13. T. Bolanča, Š. Cerjan-Stefanović, G. Srečnik, Š. Debeljak, M. Novič, **Development o an Ion Chromatographic Method for Monitoring Fertilizer Industry Wastewater Quality**, Journal of Liquid Chromatography & Related Technologies, 27 17 (2004) 2781-2798.
14. Š. Cerjan-Stefanović, T. Bolanča, M. Novič, J. Turšić, M. Regelja, **Krušni testovi u analizi aniona i kationa ionskom kromatografijom**, Hrvatske vode, 49 (2004) 313.
15. T. Bolanča, Š. Cerjan-Stefanović, M. Regelja, D. Štanfel, **Development of Ion Chromatographic Method for Determination of Inorganic Cations in Sea Water used in OTC Pharmaceutical Industry**, Journal of Liquid Chromatography & Related Technologies, 28 (2), 2005, 233-145.
16. T. Bolanča, Š. Cerjan-Stefanović, M. Novič, **Application of Artificial Neural Network and Multiple Linear Regression Retention Models for Optimization of Separation in Ion Chromatography by Using Several Criteria Functions**, Chromatographia, 61 (3-4), 2005.
17. T. Bolanča, Š. Cerjan-Stefanović, G. Srečnik, Š. Debeljak, M. Novič, **Comparison of Retention Modelling in Ion Chromatography by Using Multiple Linear Regression and Artificial Neural Networks**, Separation Science and Technology, 40 (6), 2005
18. T. Bolanča, Š. Cerjan-Stefanović, M. Regelja, H. Regelja, S. Lončarić, **Development of an Inorganic Cations Retention Model in Ion Chromatography by Means of Artificial Neural Networks with Different Two Phase Training Algorithms**, Journal of chromaotography A, 2005.

Lecturer data
Name, Surname **Ph.D. Ema Stupnišek-Lisac, Full Professor**
E-mail address elisac@marie.fkit.hr
Course **(2721) METAL CORROSION AND PROTECTION – CAUSE OF ENVIRONMENTAL PROBLEMS**
Institution Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Ema Stupnišek-Lisac graduated in the year 1967. on Faculty of Technology, University of Zagreb, obtained her Master degree in 1972. at Faculty of Technology, University of Zagreb and Doktor's degree 1975. at the same Faculty.
In the academic year 1973/74 Ema Stupnišek-Lisac was on specialisation in Laboratoire Physique des Liquides et Electrochimie, Universite Pierre et Marie Curie, Paris, France.
In the 1968. she took a job as assistant in Institute of Physical Chemistry, University of Zagreb.
From 1976. she works as assistant, assistant professor, associated professor and full professor at the Faculty of Chemical Engineering and Technology University of Zagreb. From 2001. she is Vice-Dean for Education and Recherche at the Faculty of Chemical Engineering and Technology, University of Zagreb.
The field of her research is corrosion and corrosion protection of metals. The main research activities are dedicated to protection of metals from corrosion in very aggressive solutions by addition of non-toxic corrosion inhibitors. Ema Stupnišek-Lisac is a project manager of scientific project from 1996. She published over 50 scientific papers (25 in CC- journals), SCI 170. From 2001. she is a vice-dean for Education and Research at Faculty of Chemical Engineering and Technology, University of Zagreb.Memberships: International Society of Electrochemistry, New York Academy of Science, Almae matris Alumni (AMACIZ), Croatian Society of Chemical Engineers and Technologists.

Date of last election 18.11.2003.

Referent publications of lecturer

1. Stupnišek-Lisac, E., Lončarić Božić, A., Cafuk I.: **Low toxic copper corrosion inhibitors,** Corrosion, **54**,713-720, 1998.
2. Stupnišek-Lisac, E., Cinotti, V., Reichenbach, D.: **Atmospheric corrosion inhibitors for copper in the electronics industry,** J.Appl.Electrochem., **29**, 117-122, 1999.
3. Gašparac, R., Stupnišek-Lisac, E.: **Corrosion protection on copper by imidazole and its derivatives,** Corrosion, **55,**1031-1039, 1999.
4. Gašparac, R., Martin, C. R., Stupnišek-Lisac, E., Mandić, Z.: **In-situ and Ex-situ Studies of Imidazole and its Derivatives as Copper Corrosion Inhibitors. Part II. AC Impedance, XPS and SIMS Studies.** J.Electrochem. Soc., **147**, 991-998, 2000.
5. Stupnišek-Lisac, E., Gazivoda, A., Madžarac, M.: **Evaluation of Non-toxic Corrosion Inhibitors for Copper in Sulphuric Acid**,Electrochem. Acta, **47**, 4189, 2002.

List of papers in last 5 years

1. E. Stupnišek-Lisac, A. Brnada, A. D. Mance, **Secondary Amines as Copper Corrosion Inhibitors in Acid Media**, Corr. Sci., 42(2000) 243-257.
2. R. Gašparac, C. R. Martin, E. Stupnišek-Lisac, **In-situ Studies of Imidazole and its Derivatives as Copper Corrosion Inhibitors**. J.Electrochem. Soc. 147 (2000) 548-551.
3. R.Gašparac, C. R. Martin, E. Stupnišek-Lisac, Z.Mandić, **In-situ and Ex-situ Studies of Imidazole and its Derivatives as Copper Corrosion Inhibitors**, J.Electrochem. Soc., 147 (2000) 991-998.
4. E. Stupnišek-Lisac, N. Galić, R. Gašparac, **Corrosion Inhibition of Copper in Hydrochloric Acid Under Flow Conditions Corrosion**, 56 (2000), 1105-1112.

5. E. Stupnišek-Lisac, M. Lisica, D. Reichenbach, **Copper Corrosion Inhibition In Printed Circuit Board Production Plating and Surface Finishing**, 88(2001)90-92.
6. H. Otmačić, E. Stupnišek-Lisac, **Copper Corrosion Inhibitors in Near Neutral Media,** Electrochimica Acta., 48 (2003) 985-991.
7. E. Stupnišek-Lisac, A. Gazivoda, M. Madžarac, **Evaluation of Non-Toxic Corrosion Inhibitors for Copper in Sulphuric Acid**, Electrochimica Acta., 47 (2002) 4189-4194.
8. H. Otmačić, J. Telegdi, K. Papp and E. Stupnišek-Lisac, **Protective Properties of an Inhibitor Layer Formed on Copper in Neutral Chloride Solution**, J. Appl. Electrochem., 34 (2004) 545-550.
9. R. Gašparac, E. Stupnišek-Lisac, Ch. Martin, **Imidazole and its Derivatives as Inhibitors for Prevention of Corrosion of Copper**, The European Federation of Corrosion, IOM Communications, London, 2000, pp. 20-36.
10. E. Stupnišek-Lisac, A. Gazivoda, M. Madžarac, **Nontoxic Corrosion Inhibitors for Copper in Sulphuric Acid**, The Electrochemical Society, Inc., Pennington, USA 2001. pp. 493-500.
11. F. Cajner, D. Landek, E. Stupnišek-Lisac, **Improvement of Properties of Steels Applying Salth Bath Nitrocarburizing with Post Oxidation**, Materials and Technology, 37 (2003) 333-339.
12. E. Stupnišek-Lisac, S. Živković, R. Gašparac, **Effect of Flow on Corrosion Inhibition of Copper in Acid Mediaon Corrosion Inhibitors**, Proceedings 9 SEIC Ferrara, Italy, 2000, (567-578).
13. H. Otmačić, E. Stupnišek-Lisac, **Copper Corrosion Inhibitors in Near Neutral Media**, Congress Proceedings Eurocorr 2001, Milano, Italy, 2001 (1-10).
14. E. Stupnišek-Lisac, H. Otmačić, M. Goršćak, **The Influence of pH on the Copper Corrosion Inhibition in Chloride Media**, Congress Proceedings 15th International Corrosion Congress, Madrid, Španjolska 2002., 1-7.
15. H. Otmačić, E. Stupnišek-Lisac, **Imidazole Derivatives as Copper Corrosion Inhibitors**, Congress Proceedings 15th International Corrosion Congress, Madrid, Španjolska, 2002., 1-7.
16. H. Otmačić, R. Brezonjić, A. Milojević, E. Stupnišek-Lisac, **Investigation of Corrosion Inhibitor Performance on Rotating Disc Electrode**,Congress Procedings Eurocorr 2003., Budapest, Hungary, 2003, 1-9.
17. E. Stupnišek-Lisac,A. Gazivoda, M. Madžarac, **Nontoxic Corrosion Inhibitors for Copper in Sulphuric Acid,** Corrosion and Corrosion Protection, edited by Sinclair, J.D.; Frankenthal, R.P.; Kalman E.; Plieth, W., The Electrochemical Society, Inc., Pennington, USA 2001. pp. 493-500.
18. E. Stupnišek-Lisac, H. Otmačić, **Copper Corrosion Inhibitors**, Zbornik radova 3. hrvatskog simpozija o elektrokemiji, Dubrovnik, 2004, 45-48.

Lecturer data

Name, Surname	**Ph.D. Dubravka Bjegović, Associate Professor**
E-mail address	dubravka@grad.hr
Course	**(2722) CORROSION AND PROTECTION OF CIVIL ENGINEERING STRUCTURES**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

Graduated from the Civil Engineering Faculty Zagreb University , where she also received her Ph. D. She is the Professor in Building Materials at the Materials Department, Faculty of Civil Engineering, Zagreb University. She has written more than 90 papers dealing with theoretical and practical aspects of concrete technology and durability of concrete and reinforced concrete exposed to aggressive environment. She was a member of the RILEM Committee 32 RCA on Resistance of Concrete to Chemical Attack and ISO Technical Committee SC3, Working group 6, Classification of Environmental Conditions Affecting Concrete. She is actual Dean of the Faculty of Civil Engineering, University of Zagreb, and member of Croatian Academy of Technical Sciences, Zagreb, Croatia, NACE International, Houston, Texas, USA and New York Academy of Sciences, New York, USA.

Date of last election

Referent publications of lecturer

1. Bjegović, D., Krstić, V., Mikulić, D., Radić, J., Čandrlić, V.: **Mathematical model for durability design of reinforced concrete structures**, Engineering Modeling, **11**(1-2), 35-40, 1998.
2. Bjegović, D., Radić, J., Puž, G., Mikulić, D., Krstić, V.: **Corrosion limit state design for concrete bridges**, Proceedings of the fib symposium 1999 Structural concrete-The bridge between people, Prague, Czech Republic, **2**, 583-588, 1999.
3. Bjegović, D., Mikšić, B.: **Migrating corrosion inhibitor protection of concrete**, Materials Performance, USA, 52-56, 1999.
4. Bjegović, D., Mikulić, D.: **Concrete Penetrability Testing**, Fifth CANMET/ACI International Conference on Durability of Concrete, Barcelona, Spain, Supplementary Papers, 287- 301,2000.
5. Bjegović, D., Mikšić, B.A., Stehly, R.D.: **Test protocols for migrating corrosion inhibitors (MCI®) in reinforced concrete**, Werkstoffe und Korrosion, **6**(51), 444-452, 2000.
6. Bjegovic, D., Planinc, R., Žuljevic, M., Planinc, M., Stipanovic, I.: **Composite Fire-resistant Tunnel Segments**, will be published in the proceedings of Third International Conference Tunnel Fires which will be held on 9 – 11 October 2001, NIST, Gaithersburg, USA.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data
Name, Surname **Ph.D. Božo Vranješ, Full Professor**
E-mail address bozo.vranjes@fsb.hr
Course **(2723) DISASSEMBLY**
Institution Faculty of Mechanical Engineering and Naval Architecture Zagreb

Curriculum vitae

Date and place of birth: October 19th, 1941, Split, Croatia; Education and qualifications:
Finished technical school in Split in 1960. He was engine assistant and officer in shipping company. Graduated mechanical engineering at the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, in 1968. At the same faculty and university, he earned Ms.Sc. degree in 1976, and Ph.D. degree in 1979. He became an assistant in 1970, assistant professor in 1979, associate professor in 1985, and full professor in 1992. He carried on the lectures in the following courses: *Production planning I & II*, *Assembly system planning I & II*, *Assembly technology*, *Assembly automation*, *Flexible production systems* (part of the course), *Optimising of production layout*, *Design of assembly systems*, *Methods of group technology*, *Computer integrated manufacturing* (part of the course). His scientific activity is directed towards research of methods and techniques of manufacturing and assembly system planning, application of group technology, computer integrated manufacturing and intelligent mechanical assembly. He published as author or co-author more than 75 scientific papers, and was a participant in 26 projects for industry (in 14 he was a leader). He established the *Laboratory for manufacturing and assembly system planning*, and was its head from 1976 until 1985. He is the chief of: the *Division for manufacturing and assembly system planning*, since 1985; the postgraduate study *Technology in mechanical engineering production*, since 1985; the Faculty`s entire postgraduate study since 1996; graduate study branch *Production* and sub-study *Forming and assembly* since 1996. He was the head of the Faculty Council (1984-1986), the head of the study in Slavonski Brod (1986-1989), the head of the *Department of technology* (1989-1991). He is the member of many scientific and professional societies in country and abroad. He is the member of the evaluation group of Croatian Ministry of science and technology for scientific projects in technical sciences since 1996. His awards are: the Medal for military service; Award, Big medal and Chart of the Faculty, and three awards of the DAAAM International, Vienna.

Date of last election 9.12. 1997.

Referent publications of lecturer

1. ***MASTER'S THESIS:***
Vranješ, B. (1976.): *Komparacija postojećih numeričkih metoda za optimiranje rasporeda radnih mjesta, sa gledišta efikasnosti, za slučaj problema sa ograničenjima*, Fakultet strojarstva I brodogradnje Sveučilišta u Zagrebu, Zagreb,
2. **DOCTOR'S THESIS**:
Vranješ, B. (1979.): *Postupak oblikovanja proizvodnih prostornih struktura*, Sveučilište u Zagrebu Fakultet strojarstva i brodogradnje, Zagreb,
3. B. Vranješ, B. Jerbić, Z. Kunica, Projektiranje proizvodnih sustava, Inženjerski priručnik IV, (poglavlje 3.), Školska knjiga, Zagreb, 2003., 73-130.
4. B. Vranješ, B. Jerbić, Z. Kunica, Doprinos projektiranju montažnih sistema, Strojarstvo 33, 1991, (2-3), str. 97-110.
5. B. Vranješ, B. Jerbić, Z. Kunica, Programski paket za projektiranje proizvodnih sistema, Strojarstvo 31, 1989.,(4/5/6), str. 229-236.
6. Vranješ B., Jerbić B., Kunica Z., Prilog osmišljavanju hrvatskoga tehničko-tehnološkoga razvoja, Matica hrvatska, Zagreb, 1993, 164-169

7. Vranješ B., Vrtodušić D. & Jerbić B., CAD Integriertes System zur Auslegung der Ordnungseinrichtungen, Österreichische Ingenieur- und Architekten-Zeitschrift (ÖIAZ), vol. 142, n. 11-12, 1997, 815-822.
8. Jerbić B., Grolinger K. & Vranješ B., Autonomous Agent Based on Reinforcement Learning and Adaptive Shadowed Network, Artificial Intelligence in Engineering, 13/2, 1999., 141-157.
9. Z. Kunica; B. Vranješ (1999). *Towards automatic generation of plans for automatic assembly*, International Journal of Production Research, 37, 8, 1817-1836.
10. Z. Kunica; B. Vranješ; M. Hrman (2003). *Some New Algorithms for CA Assembly Planning*, Strojniški vestnik - Journal of Mechanical Engineering, 49, 1, 41-51

List of papers in last 5 years

1. I. Rajić, B. Vranješ, An Algorithm of Part Repositioning for Automatic Insertion, Annals of DAAAM for 2000 & Proceedings of the 11th International DAAAM Symposium, ISBN 3-901509-13-5, Editor B. Katalinić, Opatija, 19.- 21. 10. 2000., str.399-400.
2. Z. Kunica, M. Hrman, B. Vranješ, Assembly Planning as Concurrent Engineering Issue, Annals of DAAAM for 2000 & Proceedings of the 11th International DAAAM Symposium, ISBN 3-901509-13-5, Editor B. Katalinić, Opatija, 19.- 21. 10. 2000., str.259-260.
3. Z. Kunica, B. Vranješ, D. Zorc, Generic Approach to Assembly Process Modeling, Proceedings of the 2nd International Conference « Business Systems Management-UPS 2001», ISBN3-901509-26-7, Editors V. Majstorović, B. Katalinić, D. Čović, V. Višekruna, Mostar, 31.05,-2.06.2001.,str.141-145.
4. Z. Kunica, B. Vranješ, D. Zorc, A Form and Growth of an Automatic Assembly System, Annals of DAAAM for 2001& Proceedings of the 12th International DAAAM Symposium, ISBN 3-901509-19-4 , Editor B. Katalinić, Jena, 24-27.10 2001., str. 267-26
5. B. Jerbić, B. Vranješ, Model of Autonomous Robotic Assembly as Multiagent System, Proceedings of the World Manufacturing Congres 2001- CD rom, ISBN: 3-906454-28-2, Editors: Guy Johnson, Jon Freckleton,.., Rochester,NY, USA, Postponed to April 2-5, 2002.
6. Z. Kunica, B. Vranješ, M. Hrman, Development of a System for Concurrent Engineering Assembly plan Generation, Proceedings of the World Manufacturing Congres 2001 - CD rom, ISBN: 3-906454-28-2, Editors: Guy Johnson, Jon Freckleton, Rochester, NY, USA, Postponed to April 2-5, 2002.
7. Z. Kunica, B. Vranješ, G. Nikolić, I. Tomić, On Design Procedure of Automatic Assembly System, Annals of DAAAM for 2002& Proceedings of the 13th International DAAAM Symposium, ISBN 3-901509-29-1 , Editor B. Katalinić, Beč, 23-25.10. 2002., str. 299-300.
8. B. Vranješ, B. Jerbić, M. Hrman, G. Nikolić, A. Jokić, Application of Machine Vision in Autonomous Robotic Assembly System, Annals of DAAAM for 2002& Proceedings of the 13th International DAAAM Symposium, ISBN 3-901509-29-1 , Editor B. Katalinić, Beč, 23-25.10. 2002., str. 603-604.
9. Novaković, Branko; Vranješ, Božo; Novaković, Dario; Majetić, Dubravko; Kasać, Josip; Brezak, Danko, An adaptive fuzzy robot control without a fuzzy rule base, IFAC-b'02, Camacho, E.F.; Basanez, L.; De la Puente, J.A. (ur.), Barcelona : Pergamon, Elsevier Science, 2002. 1226.1-1226.6.
10. Jerbić, Bojan; Vranješ, Božo, Robotiziran montažni sistem kot sodelujoča večdelna organizacija., Strojniški vestnik - Journal of Mechanical Engineering. **49** (2003) , 1; 52-62.
11. Kunica, Zoran; Vranješ, Božo; Hrman, Miljenko, Nekaj novih algoritmov za računalniško podprto načrtovanje montaže., Strojniški vestnik - Journal of Mechanical Engineering. 49 (2003) , 1; 41-51.
12. Jerbić, Bojan; Hrman, Miljenko; Vranješ, Božo, Intelligent robotic assembly by active vision system integrated with CAD, 7th International Research/Expert conference "Trends in the development of machinery and associated technology" TMT2003 Proceedings, Vivancos, Joan V.; Puerta,(ur.), Lloret de Mar, 2003., 321-324.
13. Kunica, Zoran; Vranješ, Božo; Tomić, Ivona, Development of a Design Procedure for Automatic Assembly System, The Proceedings of the 5th IEEE International Symposium on Assembly and Task Planning, ISBN 0-7803-7770-2-. Besançon : IEEE, 2003. 295-300.

14. Zorc, Davor; Kunica, Zoran; Vranješ, Božo, Integration of control systems of automatic assembly cell and robots as transactional analysis issue, Annals of DAAAM for 2003 & Proceedings of the 14th International DAAAM Symposium, ISSN 1726-9679 ISBN 3-901509-34-8, Katalinic, Branko (ur.), Vienna : DAAAM International, Vienna, Austria, 2003. 515-516.
15. Kunica, Zoran; Vranješ, Božo; Zorc, Davor; Jerbić, Bojan, A Framework for Laboratory Modelling of Intelligent Production Processes, Annals of DAAAM for 2004 & Proc. of the 15th International DAAAM Symposium, Katalinic, Branko (ur.), Vienna : DAAAM International, 2004.

Lecturer data

Name, Surname	**Ph.D. Zoran Kunica, Assistant Professor**
E-mail address	zoran.kunica@fsb.hr
Course	**(2723) DISASSEMBLY**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb

Curriculum vitae

Date and place of birth: 8th May 1963, Belgrade, Serbia; Education and qualifications:

Finished primary and secondary school (Mathematical-Informatical Education Center) in Zagreb. From the Faculty of Mechanical Engineering and Naval Architecture, (FAMENA) University of Zagreb, received the following degrees in mechanical engineering: B.Sc. degree in 1988, M.Sc. degree in 1992 (thesis: Generation of functional structure of automatic assembly systems), Ph.D. degree in October 1996 (thesis: Contribution to Plan Generation of Automatic Assembly).

Since 1988 the employee of FAMENA (Division for manufacturing and assembly system planning), carrying out scientific, education and projects-for-industry tasks, helding the following positions: postgraduate student - trainee 1988 - 1993, assistant 1994 - 1997, senior assistant 1997 – 2000, assistant professor from 2000 till now.

The scope of his research interests includes manufacturing and assembly system planning, and development of CA planning tools. In the field of assembly system planning, he especially explores the issue of plan generation for automatic assembly. He also works in the field of packaging.

Published more than 70 scientific and expert publications in Croatia and abroad.

At FME, he has been teaching courses on graduate and postgraduate studies. The subjects are: Planning of Production Systems, Assembly System Planning, Automatic Assembly, Intelligent Assembly Systems, Packaging Automation, etc.

Married and the father of the thrree children.

Date of last election 11.07.2000.

Referent publications of lecturer

1. Z. Kunica (1992). *Generiranje funkcionalne strukture automatskih montažnih sistema*, Magistarski rad, Fakultet strojarstva i brodogradnje Sveučilišta u Zagrebu, Zagreb.
2. Z. Kunica (1996). *Doprinos generiranju planova automatske montaže*, Disertacija, Sveučilište u Zagrebu, Zagreb.

List of papers in last 5 years

1. B. Vranješ; B. Jerbić; Z. Kunica (2002). *Projektiranje proizvodnih sustava*, *Inženjerski priručnik*, Svezak IV. Organizacija proizvodnje, Školska knjiga, Zagreb.
2. Z. Kunica; B. Vranješ (1999). *Towards automatic generation of plans for automatic assembly*, International Journal of Production Research, 37, 8, 1817-1836. (5 ili 6 nevlastitih citata prema SCOPUS bazi, 8. rujna 2004.)
3. Z. Kunica; B. Vranješ; M. Hrman (2003). *Some New Algorithms for CA Assembly Planning*, Strojniški vestnik - Journal of Mechanical Engineering, 49, 1, 41-51.
4. Z. Kunica; B. Vranješ; D. Zorc (2001). *Generic Approach to Assembly Process Modeling*, Proceedings of 2nd International Scientific Conference "Business Systems Management – UPS 2001", ISBN 3-901509-26-7, Mostar, 141-144.
5. Z. Kunica; B. Vranješ; D. Zorc (2001). *A Form and Growth of and Automatic Assembly System*, Annals of DAAAM for 2001 & Proceedings of the 12th International DAAAM Symposium "Intelligent Manufacturing & Automation: Focus on Precision Engineering", ISBN 3-901509-19-4, Jena, 267-268, DAAAM International Vienna.

6. Z. Kunica; B. Vranješ; M. Hrman (2002). *Development of a System for Concurrent Engineering Assembly Plan Generation*, Proceedings of Third International ICSC-NAISO World Manufacturing Congress, ISBN 3-906454-28-2, Rochester, New York, ICSC-NAISO.
7. Z. Kunica; B. Vranješ; G. Nikolić; I. Tomić (2002). *On Design Procedure of Automatic Assembly System*, Annals of DAAAM for 2002 & Proceedings of the 13th International DAAAM Symposium, ISBN 3-901509-29-1, Vienna, 299-300, DAAAM International Vienna.
8. Z. Kunica; B. Vranješ; I. Tomić (2003). *Development of a Design Procedure for Automatic Assembly System*, Proceedings of the 5th IEEE International Symposium on Assembly and Task Planning, ISBN 0-7803-7770-2, Besançon, 295-300.
9. Z. Kunica (2000). *Oblikovanje proizvoda za sklapanje*, Interni prijevod knjige G. Boothroyda i P. Dewhursta "Product Design for Assembly", Boothroyd Dewhurst, Inc., Wakefield, 1991; Zagreb.
10. Z. Kunica; B. Vranješ; D. Zorc; B. Jerbić (2004). *A Framework for Laboratory Modelling of Intelligent Production Processes*, Annals of DAAAM for 2004 & Proceedings of the 15th International DAAAM Symposium "Intelligent Manufacturing & Automation: Globalisation - Technology - Men - Nature", Beč, DAAAM International Vienna.
11. Z. Kunica; B. Vranješ; B. Jerbić (2004). *Development of the Laboratory for Intelligent Production Systems*, 2004 ASME International Mechanical Engineering Congress and RD&D Expo, Anaheim, Sjedinjene Američke Države.

Lecturer data

Name, Surname	**Ph.D. Krešimir Šega, Senior Scientist**
E-mail address	ksega@imi.hr
Course	**(2724) AEROSOLS**
Institution	Institute for Medical Research and Occupational Health, Zagreb

Curriculum vitae

Born in Zagreb, 27 December 1951. Citizenship: Republic of Croatia.Nationality: Croatian. Married, two children. Foreign languages: English, French Afiliation: Institute for Medical Research and Occupational Health since 1 March 1977,
Education and academic degrees:
-Bachelor`s degree in physics at University of Zagreb (1977)
-Postgraduate study of Health ecology at University of Zagreb (1977/78)
-Master´s degree in1981
-Schoool year 1981/82 at Particle Technology laboratory, Department of Mechanical Engineering, University of Minnesota
-PhD in 1993 at Medical School, University of Zagreb
Participation in projects:
Human Exposure to Carbon Monoxide and Suspended Particulate Matter in Zagreb, Yugoslavia (WHO EFP 82.33)
Onečišćenje zraka prostorija - izvor izloženosti ljudi (Indoor Air Pollution as a Relevant Factor in Hzman Exposure) (EPA PN 573), final report, IMI Zagreb 1989
Exposure monitoring of NO2, An international pilot study within the WHO Human Exposure Assessment Location (HEAL) Programme, WHO/UNEP 1990
Onečišćenje vanjske i unutrašnje atmosfere i zdravstveni učinci (Ambient and Indoor Air Pollution and Health Effects), Project 3.01-135
Ocjena ukupne izloženosti ljudi onečišćenju u okolini (Total human exposure assessment) Project 3.01-131 (1991-93)
International coordinator of "International nitrogen dioxide exposure study", Harvard School of Public Health (1996)
National cordinator of RER8009 "Air Pollution Monitoring in the Mediterranean Region" (2005 -)
Principal investigator of national projects
Air pollution exposure and risk assessment, Project 00220202 (1998 - 2002)
Air pollution - exposure and health endpoints assessment, Project 0022002 (2002 -)
Principal investigator of international projects
IMI-EPA JFP 869 "Exposure to particles and particle associated pollutants (1989-92)
IMI-EPA JFP 240 "Air Pollutant Exposure Distributions and Their Evaluation With Respect to the Proposed Limit"(1995-98)

Date of last election 13.02.2003.

Referent publications of lecturer

1. Fugaš Mirka, Šega Krešimir, Šišović Anica. Study of personal exposure to airborne respirableparticles and carbon monoxide. Environmental Monitoring and Assessment 1982; 2: 157-170.
2. Šega Krešimir, Fugaš Mirka. Seasonal and Spatial Differences in Mass Concentration Levels and Particle Size Distribution of Aerosols over an Urban Area. Atmospheric Environment 1984; 18: 2433-2437.
3. Liu Benjamin Y H, Šega Krešimir, Rubow Keneth L, Lenhart S W, Myres W R. In-Mask Aerosol Sampling for Powered Air Purifying Respirators. American Industrial Hygiene Association Journal 1984; 45: 278-283.
4. Šega Krešimir, Fugaš Mirka, Kalinić Nataša, Šišović Anica. Indoor-outdoor Relationships for

Respirable Particles, Total Suspended Particulate Matter and Smoke Concentrations in Modern Office Buildings. Environment International 1986; 12: 71-74.
5. Šega Krešimir, Hršak Janko, Čačković Mirjana, Bešlić Ivan. PM10 and PM2.5 aerosol fractions in Zagreb air. Journal of Aerosol Science 2000; 31 Suppl. 1: 528-529.
6. Hršak Janko, Šišović Anica, Škrbec Alen, Šega Krešimir. Seasonal differences in the levels of suspended particulate matter and heavy metals in the vicinity of a waste dump. Atmospheric Environment 2000; 35: 3543-3546.
7. Čačković Mirjana, Šega Krešimir, Vađić Vladimira, Bešlić Ivan, Šoljić Zvonimir. Seasonal Distributions of Acid Components in PM2.5 Fraction of Airborne Particles in Zagreb Air.Bulletin of Environmental Contamination and Toxicology 2001; 67: 704-711.

List of papers in last 5 years

1. Vađić Vladimira, Hršak Janko, Kalinić Nataša, Čačković Mirjana, Šega Krešimir. Seasonal differences in the levels of gaseous air pollutants in the vicinity of a waste dump. Environ Monitoring and Assessment 2000; 65: 147-153.
2. Šega Krešimir, Hršak Janko, Čačković Mirjana, Bešlić Ivan. PM10 and PM2.5 aerosol fractions in Zagreb air. Journal of Aerosol Science 2000; 31 Suppl. 1: 528-529.
3. Hršak Janko, Šišović Anica, Škrbec Alen, Šega Krešimir. Seasonal differences in the levels of suspended particulate matter and heavy metals in the vicinity of a waste dump. Atmospheric Environment 2000; 35: 3543-3546.
4. Čačković Mirjana, Šega Krešimir, Vađić Vladimira, Bešlić Ivan, Šoljić Zvonimir. Seasonal Distributions of Acid Components in PM2.5 Fraction of Airborne Particles in Zagreb Air. Bulletin of Environmental Contamination and Toxicology 2001; 67: 704-711.
5. Hršak Janko, Škrbec Alen, Balagović Ivica, Šega, Krešimir. Thallium Content in Zagreb Air. Bulletin of Environmental Contamination and Toxicology. 2003 ; 71: 131-134
6. Kos Ankica, Beljo-Lučić Ružica, Šega Krešimir, Rapp A.O. Influence of woodworking machine cutting parameters on the surrounding air dustiness. Holz als Roh- und Werkstoff. 62 (2004) , 3; 169-176
7. Puntarić Dinko, Kos Ankica, Šmit Zdenko, Zečić Željko, Šega Krešimir, Beljo-Lučić Ružica, Horvat Dubravko and Bošnir Jasna. Wood dust exposure in wood industry and forestry. Coll. Antropol. 2005; 29: 1-8
8. Hršak Janko, Šega Krešimir, Balagović Ivica. Lead, manganese and cadmium content i PM10 and PM2.5 particle fractions-a pilot study. Arhiv za higijenu rada i toksikologiju 2000; 51: 243-247.
9. Čačković Mirjana, Vađić Vladimira, Šega Krešimir. Sulphates, nitrates and chlorides in particle fractions of different size. Arhiv za higijenu rada i toksikologiju 2000; 51: 193-198.
10. Kos Ankica, Horvat Dubravko, Šega Krešimir. The combined machine´s short work breaks as quality indicators of air conveyors work. Drvna industrija 2000; 51: 69-75.
11. Šega, Krešimir. Procjena utjecaja onečišćenja zraka na zdravlje ljudi u europskoj regiji. Gospodarstvo i okoliš 2001; 9: 39-42.
12. Bešlić Ivan, Šega Krešimir. Gravimetrijsko određivanje koncentracija lebdećih čestica - zahtjevi točnosti mjernih parametara. Gospodarstvo i okoliš. 2002; 55: 130-131.
13. Kos Ankica, Beljo-Lučić Ružica, Horvat Dubravko, Šega Krešimir, Bešlić Ivan. Utjecajni čimbenici na zaprašenost u drvoprerađivačkim pogonima. Drvna industrija. 2002; 53: 131-140.
14. Marović Gordana, Senčar Jasminka, Šega Krešimir, Bešlić Ivan. Lebdeće čestice - doprinos ukupnoj beta aktivnosti zraka i brzini ekspozicijske doze. Gospodarstvo i okoliš. 2002; 55: 134-136.
15. Bešlić Ivan, Šega Krešimir, Bencetić Klaić Zvjezdana. Utjecaj tipova vremena na koncentracije lebdećih čestica. Gospodarstvo i okoliš. 2004; 12: 587-589.
16. Čačković Mirjana, Šega Krešimir, Vađić Vladimira, Hršak Janko, Bešlić Ivan, Šoljić Zvonimir.Olovo, mangan, kadmij, kloridi, nitrati i sulfati u PM2.5 frakciji lebdećih čestica u zraku Zagreba. Gospodarstvo i okoliš. 2004; 12: 583-586.
17. Marović Gordana, Senčar Jasminka, Šega Krešimir, Bešlić Ivan. Ukupna beta aktivnost u zraku i oborini u odnosu na koncentraciju lebdećih čestica. Gospodarstvo i okoliš. 2004; 12: 594-596.
18. Šega, Krešimir. Lebdeće čestice (Aerosoli). Gospodarstvo i okoliš. 2004; 12: 11-16.

19. Šišović Anica, Vađić Željka, Šega Krešimir, Bešlić Ivan, Vađić Vladimira. Usporedba masenih koncentracija PAU mjerenih u različitim veličinama lebdećih čestica. Gospodarstvo i okoliš. 2004; 12: 590-593.

Lecturer data

Name, Surname	**Ph.D. Dubravka Hršak**
E-mail address	hrsak@rudjer.irb.hr
Course	**(2725) BIOTRANSFORMATION PROCESSES AND ENVIRONMENTAL POLLUTION**
Institution	Ruđer Bošković Institute, Zagreb

Curriculum vitae

Born in 1941 in Slavonski Brod, Croatia. In 1965 she graduated at the Faculty of Technology, University of Zagreb. At the same faculty she also obtained her MSc in Biotechnology (1973) and PhD in Chemical Technology (1978) and was employed as research assistant in the Laboratory for Industrial Microbiology. From 1967 to 1982 she was employed as research associate at the Research Institute of the Detergent Industry «Saponia», Osijek. Since 1982 she has been employed at the Center for Marine and Environmental Research of the Ruđer Bošković Institute (present position senior research associate). Major topics of her scientific research work are: a) kinetics and mechanism of xenobiotics transformation in natural and waste waters, and b) isolation, selection and characterization of mixed heterotrophic and methanotrophic-heterotrophic bacterial cultures for xenobiotics degradation. She published 48 scientific papers and held over 50 presentations at scientific and professional meetings. She participated in undergraduate and graduate studies at the Faculty of Food, Technology and Biotechnology, University of Zagreb: undergraduate course on Industrial Microbiology (1965-1977) and graduate course on Ecoengineering (1977-1982). Since 1985 she has been holding courses at graduate study in Oceanology at the Faculty of Natural Sciences, University of Zagreb.

Date of last election

Referent publications of lecturer

1. Hršak, D., Bošnjak,M., Johanides,V.: **Enrichment of linear alkylbenzenesulphonate (LAS) degrading bacteria in continuous culture**, J. Appl. Bacteriol., **53,**413-422,1982.
2. Terzić,S., Hršak,D., Ahel,M.: **Enrichment and isolation of linear alkylbenzenesulphonate degrading bacteria from estuarine and coastal water**, Mar. Poll. Bull., **24**, 199-204, 1992.
3. Hršak, D. Grbić-Galić, D.: **Biodegradation of linear alkylbenzenesulphonates (LAS) by mixed methanotrophic-heterotrophic cultures**, J. Appl. Bacteriol., **78,** 487-494, 1995.
4. Hršak,D.: **Cometabolic transformation of linear alkylbenzene-sulphonates by methanotrophs**, Wat. Res., **30**, 3092-3098, 1996.
5. Hršak, D., Begonja, A.: **Growth characteristics and metabolic activities of the methanotrophic-heterotrophic groundwater community**, J. Appl. Microbiol., **85,** 448-456, 1998.
6. Hršak, D., Begonja, A.: **Possible interactions within a methanotrophic-heterotrophic groundwater community able to transform linear alkylbenzenesulphonates**. Appl. Environ. Microbiol., **60**,4433-4439, 2000.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Boris Muvrin, Associate Professor**
E-mail address	bmurvin@rgn.hr
Course	**(2726) ENVIRONMENTAL PROTECTION IN MINERAL RESOURCES EXPLOITATION**
Institution	Faculty of Mining, Geology and Petroleum Engineering, Zagreb

Curriculum vitae

He was born in Zagreb in 1943. He has finished high school in Zagreb. Graduated as petroleum engineer on Faculty of Mining, Geology and Petroleum Engineering. In 1972 started working as a teaching assistant on Faculty of Mining, Geology and Petroleum Engineering, giving lectures in "Oil and Gas Transport". Got his Masters degree in Ecological engineering on Technological Faculty in Zagreb. In 1993 got his Ph. D. degree on Faculty of Mining, Geology and Petroleum Engineering. At the moment his is giving lectures in "Automation" and "Safety techniques and Environmental Protection". He has published 20 scientific papers and had taken part in several domestic and international congresses.

Date of last election

Referent publications of lecturer

1. Muvrin, B., Benčić, Lj.: **Mehanizam širenja ugljikovodika (nafte) u tlu**, Nafta, **43**(1), 39-49, 1992.
2. Muvrin, B., Salopek, B.: **Mechanical methods of waste water purification**, Nafta, **43**(7), 349-362, 1992.
3. Murvin,B., Hudec,M.: **Matematski model širenja ograničene količine kapljevine**, Nafta, **45**(12), 609-616, 1994.
4. Muvrin, B., Kavedžija, B.: **Onečišćenje tla ugljikovodicima, određivanje posljedice i sanacija.** III. Međunarodni simp. "Gospodarenje otpadom Zagreb '94", Zbornik radova, Zagreb, 284-295, 1994.
5. Muvrin, B., Kavedžija, B., Capik, M.: **A new method of estimating the soil pollution in small oil fields**, Conference and technical exibition on "Modern exploration and improved oil and gas recovery methods, Krakow, Book of Abstract, E-10, 1995.
6. Muvrin, B., Lukić, M., and al.: **Air protection in Croatia,** Coastal Environment 98, environmental problems in coastal regions, Cancun, Mexico,8.-10. September 1998.
7. Muvrin, B., Juranić, T.: **Kemija atmosfere,** 2. Međunarodni naftnogeologijski znanstveni skup, Zbornik radova, HAZU, Znanstveno vijeće za naftu, Zagreb, 21. travanj 1999.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Rajka Budin, Full Professor**
E-mail address	rbudin@marie.fkit.hr
Course	**(2727) ENERGY AND ENVIRONMENT**
Institution	Faculty of Chemical Engineering and Technology, Zagreb

Curriculum vitae

Rajka Budin, born in Zagreb, holds a B.Sc., M:D. and Ph.D. in chemical engineering from Faculty of chemical engineering and technology, University of Zagreb. She works at the same Faculty , Department of thermodynamics and energy since 1962 as assistant, assistant professor and presently full professor in permanently function since1997. She teached several courses on undergraduate and postgraduate courses In 1979/80 she joint the Department OD Mechanical and Industrial Engineering at the University OD Illinois Urban-Champaign as an assistant professor. Dr. Budin has published numerous articles in the areas of energy and power especially in energy savings strategies.
Dr.Rajka Budin was awarded the Fran Bošnjaković, Hrvoje Požar and. J.J.Strossmayer award for research on development of the energy management.

Date of last election 16.09.1997.

Referent publications of lecturer

1. R.Budin,A.Mihelić-Bogdanić, **Application of solar energy in drying process**, Energ. Convers. Mgmt. Vol.35,No2, 1994 (97-103).
2. R.Budin,A.Mihelić-Bogdanić,V.Filipan, **Energy conservation using recuperative drying process**, Energ. Convers.Mgmt.Vol.37,No9, 1996 (1393-1399)
3. R.Budin,A.Mihelić-Bogdanić,**Heat recovery in polyester production**,Applied Thermal Engineering, Vol.17, No7, 1997. (661-665).
4. R.Budin,A.Mihelić-Bogdanić,V.Filipan, **Solarized evaporation process**, Energ. Convers. Mgmt.Vol.39, No11, 1998 (1169-1175).
5. R.Budin,I.Sutlović, A.Mihelić-Bogdanić,F.Briški, **Smanjenje toplinskog i kemijskog opterećenja okoliša u procesu proizvodnje HDPE**, Sigurnost, Vol.45,No 1 (2003) 1-11.
6. R.Budin,I.Sutlović, A.Mihelić-Bogdanić, V. Filipan, **Energy efficient bricks production, RIO 5**, Proc. of World Climate & Energy Event, 2005, Rio de Janeiro, 123-128

List of papers in last 5 years

1. R. Budin, A.Mihelić-Bogdanić, I.Sutlović,V.Filipan, **Kiln Hot Air Recovery**, Proc.of the Int. Cong."Energy and Environment"2000, 17th Scientific Conf. on Energy and Environment, Opatija 2000, (287-290).
2. I. Sutlović, A.Mihelić-Bogdanić, R.Budin, **Energy Analysis of Process in Garment Industry**, Annals of DAAAM for 2000& Proc.of the 11th Intern. DAAAM Symposium, Opatija 2000 (453-454).
3. A. Mihelić-Bogdanić, R.Budin, I.Sutlović, **Solar Energy System and Waste Heat Recovery in Industrial Process**, Proc.of the World Renewable energy Con.VI (WREC 2000) Brighton,(1094-1097).
4. V. Filipan, R.Budin, A.Mihelić-Bogdanić, **Improvements of Dyeing Process by Heat Recovery**, Proc. of the World Renewable Energy Cong. VI (WREC 2000) Brighton 2000,(2626-2629).
5. R. Budin, I.Sutlović, A.Mihelić-Bogdanić, **Kiln Flue Gas Heat Recovery**, Proc of the 5th Inter. Conf. On New Energy Systems and Conversions, Shanghai 2001,(375-377).
6. I. Sutlović, R.Budin, A.Mihelić-Bogdanić, V.Filipan, **Energy Savings in of HDPE Production**, Proc. of the 16th International Symp. of Heating, Refrigerating, and Air Cond., Interklima Zagreb, 2001., (338-342).

7. I. Sutlović, A.Mihelić-Bogdanić, R.Budin, **Waste Heat Utilization in Garment Industry**, Annals of DAAAM for 2001&Proc.of the 12th Intern. DAAAM Symposium,Jena 2001,(469-470).
8. R.Budin,A.Mihelić-Bogdanić, Udžbenik: **Osnove tehničke termodinamike**, II.dopunjeno i izmijenjeno izdanje, Školska knjiga Zagreb,2002.
9. A. Mihelić-Bogdanić, R.Budin, I.Sutlović, **The Effectiveness Exhaust Stack Energy Recovery**, DAAAM International Scientific Book 2002,Vienna 2002,Chapt.39,pp379-384.
10. A. Mihelić-Bogdanić, R.Budin, I.Sutlović, **Solar Application in Thermoplastics Production**, Proc of theWorld Energy Cong.. Köln 2002, 3881/1-5.
11. A. Mihelić-Bogdanić, R.Budin, I.Sutlović, **Improved Efficiency in Textile Industry**, 1st. Int.Textile,Clothing and Design Conf., Book of Proc. Dubrovnik 2002, (714-718).
12. A.Mihelić-Bogdanić, R.Budin, I.Sutlović, **Condensate and Flue Gases Heat Recovery**, Proc of the Int.Cong., Energy and Environment.2002,18th Scientific Conf. on Energy and Environment, Opatija 2002, Vol.II (19-24).
13. A.Mihelić-Bogdanić, R.Budin, **Heat Recovery in Thermoplastic Production**, Energy Convers. Mgmt.,43(8) (2002) 1079-1089.
14. V.Filipan, R.Budin, A.Mihelić-Bogdanić, **The Possibilities of Energy Saving in Textile Industry**, 1st. Int.Textile, Clothing and Design Conf., Book of Proc.,Dubrovnik 2002, (682-687).
15. A.Mihelić-Bogdanić, R.Budin, **The Application of Heat Recovery in Low Temperature Stirling Engine**, Proc.of the 11th ISEC, Rome 2003, (285-288).
16. R.Budin, I.Sutlović, A.Mihelić-Bogdanić, F.Briški, **Smanjenje toplinskog i kemijskog opterećenja okoliša u procesu proizvodnje HDPE**, Sigurnost, 45(1) (2003) 1-11.
17. V.Filipan, R.Budin, I.Sutlović, A.Mihelić-Bogdanić, **The Possibilities of Condensate Reusing in Finishing Process**, 2st. Int. Textile, Clothing and Design Conf., Book of Proc.,Dubrovnik 2004,(992-997).
18. A.Mihelić-Bogdanić, R.Budin, I.Sutlović, V.Filipan, **Efficient Use of Energy in Selected Industry Plants**, 2st. Int. Textile, Clothing and Design Conf., Book of Proc.,Dubrovnik 2004,(1002-1007).

Lecturer data

Name, Surname	**Ph.D. Borivoj Modlic, Full Profesor**
E-mail address	Borivoj.modlic@fer.hr
Course	**(2728) ELECTROMAGNETIC FIELDS IN THE ENVIRONMENT**
Institution	Faculty of Electrical Engineering and Computing, Zagreb

Curriculum vitae

Born March 18th 1950. Dr.sc. Borivoj Modlic is professor at the Department of Radiocommunications and Microwave Engineering, Faculty of Electrical Engineering and Computing, University of Zagreb. His science research is in the area of communication systems, electromagnetic field measurements, and biological effects of electromagnetic fields. He was a researcher of the national scientific project 3-01-276 "Biomedical effects of electromagnetic fields". Since 1998 he has been the head of the national scientific project 036018 "Electromagnetic compatibility – biomedical effects". He was also involved in the international scientific project COST 244 "Biomedical Effects of Electromagnetic Fields", together with the group of Croatian scientists from the field. He is the author of six university textbooks and over 80 scientific papers published in national scientific journals and international and national scientific symposia.

Date of last election

Referent publications of lecturer

1. Modlić, B., Modlić, I.: **Modulacije i modulatori**, Školska knjiga, Zagreb, 1995.
2. Modlić, B., Vujević,D., Koren, Z.T.: **Elektromagnetic fields in student laboratories**, in XXVth General assembly of the international union of radio science, Lille, France, 756, 1996.
3. Regvart, B., Modlić, B., Koren, Z.T.: **Electromagnetic field exposure of technical staff from telecom power and related health hazards**, Proceedings of 18th International telecommunications energy conference, INTELEC 96, Boston, 160-167, 1996.
4. Modlić,B., Regvart, B., Nagy, R.: **Is there hazardous elektromagnetic radiation from telecom power systems-some practical experiences**, Proceedings of second international telecommunications energy special conference, TELESCON 97, Budapest, 447-454, 1997.
5. Pavić, P., Šarolić, A., Modlic, B.: **Harmful electromagnetic fields on ships - Standards and worst case estimation**,Proceedings of the 40th ELMAR International Symposium, Zadar : ELMAR, 75-79,1998.
6. Modlic, B., Malarić, K.,Regvart, B.,Bartolić, J., Kviz, B.: **Set-up for testing telecom power unit immunity to electromagnetic fields**, TELESCON 2000, Proceedings, Dresden: VDE VERLAG, 333-337, 2000.
7. Malarić, K., Bartolić, J., Modlic, B.: **Instrumentation for electromagnetic compatibility measurements**, Measurement 2001 Proceedings 3rd International Conference on Measurement, Smolenice, Slovačka : VEDA, 73-76, 2001.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Vladivoj Valković, Full Professor**
E-mail address	valkovic@rudjer.irb.hr
Course	**(2729) RADIOACTIVITY IN THE ENVIRONMENT**
Institution	Ruđer Bošković Institute, Zagreb

Curriculum vitae

Born: 19.07.1939. Draga Baska, Island Krk, Croatia.
Education: University of Zagreb, Croatia, 1961-B.A. in Physics, 1963-M.A. in Nuclear Physics, 1964-Ph.D. in Physics. Thesis title: "Nuclear Reactions with 14.4 MeV".
Languages. English, Italian.
Employment record: Institute "Ruđer Bošković", Department of Experimental Physics – 1998 – Scientific Advisor; Analysis and Control Technologies – 1996-1998 – Founder and Director; International Atomic Energy agency Vienna, Austria – 1989-1996 – Department of Research and Isotopes.
Institute "Ruđer Bošković", Zagreb, Croatia
1961-1965 – Research assistant, 1967-1979 – Research associate, 1977-1994 Professor of Physics (scientific advisor).
T.W.Bonner Nuclear Laboratory, Physics Department Rice University, Houston, Texas
1965-1967 – Research associate, 1970-1971 – Assistant professor of physics, 1971-1973 – Associate profesor of physics, 1975-1977 – Professor of physics.
Membership in learned societis: American Physical Society, European Physical Society, Physical Society of Croatia, Society for Environmental Geochemistry and Health, International Society for the Study of the Origin of Life, International Committee for Radionuclide Metrology.
IAEA expert missions: Costa Rica (1977,1984,1986); Ghana (1980,1987); Albania (1980); Jamaica (1982, 1983); Thailand (1982); Singapore (1984); China (1985, 1993); Russia (1990, 1991); Ukraine (1990,91,95,96); Byelorussia (1990,91,95); Japan (1992,93); Italy (1993,94); Hungary (1993,95); Syria (1996); Jordan (1991); Iran (1991,92,93,95); U.A.E. (1994); Saudi Arabia (1993,94,95); Mururoa, French Polynesia (1996); South Africa (1996); Greece (1994,95,96); Germany (1991,93,95); Poland (1994); Croatia (1994,95,96); Slovenia (1995,96); Mexico (1996); Spain (1995).

Date of last election

Referent publications of lecturer

1. Valković,O., Jaksić,M., Fazinić,S., Valković,V., Moschini,G., Menapace,E: **Quality control of PIXE and PIGE nuclear analytical techniques in geological and environmental applications**, Nucl. Instr. Meth. in Phys. Res., **B99**, 372-375, 1995.
2. Markowicz,A., Haselberger,N., Dargie,M., Tajani,A., Tchantchane,A., Valković,V., Danesi,P.R. **Application of X-Ray fluorescence spectrometry in assessment of environmental pollution**, J. Radioanal. and Nucl. Chemistry ,1996.
3. Limić,N., Valković,V.: **A combined experimental-modeling method for the detection and analysis of pollution in the coastal zone**, Nucl. Instr. in Phys. Res., **B109/110**, 415, 1996.
4. Dargie,M., Markowicz,A., Tajani,A., Valković,V.: **Optimized sample preparation procedures for the analysis of solid materials by total-reflection XRF fresenius,** J. Anal. Chem., **357**, 589, 1997.
5. Hoornaert,S., Treiger,B., Valković,V., van Grieken,R.: **Electron probe X-Ray microanalysis of homogeneity of candidate reference materials at the nanogram level**, Mikrochimia Acta, **128**, 207-213,1998.
6. Book: RADIOACTIVITY in the ENVIRONMENT, Elsevier, 2000.

List of papers in last 5 years

1. V. Valković:Determination of Radionuclides in Environmental Samples Sample Handling and Trace Analysis of Pollutants: Techniques, Applications and Quality Assurance (Ed. D.Barcelo), Elsevier (2000) pp. 458-532
2. N. Horvatinčić, M. Groening, N. Mikulić, J. Obhođaš, V. Valković: Investigation of Groundwater Infiltration to Seawater in Punat Bay, Croatia, by Measurements of Conductivity and Stable Isotopes in Water *Acta carsologica – Krasoslovni zbornik* **29** (2000) 93-105
3. L. Grubišić, N. Limić, V. Valković: On Simulations of Random Fields on Bounded Domains *Proc. Applied mathematics and Computation Conf.*, Dubrovnik 13-18.09.1999 (Eds.M. Rogina, V. Hari, N. Limić, Z. Tutek) PMF, Zagreb (2001) pp. 233-243
4. 4. V. Oreščanin, K. Nađ, V. Valković, N. Mikulić, O. Meštrovć: Red mud and waste base: Raw materials for Coagulant Production. *J. Trace and Microprobe Techniques* **19** (2001), 3; 419-428.
5. V. Valković, V. Oreščanin, N. Mikulić, J. Obhodaš: Geochemical map of island Krk in Adiatic sea: elements determined by XRF *J. Trace and Microprobe Techniques* **19** (2001), (3); 393-408.
6. V. Oreščanin, J. Franekić-Čolić, K. Durgo, V. Valković: Investigation of Mutagenic Effect of Metals in Plomin Bay Sediments by Modified Preincubation Ames Assay *J. Trace and Microprobe Techniques* **20**(1) (2002) 69-77.
7. V. Oreščanin, N. Mikulić, J. Obhodaš, K. Nađ, V. Valković: Distribution of trace elements in the coastal sea sediments: Punat bay in the Northern Adiatic *J. Trace and Microprobe Techniques* **20**(2) (2002), 247-260
8. V.Oreščanin, D.Tibljaš, V.Valković: A study of coagulant production from red mud and its use for heavy metals removal *J. Trace and Microprobe Techniques* **20**(2) (2002), 233-245
9. V. Oreščanin, K. Durgo, J. Franekić-Čolić, K. Nađ, V. Valković: Physical, Chemical, and Genotoxic Properties of Waste Mud by-product of Waste Water Treatment *J. Trace and Microprobe Techniques* **21**(1) (2003) 123-132
10. V. Oreščanin, A. Katunar, A. Kutle, V. Valković: Heavy Metals in Soil, Grape and Wine *J. Trace and Microprobe Techniques* **21**(1) (2003) 171-180
11. V. Oreščanin, K. Nađ, L. Kukec, A. Gajski, D. Sudac, V. Valković: Trace element analysis of water and sediment before/after passing a waste water treatment plant *J. Trace and Microprobe Techniques* **21**(2) (2003) 325-334
12. V. Valković, V. Oreščanin, A. Kutle, J. Obhođaš: Elemental composition of the vegetation on the island Krk *J. Trace and Microprobe Techniques* **21**(3) (2003) 501 – 512
13. J. Obhođaš, D. Sudac, K. Nađ, V. Valković, G. Nebbia, G. Viesti: The Role of Soil in NBT Applications to Landmine Detection Problem CP680, *Application of Accelerators in Research and Industry: 17th Int. Conf.* (Ed.J.L. Duggan and I.L. Morgan), 2003, pp 895-899
14. A. Kutle, J. Obhođaš, V. Valković: Trace Elements Distribution in Geochemical Environment and the Health of the Local Population *Proc. 4th Int. Symp. on Trace Elements in Human: New Perspective*, Athens, Greece (Eds. S.Ermidou-Pollet and S.Pollet) 2003, pp. 973-986
15. A. Kutle, K. Nađ, J. Obhođaš, V. Oreščanin, V. Valković: Assessment of environmental condition in the waste disposal site of ex- aluminum plant near Obrovac in Croatia. *X-Ray Spectrometry* **33** (2004) 39-45.
16. A. Kutle, V. Oreščanin, J. Obhođaš, V. Valković: Trace element distribution in soils of the Island of Krk and its influence on the local population *J. Radioanal. Nucl. Chem.* **259** (2004) 271-276
17. J. Obhođaš, D. Sudac, K. Nađ, V. Valković, G. Nebbia, G. Viesti: The Soil Moisture and its Relevance to the Landmine Detection by Neutron Backscattering Technique *Nucl. Instr. and Meth. B* **213** (2004) 445-451
18. S. Blagus, D. Sudac, V. Valković: Hidden substances identification by detection of fast neutron induced γ rays using associated α particle techique *Nucl. Instr. and Meth. B* **213** (2004) 434-438
19. V. Valković, S. Blagus, D. Sudac, K. Nađ, D. Matika: Inspection of Shipping Containers for Threat Materials *Radiat. Phys. Chem.* **71** (2004) 897-898
20. S. Pesente, G. Nebbia, M. Lunardon, G. Viesti, D. Sudac, K. Nađ, S. Blagus and V. Valković: Detection of hidden explosives by using tagged neutron beams with sub- nanosecond time resolution *Nucl. Instr. and Meth. A* **531** (2004) 657-667.

21. V. Oreščanin, N. Kopjar, K. Durgo, V. Garaj Vrhovac, J. Franekić Colić, S. Ramić, K. Nađ, V. Valković: Toxicological characterization of the new water cleaning product and its waste by-product Journal of Environmental Science and Health; Part A-Toxic/Hazardous *Substances & Environmental Engineering*. *A***39** (2004) 1277-1290
22. D. Sudac, S. Blagus, V. Valković: Chemical composition identification using fast neutrons *Appl. Radiat. and Isotopes* **61/1** (2004) 73-79
23. G. Nebbia, S. Pesente, M. Lunardon, S. Moretto, G. Viesti, M. Cinausero, M. Barbui, E. Fioretto, V. Filippini, D. Sudac, K. Nad, S. Blagus, V. Valkovic V: Detection of hidden explosives in different scenarios with the use of nuclear probes *Nuclear Physics* ***A*** **752** (2005) 649C-658C

Lecturer data

Name, Surname	**Ph.D. Bojan Ivančević, Full Professor**
E-mail address	bojan.ivancevic@fer.hr
Course	**(2730) NOISE AND VIBRATION**
Institution	Faculty of Electrical Engineering and Computing, Zagreb

Curriculum vitae

Prof. dr. sc. B. Ivančević was born 1948 in Zagreb. 1967 he comleted secondary schooling on II High school. 1973 graduated on Electrotechnical faculty, on Radiocommunications. From 1974 worked in Frankfurt/M, in the firm Hartmann&Braun on the field of biomedical electronics and protection of human environment. 1978 began to work in Zagreb at the firm ATM as project engineer and since 1980 as assistent on Electrotechnical faculty in Zagreb on Institut of electroacoustics. He received the M.Sc.E.E. and Ph.D. degree from the Faculty of Electrical Engineering in 1985 and 1991 respectively. He was promoted to senior assistant (1991), assistant professor (1993), associate professor (1998) and in 2003 professor. He lectures several subjects (Digital audiotechnique since 1985, Ultrasonics and Psychoacoustic since 1996 and Electroacoustic since 2002). His scientific and professional activities have been in the fields of acoustics, electroacoustics, high power ultrasound and digital audiotechnique. He is author or co-author of 42 original scientific papers, 65 papers presented and published in the proceedings of scientific congresses, 2 books, 23 accepted acoustic projects and a large number of professional papers. He was leading large number of graduation thesis, 4 master-thesis and 4 dissertations. The most important activities in his scientific research and professional work are in the field of psychoacoustic, architectural acoustic, biomedical ultrasound and protection of noise and vibration. He is main researcher on 3 projects of Ministry of science. Professor Ivančević is member of several national and international professional societies, and establicher and president of Acoustic society of Croatia.

Date of last election 19.11.2003.

Referent publications of lecturer

1. Jambrošić, Kristian; Ivančević, Bojan: Influence of lead and lag differences on localization // Official publication of the Forum Acusticum Sevilla 2002 / Calvo-Manzano, Antonio ; Perez-Lopez, Antonio ; Santiago, Jose Salvador (ur.).Madrid : Sociedad Espanola De Acustica, 2002. PSY-02-008 (međunarodna recenzija, znanstveni rad).
2. Jambrošić, Kristian; Ivančević, Bojan:Acoustic modificiation of the "Tresnja" theatre // Proceedings of the First Congress of Alps Adria Acoustics Association / Čudina, Mirko (ur.).Ljubljana : Slovenian Acoustical Society, 2003. 215-220 (međunarodna recenzija, znanstveni rad).
3. Jambrošić, Kristian; Ivančević, Bojan; Sikora, Marjan: Acoustic properties of an old stone atrium used for concerts // Official publication of the Forum Acusticum Sevilla 2002 / Calvo-Manzano, Antonio ; Perez-Lopez, Antonio ; Santiago, Jose Salvador (ur.).Madrid : Sociedad Espanola De Acustica, 2002. RBA-02-017 (međunarodna recenzija, znanstveni rad).
4. Ivančević, Bojan; Domitrović, Hrvoje; Fajt, Siniša:The acoustical porperties of large studios // Proc. of Forum Acusticum. Berlin : , 2000. 1PAA_14 (međunarodna recenzija, znanstveni rad).
5. Jambrošić, Kristian; Ivančević, Bojan; Zorić, Igor: Determination of acoustical bridge side effects between double walls using a pulse method // Proceedings of the 7th International Congress on Sound and Vibration / Heller, Hanno (ur.). Auburn University : The International Institute of Acoustcs and Vibration, 2000. 1567-1574 (međunarodna recenzija, znanstveni rad).
6. Grubeša, Tomislav; Jauk, Sanja; Ivančević, Bojan: Simulation of virtual 3D auditory space with HRTF // Proceedings Elmar-2004 / Kos, Tomislav ; Grgić, Mislav (ur.).Zadar : ELMAR, 2004. 271-277 (međunarodna recenzija, znanstveni rad).
7. Jambrošić, Kristian; Ivančević, Bojan: Influence of lead and lag differences on localization // Official publication of the Forum Acusticum Sevilla 2002 / Calvo-Manzano, Antonio ; Perez-

Lopez, Antonio ; Santiago, Jose Salvador (ur.).Madrid : Sociedad Espanola De Acustica, 2002. PSY-02-008 (međunarodna recenzija, znanstveni rad).

8. Brkić, Irena; Jambrošić, Kristian; Ivančević, Bojan: Perception of Sound by Animals in the Ocean // Proceedings Elmar-2004 / Kos, Tomislav ; Grgić, Mislav (ur.). Zadar : ELMAR, 2004. 258-264 (međunarodna recenzija, znanstveni rad).

List of papers in last 5 years

1. Štimac, Alan; Ivančević, Bojan; Jambrošić, Kristian. Directivity pattern of neurosurgical endoscopic ultrasonic probes. // Ultrasonics. 40 (2002) , 1-8; 813-818 (članak, znanstveni rad).
2. Jambrošić, Kristian; Ivančević, Bojan; Zorić, Igor. Electroacoustic Measurements on Audio Coders. // AUTOMATIKA, Časopis za automatiku, mjerenje, elektroniku, računarstvo i komunikacije . 41 (2000.) , 1-2; 63-67 (prethodno priopćenje, znanstveni rad).
3. Štimac, Alan; Komeštik, Vladislav; Ivančević, Bojan. Sekvencijski ultrazvučni pretvarač za mjerače dubine za mala i srednje velika plovila. // AUTOMATIKA, Časopis za automatiku, mjerenje, elektroniku, računarstvo i komunikacije. 41 (2000) , 1-2; 57-61 (prethodno priopćenje, strucni rad).
4. Brkić, Irena; Jambrošić, Kristian; Ivančević, Bojan. Perception of Sound by Animals in the Ocean // Proceedings Elmar-2004 / Kos, Tomislav ; Grgić, Mislav (ur.). Zadar : ELMAR, 2004. 258-264 (međunarodna recenzija, znanstveni rad).
5. Grubeša, Tomislav; Jauk, Sanja; Ivančević, Bojan. Simulation of virtual 3D auditory space with HRTF // Proceedings Elmar-2004 / Kos, Tomislav ; Grgić, Mislav (ur.).Zadar : ELMAR, 2004. 271-277 (međunarodna recenzija, znanstveni rad).
6. Periša, Danijel; Ivančević, Bojan; Jambrošić, Kristian. Sound localization // Proceedings Elmar-2004 / Kos, Tomislav ; Grgić, Mislav (ur.). Zadar : ELMAR, 2004. 278-282 (međunarodna recenzija, znanstveni rad).
7. Petošić, Antonio; Ivančević, Bojan; Horvat, Marko.Modelling Ultrasound Fields With Linear Array Transducers // Proceedings ELMAR-2004 / Kos, Tomislav ; Grgić, Mislav (ur.). Zagreb : Croatian Society Electronics in Marine - ELMAR, 2004. 294-299 (međunarodna recenzija, znanstveni rad).
8. Petošić, Antonio; Ivančević, Bojan; Jambrošić, Kristian. Odziv 1-D niza ultrazvučih pretvarača u fokalnoj ravnini // MATEST 2004, KBR - Kompetentnost i sigurnost / Markučić, Damir (ur.). Zagreb : Hrvatsko društvo za kontrolu bez razaranja, 2004. 117-125 (međunarodna recenzija, znanstveni rad).
9. Grgesina, Davor; Ivančević, Bojan; Jambrošić, Kristian. Application of Digital Mixing Consoles for Multitrack Recording and Music Prouction // Proceedings of the First Congress of Alps Adria Acoustics Association / Čudina, Mirko (ur.). Ljubljana : Slovenian Acoustical Society, 2003. 227-232 (međunarodna recenzija, znanstveni rad).
10. Jambrošić, Kristian; Ivančević, Bojan. Acoustic modificiation of the "Tresnja" theatre // Proceedings of the First Congress of Alps Adria Acoustics Association / Čudina, Mirko (ur.). Ljubljana : Slovenian Acoustical Society, 2003. 215-220 (međunarodna recenzija, znanstveni rad).
11. Petošić, Antonio; Ivančević, Bojan; Jambrošić, Kristian. PVDF Transducers // Proceedings Elmar-2003 / Kos, Tomislav (ur.). Zagreb : Croatian Society Electronics in Marine, 2003. 275-280 (međunarodna recenzija, znanstveni rad).
12. Ivančević, Bojan; Jambrošić, Kristian; Maletić, Mladen. Characteristics of Reverberation Time Measuring Signals // Proceedings Elmar-2002 / Kos, Tomislav (ur.). Zagreb : Croatian Society Electronics in Marine - ELMAR, 2002. 88-93 (međunarodna recenzija, znanstveni rad).
13. Jambrošić, Kristian; Ivančević, Bojan. Influence of lead and lag differences on localization // Official publication of the Forum Acusticum Sevilla 2002 / Calvo-Manzano, Antonio ; Perez-Lopez, Antonio ; Santiago, Jose Salvador (ur.). Madrid : Sociedad Espanola De Acustica, 2002. PSY-02-008 (međunarodna recenzija, znanstveni rad).
14. Jambrošić, Kristian; Ivančević, Bojan; Sikora, Marjan. Acoustic properties of an old stone atrium used for concerts // Official publication of the Forum Acusticum Sevilla 2002 / Calvo-Manzano, Antonio ; Perez-Lopez, Antonio ; Santiago, Jose Salvador (ur.). Madrid : Sociedad Espanola De Acustica, 2002. RBA-02-017 (međunarodna recenzija, znanstveni rad).

15. Sikora, Marjan; Ivančević, Bojan; Jambrošić, Kristian. Use of Acoustic Simulation and Visualization for Revitalization of Ancient Buildings // Proceedings VIProCom-2002 / Grgić, Mislav (ur.). Zadar : Croatian Society Electronics in Marine, 2002. 121-125 (međunarodna recenzija, znanstveni rad).
16. Sikora, Marjan; Ivančević, Bojan; Jambrošić, Kristian.The simulation of propagation of ultrasound during in-vasive and noninvasive neurosurgical treatments // IFMBE Proceedings 2002 / Hutter, Helmut ; Krösl Peter (ur.).Vienna : Verein zur Veranstaltung des Eurpean Medical & Biological Engineering Conference EMBEC, 2002. II/1156-1157 (međunarodna recenzija, znanstveni rad).
17. Grgesina, Davor; Ivančević, Bojan; Jambrošić, Kristian. High Quality Audio Coding Characteristics with Applications in Modern Digital Broadcasting // Conference Proceedings ICECom 2001 / Bonefačić, Davor (ur.). Zagreb : KoREMA, 2001. 105-108 (međunarodna recenzija, znanstveni rad).
18. Ivančević, Bojan; Jambrošić, Kristian; Štimac, Alan. High Intensity Sound as a Method for Repelling Animals // Conference Proceedings ICECom 2001 / Bonefačić, Davor (ur.). Zagreb : KoREMA, 2001. 113-116 (međunarodna recenzija, znanstveni rad).
19. Ivančević, Bojan; Sikora, Marjan; Jambrošić, Kristian. Simulation of Certain Acoustic Properties of the "Knežev Dvor" in Dubrovnik // Conference Proceedings ICECom 2001 / Bonefačić, Davor (ur.). Zagreb : KoREMA, 2001. 101-104 (međunarodna recenzija, znanstveni rad).
20. Jambrošić, Kristian; Ivančević, Bojan; Štimac, Alan. The influence of ultrasound on animal irritation // Proceedings of 17th International Congress on Acoustics / Bettucci, Andrea (ur.).Rim : ICA, 2001. 6A.11.01 (međunarodna recenzija, nerazvrstan rad).
21. Jambrošić, Kristian; Ivančević, Bojan; Štimac, Alan. The Franssen effect in a multisignal environment // Proceedings of 17th International Congress on Acoustics / Bettucci, Andrea (ur.).Rim : ICA, 2001. 7P.32 (međunarodna recenzija, znanstveni rad).
22. Sikora, Marjan; Ivančević, Bojan; Jambrošić, Kristian. 3D Simulation of Ultrasound Propagation in Human Scull // Proceedings of the 43rd International Symposium "Elmar / Kos, Tomislav; Radanović, Božidar (ur.). Zadar : ELMAR, 2001. 174-178 (međunarodna recenzija, znanstveni rad).
23. Štimac, Alan; Ivančević, Bojan; Jambrošić, Kristian. Ultrasonic Atomisers for the Immunoprophylaxis of Poultry Diseases // Proceedings of 17th International Congress on Acoustics / Bettucci, Andrea (ur.). Rim : ICA, 2001. 7A.14.06 (međunarodna recenzija, znanstveni rad).
24. Štimac, Alan; Ivančević, Bojan; Jambrošić, Kristian. Characterization of Ultrasonic Homogenizers for Shipbuilding Industry // Proceedings of the 43rd International Symposium Electronics in Marine - ELMAR-2001 / Kos, T.; Radanović, B. (ur.). Zadar : Croatian Society Electronics in Marine - ELMAR, Zadar , 2001. 188-192 (međunarodna recenzija, stručni rad).
25. Štimac, Alan; Ivančević, Bojan; Jambrošić, Kristian. Acoustic Energy Output of a Low Frequency Ultrasonic Surgical Equipment // Proceedings of the IX Mediterranean Conference on Medical and Biological Engineering / Magjarević, R.;Tonković, S.;Bilas, V.;Lacković, I. (ur.). Zagreb : Faculty of Electrical Engineering and Computing, Zagreb, 2001. 573-576 (međunarodna recenzija, znanstveni rad).
26. Ivančević, Bojan; Domitrović, Hrvoje; Fajt, Siniša. The acoustical porperties of large studios // Proc. of Forum Acusticum. Berlin : , 2000. 1PAA_14 (međunarodna recenzija, znanstveni rad).
27. Jambrošić, Kristian; Ivančević, Bojan; Zorić, Igor. Determination of acoustical bridge side effects between double walls using a pulse method // Proceedings of the 7th International Congress on Sound and Vibration / Heller, Hanno (ur.).Auburn University : The International Institute of Acoustcs and Vibration, 2000. 1567-1574 (međunarodna recenzija, znanstveni rad).
28. Štimac, Alan; Ivančević, Bojan. Optimisation of ultrasonic probe for minimally invasive surgery // Proceedings of the 2nd Congress of Slovenian acoustical society / Čudina, Mirko (ur.).Portorož : Slovenian acoustical Society, 2000. 195-202 (međunarodna recenzija, znanstveni rad).
29. Štimac, Alan; Ivančević, Bojan; Jambrošić, Kristian. Acoustical evaluation of ultrasonic horns for an endoscopic contact ultrasonic probe // Proceedings of the 3rd Internatinal Conference on Bioelectromagentism and 1st Slovenian-Croatian Meeting on Biomedical Engineering / Tomaž, Jarm ; Kotnik, tadej ; Miklavčić, Damjan (ur.).Ljubljana : Faculty of Electrical Engineering, University of Ljubljana, 2000. 87-88 (međunarodna recenzija, znanstveni rad).

30. Ivančević, Bojan.Ultrazvučni centar izvrsnosti // Dani instituta za fiziku : knjiga sažetaka / Ban, Ticijana ; Vučić, Zlatko (ur.). Zagreb : Institut za fiziku, 2004. 17-18 (sažetak, pregledni rad).
31. Ivančević, Bojan; Jambrošić, Kristian; Petošić, Antonio. Development and use of a Neursurgical Ultrasound Endoscope Probe // TeleMED 2004 / Klapan, Ivica ; Kovač, Mario (ur.).Zagreb : Croatian Telemedicine Society ot the Croatian Medical Association, 2004. 50-51 (sažetak, znanstveni rad).
32. Ivančević, Bojan; Petošić, Antonio; Jambrošić, Kristian. Development of Neurosurgical Contact Ultrasonic Probe // Neurologia Croatica, Book of abstracts, The First Croatian Congress of Neuroscience / Petravić, D. (ur.).Zagreb : Croatian Society of Neuroscience, 2003. 35-36 (sažetak, znanstveni rad).

Lecturer data

Name, Surname	**Ph.D. Ante Barić, Assistant Professor**
E-mail address	abaric@unepmap.gr
Course	**(2731) PROTECTION OF THE ADRIATIC SEA FROM THE POLLUTION**
Institution	Institute of Oceanography and Fisheries, Split

Curriculum vitae

He was born in Zadar in 1943, where he received, in 1961, his high school (gymnasium) diploma. In 1965 he graduated from the Faculty of Chemical Technology of the University of Split. He received his M.Sc, and Ph.D. in chemistry from the Faculty of Science of the University of Zagreb in 1967 and 1972 respectively.
He was employed by the Rudjer Boskovic Institute in Zagreb as an assistant from 1965 – 1971 and as a research assistant from 1973 – 1974 in the Center for Marine Research of the Rudjer Boskovic Institute in Rovinj. During 1982-1989 he was assistant professor at the Faculty of Science of the University of Split, lecturing General and Inorganic Chemistry. During the same period he was also the manager of the Faculty. From 1989 to 1995 he was the Director of the Institute of Oceanography and since 1995 Head of the Laboratory of Marine Chemistry and Sedimentology. During 1999-2001 he was Head of the Department of the Marine Study of the University of Split and deputy director of the National Monitoring Programme of the Adriatic.
Since 1980 he was a permanent associate to the Regional Activity Centre for Priority Actions Programme of the Mediterranean Action Plan of the United Nations Environment Programme, where he was the scientific coordinator of an action on EIA. He was the principal coordinator of the EU financed project on the Introduction of Strategic Action Assessment in Planning System of Mediterranean countries. As from 2001 he is on leave from the Institute and seconded to the Mediterranean Action Plan in Athens, Greece, as Manager of its Global Environmental Facility (GEF) project, for the protection of the Mediterranean Sea against pollution from land-based sources, a project financed by the UNEP's Global Environmental Facility (GEF). He is a member of the Committee for the Adriatic HAZU, Croatian Society for Water Protection, of CIESM, of MEDCOAST , and of the EIA Network of the EIA Centre of the University of Manchester.

Date of last election

Referent publications of lecturer

1. Ujević, I., Bogner, D., Zvonarić, T., Barić, A.: **Trace metal distribution in coastal sediment from the Adriatic sea**. Fresenius Envir. Bull., **7**, 701-708, 1998.
2. Ujevic, I., Odzak, N., Baric, A.: **Trace metal accumulation in different grain size fractions of the sediments from a semi-enclosed bay heavily contaminated by urban and industrial wastewaterrs**, Water Research, **34** (11), 3055-3061, 2000.
3. Odzak, N., Zvonaric, T., Kljakovic Gaspic, Z., Horvat, M., Baric, A: **Biomonitoring of Mercury in the Kaštela Bay using transplanted Musselss**, The Science of the Total Environment, **26** (1-3), 61-68, 2000.
4. Odzak, N., Zvonaric, T., Kljakovic Gaspic, Z., Baric, A.: **Biomonitoring of Cupper, Cadmium, Lead, Zinc and Chromium the Kaštela Bay using transplanted Musselss**, Fresenius Environmetal Bulletin, **10** (1), 37-41, 2001.
5. Kljakovic Gaspic, Z., Zvonaric, T., Vrgoc, N., Odzak, N., Baric, A.: **Cadmium and lead in selected tissues of two commercially important fish species from the Adriatic Sea**, Water Research, **36**, 5023-5028, 2002.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data
Name, Surname **Ph.D. Božena Tušar, Assistant Professor**
E-mail address b.tusar@gtfvz.hr
Course **(2732) WASTE DISPOSAL**
Institution Geotechnical Faculty, Varazdin

Curriculum vitae

She was born on the 23 June 1941 in Split. She is of Croatian nationality. She finished elementary and secondary school in Split. In 1967 she graduated from the Faculty of Civil Engineering, University of Zagreb. In 1985 she earned a M.Sc. degree in Ecological Engineering from the Faculty of Chemical Engineering and Technology, University of Zagreb. In 1993 she won a Ph.D. degree from the Faculty of Civil Engineering, University of Zagreb. In 1986 she was entered into the register of scientific researchers of the Croatian Ministry of Science and Technology under the number 093435. After receiving a B.Sc. degree, she was employed at the Urban Planning Institute for Dalmatia in Split as a planner and public utility infrastructure designer. From 1979 she has been working at the Faculty of Civil Engineering in Zagreb, and since 2002 she has been employed at the Geotechnical Faculty in Varaždin.
In 1986 she became a professional advisor, and was elected as a lecturer in 1985 for the first time, then again in 1992 and 1997. She was appointed an assistant professor in 1999, and an associate professor in 2003.
She has been leading the subject Water Supply and Drainage at the VII/I degree of study at the Faculty of Civil Engineering, University of Osijek since 1985, and the same subject at the VI/I degree of study in Zagreb. Since 1995 she has been leading the subjects Water Supply and Drainage, Waste Water Treatment, and Ground Waters Protection at the VII/I degree of study at the Geotechnical Faculty in Varaždin.
She has been a supervisor of the thesis to fifteen graduating students at the Faculty of Civil Engineering in Osijek, twenty graduating students at the Geotechnical Faculty in Varaždin, and to over hundred students at the programme of study "Civil Engineering Installations" at the Faculty of Civil Engineering in Zagreb and the Technical College – Construction Department. She has been also a supervisor of the two theses awarded with the University Chancellor's award, and the two theses awarded with the Dean's award.
She has published thirty-two scientific papers and thirty-five professional papers, and also about ninety articles aimed at profession popularisation in the journals: *Hrvatska vodoprivreda, Graditelj, Hrvatski instalater, Moja kupaonica* and others.
She is the author of the book *Kućna kanalizacija*. She participated in the compilation of a civil engineering lexicon.
She is a member of the Croatian Association of Civil Engineers, Croatian Association for Waters Protection, Croatian Hydrological Association, and Croatian Scientific Association for Traffic.

Date of last election

Referent publications of lecturer

1. Tušar,B.: **Čovjek-otpad-okoliš**, Gospodarstvo i okoliš, Zagreb, (2), 115-117,1995.
2. Tušar,B.: **Utjecaj na okoliš uređaja za pročišćavanje otpadne vode,** Gospodarstvo i okoliš, Zagreb, godina III, (4), 210-213, 1995.
3. Tušar,B.: **IMPACT of equipment for purification of wastewaters on environment**, International symposium research on hydraulic engineering, Gdansk, 265-274, September 1995.
4. Tušar, B., Gereš, D.: **Wastewater management for small comunities in Croatia**, 11 International symposium suitable water management and technologies for small seattlements Barcelona, 13-15 October, Proceedings, 132-138, 1998.
5. Levačić, E., Gotić, I., Tušar, B., Štuhec, D., Đunđek, A.: **Estimation of Suitability of Some Clay for use as Isolation Layer in Landfill for Tannery Sludge**, International Symposium on Water

Management and Hydraulic Engineering Proceedings, Dubrovnik - Crotaia, September 14-18, 1998., Volume 2, 437-446. (Organizatori: University of Zagreb, Faculty of Civil Engineering Tehnical University of Gdansk - Polan Faculty of Environmental Engineering; IARH IWRA).

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Davor Malus, Associate Professor**
E-mail address	malus@grad.hr
Course	**(2733) WATER SUPPLY AND SEWERAGE**
Institution	Faculty of Civil Engineering, Zagreb

Curriculum vitae

Born on 30th August 1951 in Zagreb, Croatian nationality, and citizen of RH. Primary and secondary school finished in Zagreb. Graduated at the Faculty of Civil Engineering of Zagreb University on 17th November 1997– specialization in water management.First employment at the Faculty of Civil Engineering of Zagreb University at the Sanitary engineering department. MS degree in Ecological Engineering on the Faculty of technology of Zagreb University attained on the 21st October 1985. From 1992 to 1995 on the position of assistant with Ms degree. On the 15th November 1995, PhD degree attained in Sanitary Engineering on the Faculty of Civil Engineering of Zagreb University, on the thesis "Potable Water resources Management in the Strategy of Sustainable Development. In the 1999 promoted in assistant professor, and in the 2003 in associate professor. Teaching subjects in sanitary engineering on the graduate and postgraduate studies: Water supply and Sewerage, Water resources protection and Scientific Investigations in the Sanitary Engineering. Living in Zagreb, married, with two children.Speaking and writing English. Member of: European Water Pollution Control Association, International Water Resources Association, Croatian Society of Civil Engineers, Croatian Water Pollution Control Society, Croatian Chamber of Civil Engineering.

Date of last election 17.12. 2003.

Referent publications of lecturer

1. Malus,D.: **Approach to river-run lake ecological modeling**, Poljsko-Jugoslavenski simpozij, Research on hydraulic engineering, Gdansk, Zbornik radova, 315-323, 1989.
2. Sipos,L., Galić,M., Vujanić,B., Malus,D.: **Single or two-stage biological treatment preceding wastewater discharge into the sea**, 2nd Symposium international, Marseilles, Zbornik radova, 1-7, 1990.
3. Sawicky, D., Malus, D.: **Velocity dependent coefficient of eddy viscosity,** Archives of Hydroengineering, **39**, 3-13, 1992.
4. Malus, D.: **Economic analysis of drinking water abstraction,** International symposium on research on hydraulic engineering Gdansk, Zbornik radova, 197-205, 1995.
5. Malus, D.: **Drainage of traffic arteries and environmental protection from negative influences,** The first international conference, drainage, and treatment of wastewaters, hazardous and solid waste and protection from negative influences, Ohrid, R.Makedonija, Zbornik radova, 257-265,1996.

List of papers in last 5 years

1. Malus, D., Pertaš, J.: HIGHWAY RUNOFF TREATMENT IN CROATIA, IV international Conference: Water Supply and Water Quality, Krakow, Poznan – Poland , 2000., Conference Proceedings, p.311-321.
2. Malus, D.: HIGHWAY RUNOFF BMPs IN CROATIA, Water Management and Hydraulic Engineering: Proceedings of the VII International Symposium on Water Management and Hydraulic Engineering, Miedzybrodzie Zywieckie, Poljska, 10-12.09.2001. p. 185-189.
3. Vukelić, Z., Petraš, J., Malus, D.: GROUNDWATER – THE UNSEEN RESOURCE OD SUBSURFACE QUALITY, Water Supply and Water Quality, Proceedings of the 17-th National and 5th International Scientific and Technical Conference – Poznan – Poljska, 2002. p.205-214.

4. Malus, D.: HIGHWAY RUNOFF BMP IN CROATIA, Water Management and Hydraulic Engineering, VII International Symposium on Water Management and Hydraulic Engineering, Miedzybrodzie Zywieckie, Poljska, 10-12.09.2001. Proceedings, p.185-191.
5. Ćosić-Falajsig, G., Malus, D., Petrićec, M.: IMPORTANCE OF PROTECTED AREAS IN INTEGRATED MANAGEMENT, VIII International Symposium on Water Management and Hydraulic Engineering. Podbanske – Slovačka, 5-9.10.2003. Proceedings, p.49 –54.
6. Malus, D., Ćosić-Flajsig, G.: WASTEWATER COLLECTION, TREATMENT AND DISPOSAL IN SMALL COMMUNITIES IN CROATIA. VIII International symposium on Water Management and Hydraulic Engineering. Podbanske – Slovačka, 5-9.10.2003. Proceedings, p. 243-248.
7. Petraš, J., Malus, D.: HYDROLOGY OF DETENTION BASINS AS CONSTITUENTS OF FLOOD PROTECTION SYSTEMS OF ZAGREB CITY. VIII International symposium on Water Management and Hydraulic Engineering. Podbanske – Slovakia, 5-9.10.2003. Proceedings, p.335-352.
8. Malus, D.: TRANSBOUNDARY AQUIFERS IN CROATIA, UNESCO Workshop: Inventory of Internationally Shared Aquifers: Thessaloniki, 15-17. October 2004.
9. Malus, D.: TRANSBOUNDARY RIVER BASINS IN CROATIA, UNESCO Workshop: Development of an Inventory of Internationally Shared Surface Waters in South-Eastern Europe, Thessaloniki, 18-20. October 2004.

Lecturer data

Name, Surname	**Ph.D. Igor Čatić, Full Professor**
E-mail address	igor.catic@fsb.hr
Course	**(2734) TECHNOLOGY ASSESSMENT**
Institution	Faculty of Mechanical Engineering and Naval Architecture Zagreb

Curriculum vitae

Dr. Igor Catic is born in 14th March 1936 in Zagreb, Croatia. He is a distinguish professor on the Faculty of Mechanical Engineering and Naval Architecture at the University of Zagreb. He instructed students in Croatia and in other regions of the former Yugoslavia since 1974. He had led the group of courses entitled "Polymer processing" and Chair for Polymer processing till 2001. He is also productive researcher in many areas of polymer engineering, particular in mold making and design as well in heat exchange in molds. One of reasons for his interest in molds is that he had made also apprenticeship examine for toolmaker. Some other important fields of his interest are: application of systemic theory of technology in injection molding and prediction of future development of human technology with following conclusions. The development of materials can be in the future revolutionary one, of product and processes only innovative. Prof. Catic also published some original papers in the field of language and philosophy. He is very active in his country in public relation, connecting the technical sciences with the broader audience. He has lectured and published papers, in Croatian and several foreign languages. Prof. Catic is recipient of several important awards. Among other, he was awarded in 1998 with International Education Award by Society of Plastics Engineers. He is founding member of the Society of Plastics and Rubber Engineers, and initiated the founding of the Association of Plastics Societies. He is member of some foreign societies in this filed. Among other he is Fellow of Institute for Materials, Metallurgy and Mining.

Date of last election 13.5.1997.

Referent publications of lecturer

1. I. Čatić: **Tehnika, temelj kulture**, Graphis, Zagreb, 2003.
2. I. Čatić: **Scijentističko ili kulturologijsko obrazovanje za izazove budućnosti**, Zbornik radova Filozofija i tehnika, Hrvatsko filozofsko društvo, Zagreb, 2003, 133-144.
3. I. Čatić: **Kulturologijski pristup znanosti 21. stoljeća**, Znanost za 21. stoljeće, Klub hrvatskih humboldtovaca, Zagreb, 15. i 16. ožujka 2001., 103-126.
4. I. Čatić, G. Barić: **Vrednovanje tehnike na primjeru industrije za proizvodnju polimera**, 3. mednarodno posavetovanje: Proizvodnja, predelava ter katakterizacija plastike in gume, Slovensko kemijsko društvo, Maribor 22. travnja 1999., 5-15.

List of papers in last 5 years

1. I. Čatić, M. Rujnić-Sokele, J. Dobranić: The integration of informational functions in the chain from idea to manufacturing of molds for injection molding, Annual Technical Conference, Chicago, 16.-20. May 2004, 839-843.
2. I. Čatić, Z. Glavina, M. Rujnić-Sokele: Mechanical properties of hybrid polyester composites, Annual Technical Conference, Chicago, 16.-20. May 2004, 1493-1946.
3. I. Čatić, N. Cvjetičanin, M. Rujnić-Sokele: Temperaturfelder und Wärmebilanzen in Werkzeugen zum Spritzgießen von reaktiosfähigen Polymeren, GAK 57(2004)12, 773-778.
4. I. Čatić: Quo Vadis Spritzgießen?, GAK 55(2002)6, 382-389.
5. I. Čatić: K perspektivám plastových obalů, Plasty a Kaučuk, 39(2002)2, 41.
6. I. Čatić, M. Rujnić-Sokele: The systemic analysis of injection moulding, Polimery, 47 (2002)1, 15-21.
7. G. Barić, I. Čatić, M. Dabić: Survival and success of plastics companies in a turbulent environment, Int. J. of Materials and Product Tech. 16(2001)8, 726-735.

Lecturer data

Name, Surname	**Ph.D. Joso Vukelić, Full Professor**
E-mail address	jvukelic@sumfak.hr
Course	**(2735) FOREST VEGETATION OF CROATIA**
Institution	Faculty of Forestry, Zagreb

Curriculum vitae

Born in Senj on 3 April 1955. Completed elementary school in Krasno and chemical technical school in Zagreb. Graduated from the Forestry Department of the Faculty of Forestry, University of Zagreb on 16 March 1979. From 1 September 1981 held the position of assistant at the Forestry Faculty in Zagreb, from 1990 assistant professor, from 1993 associate professor, from 1997 full professor, and since 2000 full professor with permanent tenure in the subject of Forest Phytocoenology. Also holds course in Phytocoenology at the Faculty of Agronomy. During 1985, 1986 and 1990 spent one year specialising at the Botanical Institute in Graz, the University of Soil Culture in Vienna, Faculties of Forestry in Munich and Freiburg, and the WWF Institute in Rasttat. Editor-in-chief of the Journal for Forest Experiments and editor in the field of Forest Ecosystems in Forestry Journal. Member of several social and professional organisations. Participated in more than forty scientific and specialised symposia and excursions in the country and abroad. To date published over 80 scientific and professional papers and bibliographies, as well as several specialised reviews, surveys and studies. From 1993 to 1996 he was Assistant Minister for Agriculture and Forestry, from 1996 to 1998 he was Vice Dean and from 1998 to 2000 Dean of the Forestry Department at the Faculty of Forestry, University of Zagreb. Awarded with the Order of Danica Hrvatska with the Figure of Ruđer Bošković by Dr Franjo Tuđman, President of the Republic of Croatia.

Date of last election

Referent publications of lecturer

1. Vukelić, J.: **Šumske zajednice i staništa hrasta kitnjaka (*Quercus petraea* Liebl.) u gorju sjeverozapadne Hrvatske**, Glas. šum. pokuse, **27**, 1-82, 1991.
2. Vukelić, J.: **Synoekologische Charakterisierung und syntaxonomische Einordnung von Carpinion-Gesellschaften Nordkroatiens**,Phytocoenologia 9/4,519-546, 1991.
3. Vukelić, J., Rauš, Š.: **Šumarska fitocenologija i šumske zajednice u Hrvatskoj**, udžbenik Sveučilišta u Zagrebu, Šumarski fakultet u Zagrebu, 310, 1998.
4. Vukelić, J., Baričević, D.: **Development of vegetation in localities of penduculate oak dieback in Croatia**, Glas. šum. pokuse **37**, 277–293, 2000.
5. Vukelić, J., Rauš, Đ.: **The lowland forests of Croatia**. In: The floodplain forests in Europe (ed.) Klimo, E., Hager,H., European Forest Institute,101–125, 2001.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data

Name, Surname	**Ph.D. Oleg Grgurević, Full Professor**
E-mail address	oleg.grgurevic@arhitekt.hr
Course	**(2736) PHYSICAL PLANNING**
Institution	Faculty of Architecture, Zagreb

Curriculum vitae

Oleg Grgurević was born in Zagreb, 1940. He finished the primary school in Split and the secondary school in Zagreb. In 1968 he graduated from the Faculty of Forestry and in 1972 from the Faculty of Architecture in Zagreb. Since 1973 he has been continually working at the Department of Urban Planning, first as the Assistant and later as the Assistant Professor for the courses in *Introduction to Urban Planning, Urban Planning I-IV and Integral Work*. He won his master's degree in 1984 and his doctor's degree in 1990. In 1974 he attended a one-month seminar entitled "Salzburg Seminar in American Studies" focused on the topic in "Urban Problems and Planning" in Salzburg. In 1980/81 he spent 10 months doing a research at the Metropolitan Center for Regional Planning and Research at the John Hopkins University in Baltimore, Md., the USA. Since 1998 he has been conducting a course in *Physical Planning and Landscape Design*. His research projects deal with the study of the theory of settlements, the central ones in particular, as well as with the theory of spatial-demographic and functional evaluation of settlements. He published seven research papers in renowned journals. He took part as the main researcher in two research projects. His professional work contains 41 urban and physical plans, a preliminary design and a study.
He is a member of the Scientific Council for Remote Research and Photo-interpretation of the Croatian Academy of Science and Art

Date of last election 19.09.2002.

Referent publications of lecturer

1. Grgurević, O.: **Relativni centralitet naselja Hrvatske,** Sociologija sela, **111/112**, 73-83, 1991.
2. Grgurević, O.: **Grafička interpretacija sustava hijerarhije centralnih naselja središnje Hrvatske,** Prostor, **1**(1), 95-119,1993.
3. Grgurević, O.: **Izgled suburbanog krajolika - izraz i odraz kulture,** Prostor, **2-4**(1), 243-250, 1993.
4. Grgurević, O.: **Od pojma slike grada do pojma opće slike krajolika,** Prostor, **3-4**(2), 285-291, 1994.
5. Grgurević,O.: **Prilog proučavanju postupka demografskog vrednovanja naselja**, Prostor, **2**(3), 217-232, 1995.
6. Grgurević, O.: **Prostorno demografska valorizacija naselja Istarske županije,** Prostor, **1**(21), vol. 9, 2001.

List of papers in last 5 years

Physical plans for local communities and cities

Donji Andrijevci, PPUO Veliko Trgovišće, PPUG Kutine, PPUG Zaboka, PPUG Korčule, PPUO Lumbarda.
In the adoption procedure: PPUO Janjina.
Currently worked out: PPUO Trpanj, PPUO Vrsar, PPUO Nerežišća, PPUO Milna, PPUG Supetra, PPUO Pučišća, PPUO Postira, PPUO Smokvica.

Detailed development plans:
Adopted: DPU "Centar - 1" - Zabok, DPU "Centar - 2" - Zabok, DPU "Dijela naselja Brnobići" - Općina. Kaštelir-Labinci.
In the adoption procedure: DPU "Blaca" – naselje - Općina Smokvica
Currently worked out: DPU "Prožurska Luka" - naselje - Općina Mljet, DPU TZ "Prožurska Luka 2" – naselje - Općina Adopted: PPUO Orebić, PPUO Mljet, PPUG Korčule, PPUO Kaštelir-Labinci, PPUO Višnjan, PPUO Vižinada, PPUO Mljet, DPU "Sobra-Glavica" – naselje - Općina Mljet, DPU "Centar - 3" – Zabok.

Lecturer data

Name, Surname	**Ph.D. Jasenka Bertol-Vrček, Associate Professor**
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Course	**(2737) ECOLOGICAL BUILDING CONSTRUCTION**
Institution	Faculty of Architecture, Zagreb

Curriculum vitae

Born in Zagreb 1947 where she got education. In 1971 she received a diploma at the Faculty of Architecture, in 1987 a M.Sc. degree at the Faculty of Civil Engineering and the Ph.D. degree at the Faculty of Architecture in 1999. Since 1971 is employed at the Faculty of Architecture University of Zagreb, since 2000 as an assistant professor, and since 2005. as an associated professor. She is lecturing the courses Architectural Constructions and Building physics I-II. Besides involvement in teaching practise, she is active in scientific and professional work, mostly in the field of thermal and noise protection. She is a principal researcher at the project «Architectural Constructions in Function of the Environmental Protection», and serves as a Thermal Protection and Energy Saving licensed reviser. In the term 2001-2003 she was a vice-dean for science, to-day is the head of the Architektural Structures and Building Technology Department.

Date of last election 27.04.2005.

Referent publications of lecturer

1. Kolega, V., Šimetin, V., Bertol-Vrček, J., & al.:«KUENzgrada, Program energetske efikasnosti u zgradarstvu, Prethodni rezultati i buduće aktivnosti», Energetski institut «Hrvoje Požar», Zagreb, 1998.
2. Bertol-Vrček, J.: Unutarnja plošna temperatura toplinskih mostova, Prostor, 1 (17),7, 121-136, Zagreb, 1999.
3. Bertol-Vrček, J.: Shape and Structure of Buildings and Heat Loss, XXXII. IAHS World Congress on Housing, Knjiga sažetaka: 49, CD, Trento, 2004.
4. Bertol-Vrček, J., Rebec, M.: Cost Benefit Justification of Choosing Thermal Protection System of the Building, 2nd SENET Conference on Project Management, Knjiga sažetaka: 19, CD, Cavtat, 2002.
5. Bertol-Vrček, J., Veršić, Z.: Building Construction Typology in Croatia in Relation to the Ecological Protection, XXXI. IAHS World Congress on Housing, Knjiga sažetaka, CD, Montreal, 2003.
6. Bertol-Vrček, J., Veršić, Z., Biluš, M.: Primjena europske normizacije u području toplinske i zvučne zaštite u zgradarstvu, Savjetovanje Hrvatska normizacija i srodne djelatnosti, Tehničko usklađivanje na putu prema Europskoj uniji, zbornik radova, 246-251, Brijuni, 2004.

List of papers in last 5 years

1. Bertol-Vrček, J., Muraj, I.: The impact of Design and Building Quality on Heat Loss, 4th International Conference «TECHSTA» 2004 – Technologies for Sustainable Development in Regions, zbornik radova, 93-97, CD, Prag, 2004.
2. Bertol-Vrček, J.: Shape and Structure of Buildings and Heat Loss, XXXII. IAHS World Congress on Housing, Knjiga sažetaka: 49, CD, Trento, 2004.
3. Bertol-Vrček, J., Rebec, M.: Cost Benefit Justification of Choosing Thermal Protection System of the Building, 2nd SENET Conference on Project Management, Knjiga sažetaka: 19, CD, Cavtat, 2002.
4. Veršić, Z ., Bertol-Vrček, J.: Historic Buildings and thermal protection, XXXI. IAHS World Congress on Housing, Knjiga sažetaka, CD, Montreal, 2003.

5. Bertol-Vrček, J., Veršić, Z.: Building Construction Typology in Croatia in Relation to the Ecological Protection, XXXI. IAHS World Congress on Housing, Knjiga sažetaka, CD, Montreal, 2003.
6. Bertol-Vrček, J., Veršić, Z., Biluš, M.: Primjena europske normizacije u području toplinske i zvučne zaštite u zgradarstvu, Savjetovanje Hrvatska normizacija i srodne djelatnosti, Tehničko usklađivanje na putu prema Europskoj uniji, zbornik radova, 246-251, Brijuni, 2004.

Lecturer data
Name, Surname **Ph.D. Alenka Rastovčan-Mioč, Assistant Professor**
E-mail address mioca@siscia.simet.hr
Course **(2738) METALLURGICAL SCRAP MANAGEMENT**
Institution Faculty of Metallurgy, Sisak

Curriculum vitae

She was born in Sisak in 1965. In 1984 she enrolled at the Faculty of Metallurgy of the Zagreb University where she graduated in 1988. In 1990 she enrolled at the Faculty of Technology (now: Faculty of Chemical Engineering and Technology in Zagreb) Department of Engineering Chemistry, Sub-Department: Non-metals, and she won her master's degree in 1993. In 1996 she took the doctor's degree at the same Faculty. Since 1989 she has been employed at the Faculty of Metallurgy and now she works at their Chemical Laboratory. She was appointed assistant lecturer in 1994, senior assistant lecturer 1997, and senior lecturer for the Environment Protection Course in 2000. She ran exercise classes in the following courses: "General and Inorganic Chemistry", "Automation and Process Control", "Essential Electrical Engineering and Automation", "Chemical Analysis Techniques", "Metallurgical Measuring" and "Environment Protection". She is the supervising lecturer for "Chemical Analysis Techniques", "Metallurgical Measuring" and "Environment Protection", since 2003, at the Faulty of Metallurgy in Sisak. She is the supervising lecturer for "Disposal and Recycling of Metallurgical Scrap" course which is included in the postgraduate science program at the Faculty of Metallurgy in Sisak. Since 1990 she has been active as associate in three science research projects initiated by the Croatian Ministry of Science and Technology. Since 2002 she has lead the research and development projects bearing the title "Disposal of Metallurgical Scrap and Testing the its Recycling Potentials". Since 2004 she has lead the Croatian-Slovenian research project "Characterization of Waste from Croatian and Slovenian Steel Mills and Foundries". The domain is the protection of environment in iron and steel industry (reducing the steel making impact on the environment, waste recycling and disposal). So far she has published 52 scientific and technical papers in journals and proceedings, 15 abstracts, 1 project report. She participated in numerous national and international scientific and technical conferences. She reviewed the preliminary and the final Report on the Environment Status in Sisak Steelworks and its Monitoring with Regard to Croatian Laws. She has a vary good command of English and Russian. She is a member of the Croatian Society for Materials and Tribology and a member of the Society of Graduate Engineers and Supporters of Faculty of Chemical Technology at the Zagreb University (AMACIZ) and Sisak Environment Forum.

Date of last election 27.10.2000.

Referent publications of lecturer

Magistarski rad
Alenka Rastovčan, Ispitivanje kemijskih, radiokemijskih i mehaničkih svojstava troske kao dodatka cementu, Sveučilište u Zagrebu, Fakultet kemijskog inženjerstva i tehnologije, Zagreb, 1993.
Disertacija
Alenka Rastovčan-Mioč, Efekti aktivacije troske elektropeći, Sveučilište u Zagrebu, Fakultet kemijskog inženjerstva tehnologije, Zagreb, 1996.

1. Rastovčan-Mioč, A., Cerjan-Stefanović, Š., Ćurković, L.: **Aqueous Leachate from Electric Furnace Slag**, Croatica Chemica Acta, **73**(2000)2, 615-624.
2. Rastovčan-Mioč, A., Cerjan-Stefanović, Š., Novosel-Radović, Vj., Mioč, B., Sofilić, T.: **Influence of X-Ray Radiation on Phase Composition and Morphology of Electric Furnace Slag**, **Clinker, and Plaster**, Croatica Chemica Acta, **74**(2001)2, 419-430.
3. Rastovčan-Mioč, A., Unkić, F., Cerjan-Stefanović, Š., Ćurković, L., Mioč, B.: **Chemical Stability of Electric Furnace Slag**, Mechanical Engineering, **44**(2002)3-6, 137-144.

4. Rastovčan-Mioč, A., Sofilić, T., Cerjan-Stefanović, Š., Mioč, B.: **Radioaktivne tvari u otpadu crne metalurgije**, Krajcar Bronić, I.; Miljanić, S.; Obelić, B. (Editors), Proceedings of the 5th Symposium of the Croatian Radiation Protection Association with International Participation, Croatian Radiation Protection Association, Stubičke Toplice, 2003., 317-322.
5. Sofilić, T., Rastovčan-Mioč, A., Cerjan-Stefanović, Š., Novosel-Radović, Vj., Jenko, M.: **Characterization of Steel Mill Electric-Arc Furnace Dust**, Yournal of Hazardous Materials, **B 109**(2004)59-70.

List of papers in last 5 years

1. Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Ćurković, L.: Aqueous Leachate from Electric Furnace Slag, Croatica Chemica Acta, 73(2000)2, 615-624.
2. Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Novosel-Radović, Vj.; Mioč, B.; Sofilić, T.: Influence of X-Ray Radiation on Phase Composition and Morphology of Electric Furnace Slag, Clinker, and Plaster, Croatica Chemica Acta, 74(2001)2, 419-430.
3. Ćurković, L.; Cerjan-Stefanović, Š.; Rastovčan-Mioč, A.: Batch Pb^{2+} and Cu^{2+} Removal by Electric Furnace Slag, Water Research, 35(2001)14, 3436-3440.
4. Rastovčan-Mioč, A. ; Unkić, F.; Cerjan – Stefanović, Š.; Ćurković, L.; Mioč, B.: Chemical Stability of Electric Furnace Slag, Mechanical Engineering, 44(2002)3-6, 137-144. (prethodno priopćenje)
5. Sofilić, T.; Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Novosel-Radović, Vj.; Jenko, M.: Characterization of Steel Mill Electric - Arc Furnace Dust, Yournal of Hazardous Materials, **B109** (2004) 59-70.
6. Mioč, B.; Rastovčan-Mioč, A.; Ćurković, L.: Sorpcija metalnih iona i termodinamički parametri u sustavu elektropećna troska – metalni ioni, Ljevarstvo 45(2003)3, 75-79.
7. Sofilić, T.; Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.: Problem radioaktivnosti u čeličnom otpadu, Unkić, F., Zovko, Z. (urednici), Zbornik radova 2. Međunarodnog savjetovanja o nodularnom lijevu Nodularni lijev na pragu trećeg milenija, Metalurški fakultet Sveučilišta u Zagrebu, Sisak, 2000, p. 67-72.
8. Ćurković, L.; Rastovčan-Mioč, A.; Geržina, A.: Equlibrium Uptake and Sorption Dynamics for the Removal of Cu^{2+} and Pb^{2+} from Wastewater Using Electric Furnace Slag, Conference Proceedings of the EUROMAT 2001, Associazione Italiana di Metallurgia, Rimini, 2001, CD-ROM, 9 pages.
9. Lisjak, D.; Ćurković, L.; Rastovčan-Mioč, A.; Mioč, B.: Primjena neuronske mreže za procjenu uklanjanja metalnih iona elektropećnom troskom, Unkić, F., Zovko Brodarac, Z. (urednici), Zbornik radova 3. Međunarodnog savjetovanja ljevača Suvremeni postupci proizvodnje odljevaka od željeznog lijeva, Metalurški fakultet Sveučilišta u Zagrebu, Sisak, 2001, str. 199-206.
10. Sofilić, T.; Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Novosel-Radović, Vj.: Problem zbrinjavanja elektropećne prašine kao opasnog tehnološkog otpada, Unkić, F., Zovko Brodarac Z. (urednici), Zbornik radova 3. Međunarodnog savjetovanja ljevača Suvremeni postupci proizvodnje odljevaka od željeznog lijeva, Metalurški fakultet Sveučilišta u Zagrebu, Sisak, 2001, str. 219-225.
11. Sofilić, T.; Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Jenko, M.: Određivanje fizikalno-kemijskih svojstava elektropećne prašine, Unkić, F., Zovko Brodarac, Z. (Editors), Proceedings Book of 4th International Foundrymen Conference Recent Development in the Casting Production, Faculty of Metallurgy, University of Zagreb, Sisak, 2002, p. 283-293.
12. Rastovčan-Mioč, A.; Sofilić, T.; Cerjan-Stefanović, Š.; Mioč, B.: Radioaktivne tvari u otpadu crne metalurgije, Krajcar Bronić, I.; Miljanić, S.; Obelić, B. (Editors), Proceedings of the 5th Symposium of the Croatian Radiation Protection Association with International Participation, Croatian Radiation Protection Association, Stubičke Toplice, 2003., p. 317-322.
13. Lisjak, D.; Ćurković, L.; Rastovčan-Mioč, A.: Selection of Optimal Backpropagation Neural Network Algorithms for Estimation of Eliminating of Metal Ions by Electric Furnace Slag, Vivancos Calvet, J.; Puerta Sales, F.; Ekinović, S.; Brdarević, S.; (Editors), Proceedings of 7th International Research/Expert Conference Trends in the Development of Machinery and Associated Technology – TMT 2003, Faculty of Mechanical Engineering in Zenica, Escola Tecnica Superior d' Enginyeria Industrial de Barcelona, Department d' Enginyeria Mechanica, Universitat Politecnica de Catalunya, Lloret de Mar, Barcelona, 2003, p. 1121-1124.
14. Sofilić, T.; Cerjan-Stefanović, Š.; Rastovčan-Mioč, A.; Mioč, B.: Application of Different Analytical Methods to the Characterization of Metallurgical Waste, Pellei, M.; Porta, A. (Editors), Proceedings of the 2nd International Conference on Remediation of Contaminated Sendimenats, Agenzia Nazionale per la Protezione dell' Ambiente e per i servizi Tecnici, Venice, 2003., CD-ROM, 10 pages.
15. Sofilić, T.; Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Mioč, B.: Examination of Water Eluates from Metallurgical Waste, Koprivanec, N. (Editor), Proceedings of International Symposium on Environmental Management, Faculty of Chemical Engineering and Technology, Zagreb, 2003. in press.

16. Rastovčan-Mioč, A.; Ćurković, L.; Sofilić, T.; Mioč, B.: Sorption of Pb^{2+} and Zn^{2+} from Aqueous Solutions by Electric Arc Furnace Slag, Unkić, F. (Editor), Proceedings Book of the 5th International Foundrymen Conference Innovative Foundry Materials and Technologies, University of Zagreb, Faculty of Metallurgy, Opatija, 2004. p. 345-352.
17. Sofilić, T.; Cerjan-Stefanović, Š.; Rastovčan-Mioč, A.; Vranješević, B.; Mioč, B.: Investigation of the Morphological and Mineralogical Composition of Electric Arc Furnace Dust as Hazardous Metallurgical Waste, Milanović, Z. (Editor), Proceedings of VIIIth International Symposium Waste Management Zagreb 2004, Economy and Environment Journal, Čistoća d.o.o., ZGOS d.o.o., Zagreb, 2004., p. 229-249.
18. Sofilić, T.; Marjanović, T.; Rastovčan-Mioč, A.: Uvođenje sustava za nadzor radioaktivnosti u procesima proizvodnje čelika, Garaj-Vrhovac, V.; Kopjar, N.; Miljanić, S. (Editors), Proceedings of the sixth Symposium of the Croatian Radiation Protection Association with International Participation, Croatian Radiation Protection Association, Stubičke Toplice, 2005., p. 425-431.
19. Cerjan-Stefanović, Š.; Rastovčan-Mioč, A.; Ćurković, L.; Unkić, F.; Mioč, B.: Praćenje elucije elektropećne troske ionskom kromatografijom, Grilec, K. (urednik), Zbornik radova skupa MATRIB 2000, HDMT, Vela Luka, 2000, str. 59-64.
20. Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Unkić, F.; Mioč, B.; Ćurković, L.: Utjecaj kisele kiše na sadržaj Na^{+}, K^{+}, Ca^{2+} i Mg^{2+} u eluatima elektropećne troske, Grilec, K. (urednik), Zbornik radova skupa MATRIB 2000, HDMT, Vela Luka, 2000, str. 297-300.
21. Ćurković, L.; Rastovčan-Mioč, A.; Mioč, B.: Sorpcija Co^{2+} i Ni^{2+} na elektropećnoj troski, Grilec, K. (urednik), Zbornik radova skupa MATRIB 2001, HDMT, Vela Luka, 2001, str. 33-38.
22. Sofilić, T.; Rastovčan-Mioč, A.; Cerjan-Stefanović, Š.; Grahek, Ž.: Prisutnost radionuklida u čeličnom otpadu, sirovom čeliku, elektropećnoj troski i prašini, Grilec, K. (urednik), Zbornik radova skupa MATRIB 2001, HDMT, Vela Luka, 2001, str. 227-231.
23. Lisjak, D.; Ćurković, L.; Rastovčan-Mioč, A. : Primjena *backpropagation* neuronske mreže za procjenu uklanjanja metalnih iona elektropećnom troskom, Ćurković, L.; Grilec, K. (urednik), Zbornik radova skupa MATRIB 2002, HDMT i Dublin Institute of Technology, Vela Luka, 2002, str. 279-285.
24. Ćurković, L.; Novak, D.; Rastovčan-Mioč, A.; Lisjak, D.: Određivanje parametara Langmuirove izoterme genetičkim algoritmom u sustavu metalni ion - elektropećna troska, Grilec, K. (urednici), Zbornik radova međunarodne konferencije MATRIB 2004, Hrvatsko društvo za materijale i tribologiju i Dublin Institute of Technology, Vela Luka, 2004., str. 56-61.

Lecturer data

Name, Surname	**Ph.D. Mirko Gojić, Assistant Professor**
E-mail address	gojic@siscia.simit.hr
Course	**(2739) RECYCLING OF METALLIC MATERIALS**
Institution	Faculty of Metallurgy, Sisak

Curriculum vitae

I am born in 1960 in Bosanski Novi, Republic of BiH. i was graduated in 1984 with a B.S. degree on Faculty of Metallurgy, University of Zagreb. Since 1984 I worked on Faculty of Metallurgy in Sisak in Department for physical metallurgy, Laboratory for development and application of materials. I was received M.Sc. 1991 on Faculty of Natural Sciences and Engineering University of Ljubljana. From 1988/89 to 1990/91 I was included in the teaching and heading on the exercises "Special Steels and Heat Treatment of Steels". Since 1999 I am working as an assistant Professor on Faculty of Metallurgy on the field "Surface Treating" and "Welding Metallurgy". From 1991 to 1999 I has held varoius positions in the Iron and Steel Works Sisak on the field: specialist assistant in the Sector for testing of materials, senior projectant in the Sector for development as well as the engineer for heat treatment and energy. From 1991 to 1999 I was included into the scientic-research project "Study of Effects Mechanisms Processes on the Special Properties of Steel Pipes" and "Study of Crystallization, Microstructure and Properties of Alloys".From 2002 I am header of project "Mechanisms and Surface Processes During Heating and Heat Treatment of Metal". I published a high scientic and professional works in a numerous international and domestic symposiums in the field heat treatment of materials, testing methods, choice and assessment of material for the application in the oil and petrochemical industry with the corrosion aspects, welding of materials, protective of materials to the corrosion and the application of ecology accepted inhibitors.

Date of last election

Referent publications of lecturer

1. Gojić,M., Črnko,J., Kosec,L. Belušić,M.: **The effect of protective gas on annealing of pipes from 42CrMo4 steel**, Kovové Materiály, **38**(3),149-159,2000.
2. Gojić.M., Marijan,D., Kosec,L.: **The electrochemical behaviour of duplex stainless steel in borate bufer solution**, Corrosion, **56**(8), 839-848,2000.
3. Gojić,M., Črnko,J., Sućeska,M., Rajić,M.: **Testing adsorbents for heat treatment of pipes,** Journal of Thermal Analysis and Calorimetry, **62**(3),703-710,2000.
4. Gojić,M., Kosec,L., Kožuh,S.: **Mechanical properties and microstructure of steel pipes for gas bottles**, Kovové Materiály, **39**(5),349-357,2001.
5. Gojić,M.: **The effect of tempering on mechanical properties of cold-rolled pipes from 42CrMo4 steel,** Kovové Materiály, **39**(2),85-92,2001.
6. Gojić,M., Črnko,J., Kožuh,S.: **Proizvodnja čelika u dvadesetom stoljeću**, Kemija u industriji, **51**(7/8), 317-328, 2002.

List of papers in last 5 years

http://bib.irb.hr

Lecturer data
Name, Surname **Ph.D. Zdenka Bolanča, Full Professor**
E-mail address
Course **(2740) RECYCLING OF PAPER**
Institution Faculty of Graphic Technology, Zagreb

Curriculum vitae

Zdenka Bolanča, PhD., graduated and defended her doctoral thesis at the Faculty of Science, University of Zagreb. She worked at the Faculty of Science; in the Centre for Meteorological Investigations in the Republic Hydro meteorological Institute From 1980 she worked at the College of Printing which became the Faculty of Graphic Arts, University of Zagreb. From seventies from the previous century she has participated continuously in scientific projects financed by the Ministry of Science, Education and Sports. She is the project manager of national scientific projects of the mentioned Ministry as well as of the bilateral Croatian-Slovene project of cooperation in the field of science and technology.
She published the investigation results in six books of international publishers (chapters), she also published about hundred scientific and technical papers in magazines and she has about two hundred participations in international congresses.
Except at the Faculty of Graphic Arts, she teaches on the Master's and doctoral courses at the University in Zadar, and the University in Slovenia. She is the tutor of about hundred diploma papers, several Master's thesis and doctoral thesis.
She is the regular member of the Academy of Technical Sciences of Croatia.

Date of last election

Referent publications of lecturer

1. Z.Bolanča, D.Agić, K.Bauer, Chapter in book: Advances in Digital Printing, A.J. Bristow (Ed), PIRA International Ltd, Surrey, UK, (2000), 53
2. Bolanča I., Bolanča Z., The Characteristic of Recycled Fibres in the Function of the Natural and Accelerated Ageing of Prints, Chapter in book Waste Management, Wit Press, 2004, 153
3. Barbarić Mikočević Ž., Oreščanin V., Bolanča Z., Lulić S., Rožić M., Heavy Metals in the Products of Deinking Flotation of Digital Offset Prints, Journal of Environmental Science and Health, Part A- Toxic/Hazardous Substances& Environmental Engineering A39(2004), (11-12), 2883-2895
4. Bolanca Z., Bolanca I., The Optical Properties of the Deinked Pulp, The Journal of Imaging Science and Technology, 49 (2005),(3)
5. Z. Bolanča, D. Agić, I. Bolanča, Chemical Deinking of Non-impact Prints, Acta Graphica, 14(2002), (1-2), 1-10

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1. Z.Bolanča, D.Agić, K.Bauer, Chapter in book: Advances in Digital Printing, A.J. Bristow (Ed), PIRA International Ltd, Surrey, UK, (2000), 53
2. Bolanča I., Bolanča Z., The Characteristic of Recycled Fibres in the Function of the Natural and Accelerated Ageing of Prints, Chapter in book Waste Management, Wit Press, 2004, 153

3. Barbarić Mikočević Ž., Oreščanin V., Bolanča Z., Lulić S., Rožić M., Heavy Metals in the Products of Deinking Flotation of Digital Offset Prints, Journal of Environmental Science and Health, Part A- Toxic/Hazardous Substances& Environmental Engineering A39(2004), (11-12), 2883-2895
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5. Z. Bolanča, D. Agić, I. Bolanča, Chemical Deinking of Non-impact Prints, Acta Graphica, 14(2002), (1-2), 1-10

II.4.8. Optimal number of students

Optimal number of students with regard to the space, equipment and the number of lecturers us between 30 and maximally 50.

II. 4.9. Costs evaluation of the doctoral Study

The current costs which the students have to pay for the three year doctoral study are 42.000,00 kn. This price covers the operating expenses, the minimal expenses for teaching but it does not cover the experimental part of the doctoral thesis

II. 4.10. Financing of the doctoral study

The doctoral program is financed exclusively by the school fee of the students. They either pay by themselves or they get paid by the institution in which they work. If the students are junior researchers, the school fee is partly refunded by the Ministry of science, education and sports with the support of scientific projects, which they are scientific active on.

II. 4.11. Quality of the doctoral study

During the study the students evaluate the quality and the successfulness of the doctoral study via students' anonymous polls. In the same way, by means of polls, they monitor the improving of the doctoral study and the professional Council of the study only performs the evaluation process of the mentioned course.