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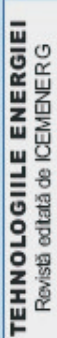
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# 3rd International Conference on Energy and Environment 2007

**Challenges of Clean Energy  
Production and Use**

# Final Programme



## Scientific committee

Gerard Antonini	Université Technologique de Compiègne;
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Victor Athanasovici	Universitatea Politehnica din Bucuresti;
Adrian Badea	Universitatea Politehnica din Bucuresti;
Paulo Bagio	Universita degli Studi di Trento;
Gabriel Bazacliu	Universitatea Politehnica din Bucuresti;
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Monique Lallemand	INSA Lyon;
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Dario Zaninelli	Politecnico di Milano.

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Adrian Badea

### **Secretary:**

Horia Necula

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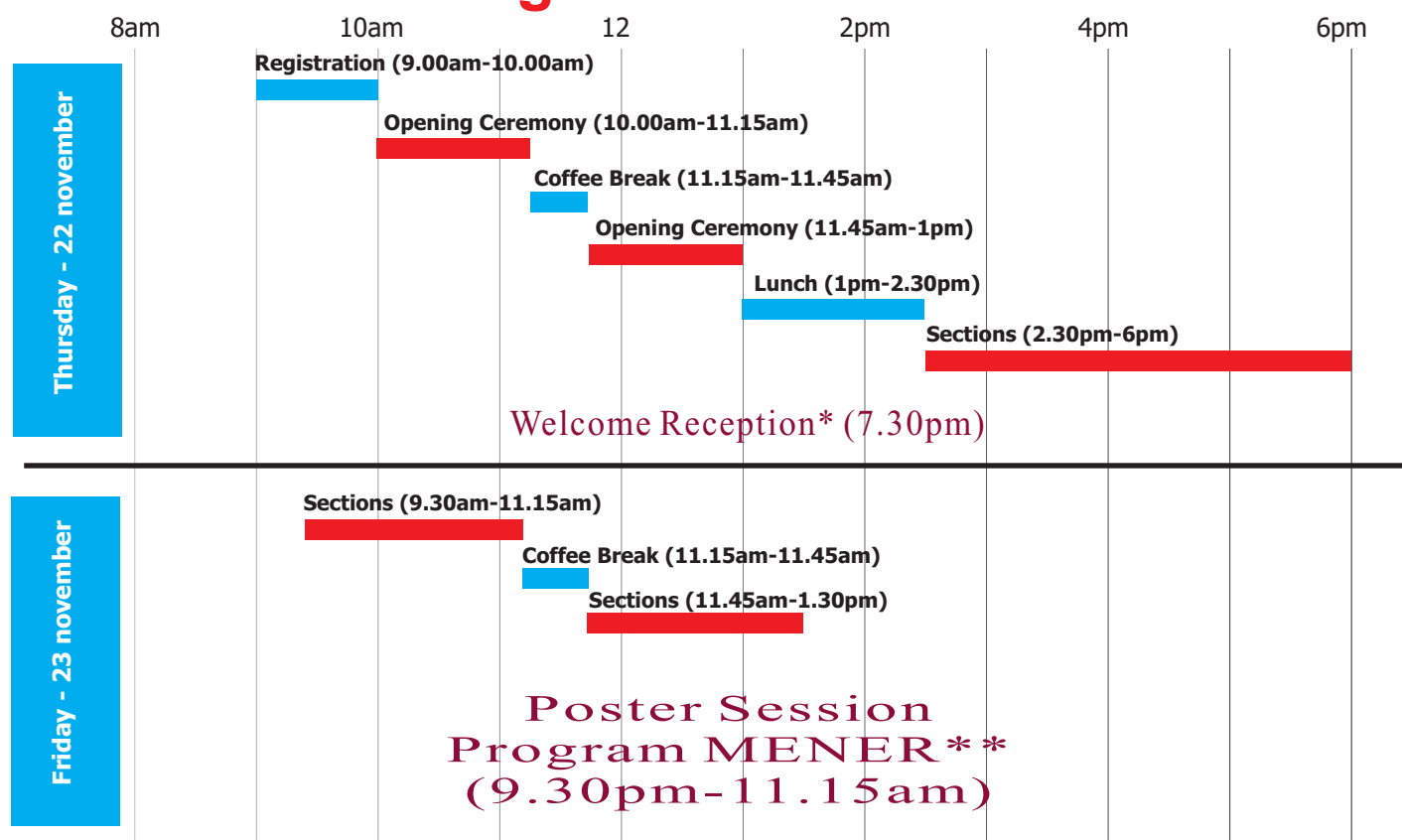
Gabriel Bazacliu;  
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Dan Robescu;  
Constantin Bulac;  
Sanda Carmen Georgescu;  
Ion Tristiu

Gheorghe Balan;  
Mircea Eremia;  
Bogdan Popa;  
Gheorghe Lazarioiu;  
Virgil Dumbrava;  
Carmen Anca Safta;

### **Editing and informatics resort:**

Tudor Petrovici & Adrian Nicolae Stan

# Conference Program



\* Cocktail - Restaurant Caro - Hall "Caro Grand Ballroom" (Bd. Barbu Vacarescu nr. 164 A, Sector 2, Bucharest)

\*\* Poster Session - Research of Excellence - Program MENER ("RECTORAT")

## Opening Ceremony (SENATE HALL)

Conference Opening (Adrian Badea, President CIEM 2007)

Welcome Messages

*Invited speakers:*

Slav Slavov, World Energy Council - Europe Coordinator

Iulian Iancu, President of Romanian National Committee - World Energy Council

Dario Zaninelli, Professor - Politecnico di Milano

## Sections

**Section 1. Renewable Energies** (room ENc)

22.11.2007, 2.30pm - 6.00 pm

23.11.2007, 9.30am - 1.30pm

**Section 2. Energy Efficiency** (room EH110)

23.11.2007, 9.30am - 1.30pm

**Section 3. Intelligent Electrical Networks** (room EI 204)

23.11.2007, 9.30am - 1.30 pm

**Section 4. Clean Technologies** (room EH 017)

22.11.2007, 2.30pm - 6.00 pm

23.11.2007, 9.30am - 1.30pm

**Section 5. Wastes Management** (room ELa 023)

23.11.2007, 9.30am - 1.30pm

**Section 6. Environmental Energy Impact** (room ELA 024)

22.11.2007, 2.30pm - 6.00 pm

**Section 7. Hydro-Power Engineering and Water Management** (room ELA 217)

22.11.2007, 2.30pm - 6.00 pm

23.11.2007, 9.30am - 1.30pm

**Section 8. Nuclear Energy** (room ENb 104)

22.11.2007, 2.30pm - 6.00 pm

## Section 1. Renewable Energies (room ENc)

**Chairman: Adrian Badea**

**Referees: Michel Feidt, Gheorghe Olteanu (22.11.2007)**

**Referees: Dan Gheorghiu, Adrian Ciocanea, Roberto Baggio (23.11.2007)**

### Plenary Session

Thursday 22.11.2007

*Solutions for reducing dissolved hydrogen sulphide in the black sea by electrochemical oxidation* (Adrian Ciocanea, Sanda Budea, Gabriel Radulescu)

*Micro wind power turbine with extension of the maximum admissible wind speed* (Petru Bedros Naianu, Gheorghe Mihai Mihaiescu, Sergiu Nicolaie)

*Wave energy of the Romanian coastwise* (Mircea Degeratu, Georgeta Bandoc, Nicolae Alboiu, Liviu Hașegan)

*Valorisation des biocarburants dans les moteurs à combustion interne* (Anamaria Constantinescu, Michel Feidt, Adrian Badea)

*Private investment for building a small hydropower plant at Zetea Dam basis* (Florica Popa, Adina Paraschivescu, Aurelia Vlădescu, Bogdan Popa)

*On the kinematic of the traveler wave* (Mircea Dimitrie Cazacu, Dan Aurel Machita)

*Modelling and experimentation with a direct fired 20 KWE gas turbine wood gasifier* (Cristian Cărlănescu, Ionuț Porumbel, Cornel Sandu, Alexandru Marin, Erol Murad, Viorel Puiu Păun)

Friday 23.11.2007

*Life cycle assessment of hydrogen energy pattern* (Lynda Aissani, Patrick Rousseaux, Jacques Bourgois, Laurent Perier Camby, Philippe Sessiecq, Florent Jabouille, Sébastien Loget)

*Optimizing the operation of biogas plants* (Gheorghe Băran, Corina Alice Băbuțanu, Florentina Bunea, Gabriela Oprina, Lucian Mândrea)

*Energy performance of the biomass gasification process* (Paolo Baggio, Marco Baratieri, Maurizio Grigante)

*Using renewable sources in the pulp and paper mills* (Aneta Hazi, Gheorghe Hazi)

*"SOLARIS" Project - A modern technology for integration of cold/warm, solar, heat pumps and energy efficiency concepts in buildings* (Dan Teodoreanu, Nicolae Ionescu, Cristian Ganea, Viorel Ursu, Paul Pencioiu)

*Optimization of a SOFC system: influence of design and operation parameters on system efficiency* (Gheorghe Lazaroiu, Umberto Desideri, Dana Radoi)

*The environmental assessment of the wood combustion* (Cristian Dinca, Adrian Badea, Tiberiu Apostol)

*Capitalization of renewable energy sources: Romanian case studies* (Mihai Marius Voronca, Mihai Cruceru)

*Dynamic model used to investigate the influence of operating conditions on the behavior of commercial PEMFC* (Gabriel Lazaro Pavel, Michele Cali, Adrian Badea, Massimo Santarelli, Paolo Spinelli, Pietro Asinari, Carlotta Francia)

### Poster Session

*Technical and economical assessment of integrated collector storage solar water heaters* (Horia Ionut Petcu)

*Promovarea surselor regenerabile de energie, obiectiv major al ICEMENERG* (Gheorghe Păuna, Gheorghe Olteanu, Ion Turcu)

*Ecological boat using the renewable energies* (Mircea Dimitrie Cazacu, Gheorghe Mihai Mihaiescu, Sergiu Nicolaie)

*Towards the use of renewable energy sources in the home* (Adriana Alexandru, Elena Jitaru, Rayner Mayer, Ovidiu Bica, Cristina-Adriana Alexandru)

*National standardization in European framework - technical support for developing wind power generation systems* (Tatiana Scărlătescu, Viorel Ursu, Dan Ilie Teodoreanu)

*Renewable energy systems for rural areas* (Gabriel Negreanu, Ionel Pișă)

*Integrated automation system for a pilot plant for energy conversion using PEMFCs* (Mihai Culcer, Mariana Iliescu, Mircea Raceanu, Vasile Stanciu, Ioan Stefanescu, Pavel Gabriel Lazaro, Gheorghe Lazaroiu, Adrian Badea, Adrian Enache)

*PORSCHÉ București Vest 2, un exemplu de valorificare complexă a energiei pământului* (Alex Aposteanu, Radu Polizu, Robert Gavriluc)

## Section 2. Energy Efficiency (room EH110)

**Chairman: Gabriel Bazacliu**

**Referees: Corneliu Radulescu, Iolanda Colda, Jean-Marie Revaz**

### Plenary Session

- A multi-agent genetic algorithm for the solution of the economic dispatch problem* (Irina Ciornei, Elias Kyriakides)
- Energy efficiency approach of the clear water systems rehabilitation* (Mircea Grigoriu, Doina Cornelia Dinu, Gheorghe Ciobanu)
- Modeling an air-conditioning plant within the TRNSYS environment* (Andrei Damian, Iolanda Colda, Catalin Teodosiu)
- Ecological fire protection materials to increase safety in energy equipments* (Lelian Cioroianu, Gabriela Cioroianu, Minodora Leca, Marie Jeanne Popovici, Gabriela Damian, Catalina Costea, Ana Maria Matei)
- Energy and exergy analysis of hot water distribution networks* (Carmen Ema Panaite, Aristotel Popescu, Daniela Popescu)
- System of dates acquisition for the temperature monitoring at the induction heating for the sticking of the connections in electrical machines coils* (Dragos Anghel, Catalin Doros, Felicia Anghel, Razvan Barbieru)
- Methods for simulating heat consumption* (Daniela Popescu, Florina Ungureanu, Dorin Ivana, Nicolae Butnaru)
- Investment portfolio and portfolio investments for a sustainable development* (Mihai-Marius Voronca, Roxana Dumitrescu, Anca Fodi, Adrian Marin)
- Aspects regarding fouling of steam condenser a case study* (Roxana Grigore, Adrian Badea)
- Economie d'energie par stockage du froid* (Constantin Ionescu, Horia Necula, Adrian Badea)
- Load profiling* (Virgil Dumbrava, Gabriel Bazacliu, Theodor Miculescu)

### Poster Session

- About the permanent magnet synchronous machine in wind power applications* (Eleonora Darie, Emanuel Darie, Valentin Tcancenco)
- Comercial financial in the field of rational use of energy (RUE) possible and necessary* (Mihai-Marius Voronca, Mihai Cruceru)
- New anticorrosive protections for the rotary air preheaters in energetical instalations* (Adriana Bantas, Lelian Cioroianu, Gabriela Cioroianu, Minodora Leca, Alexandra Pica, Elisabeth-Jeanne Popovici, Dan Gheorghe)
- The development of the legal framework and competitive environment in electric power sector* (Silvia Vlasceanu)

Friday 23.11.2007

## Section 3. Intelligent Electrical Networks (room EI 204)

**Chairman: Mircea Eremia**

**Referees: Dario Zaninelli, Gheorghe Cartina, Dorin Cristescu**

### Plenary Session

*A microturbine model including its control for the investigation of the effects of distributed generation in distribution networks* (Samuele Grillo, Stefano Massucco, Andrea Morini, Andrea Pitto, Federico Silvestro)

*Identifying plausible cascading events in system stability assessment* (Bogdan Otomega, Thierry Van Cutsem)

*Optimal placement of FACTS devices by evolutionary multiobjective optimization* (Daniel Radu, Yvon Besamger)

*Optimal reactive power flow methodology in power systems with secondary voltage control* (Valentin Ilea, Mircea Eremia, Alberto Berizzi)

*Optimal reconfiguration of the distribution networks in uncertainty conditions* (Gheorghe Cârțină, Gheorghe Grigoraș)

*Geographic information system (GIS) an integrated technology for distribution systems* (Gheorghe Grigoraș, Gheorghe Cârțină, Virgil Alexandrescu)

*Energetic sustainable applications in railway stations* (Roberto Faranda, Sonia Leva)

*Comparative study of ten maximum power point tracking algorithms for photovoltaic system* (Roberto Faranda, Sonia Leva, Vincenzo Maugeri)

*DG park: system and control optimisation for improving power quality* (M. Brenna, G. C. Lazaroiu, G. Superti Furga, E. Tironi)

*Artificial neural networks application in dynamic security assessment* (Constantin Bulac, Mircea Eremia, Ion Triștiu, Andreea Erbașu, Bogdan Otomega)

*Multi-criteria analysis for optimal placement of dispersed generators in distribution electric networks* (Ion Triștiu, Mircea Eremia, Constantin Bulac, Lucian Toma)

*An optimal management of electrical consumption for suppliers and consumers: issue, challenges and opportunities for innovative services* (G. Cherix, J.M. Revaz, M. Eremia, I. Tristiu)

*Transmission network expansion planning using genetic algorithms* (Ioana Pisciă, Gareth Taylor)

*Economic estimation of customers power quality perturbations* (G. Esposito, N. Golovanov, G. C. Lăzăroiu, D. Zaninelli)

*Materials with low environmental impact to be used in electric power engineering* (Bogdan Nicoară, Marian Costea)

### Poster Session

*Technical and economical analysis of trading ancillary services for frequency regulation in Romania* (Lucian Toma)

*Controlled switching probability distribution evaluation* (Ciprian Nemes, Florin Munteanu, Dumitru Ivas)

*Protective relay with improved performances, based on DFT method* (Călin Mucichescu, Basarab Dan Guzun)

*Geo-informatics in sustainable electrical energy developing* (Mircea Băduț)

*New trend in design and construction of signal and power cables that prevent environment pollution* (Aurel Ionescu, Florin Salmen, Gheorghe Florescu)

*The intelligent control of an induction motor* (Eleonora Darie, Emanuel Darie, Valentin Tcancenco)

*Implementation of fuzzy logic in power engineering using virtual instrumentation* (Andrei Cziker, Mircea Chindris, Anca Miron)

*Analiza comparativă a normelor, reglementărilor și aspectelor legislative pe plan național și internațional privind limitele admise de câmp magnetic în contextul actual* (Dorin Cristescu, Ana-Maria Dicu)

*The efficiency of two-winding three-phase transformers in harmonic and unbalanced regime* (Cornel Toader, Petru Postolache, Nicolae Golovanov, Dan Florica, Radu Florin Porumb, Laurentiu Lipan)

*Sustainable development and power quality in urban electrical networks* (Laurentiu Lipan, Petru Postolache)

*Gestion de l'énergie dans l'industrie* (J. M. Revaz, G. Cherix, O. Maerean, I. Tristiu, C. Matas, A. Morlière)

## Section 4. Clean Technologies (room EH 017)

**Chairman: George Darie**

**Referees: Ioana Ionel, Carmen Neagu, Florin Alexe (22.11.2007)**

**Referees: Carmencita Constantin, Victor Athanasovici (23.11.2007)**

### Plenary Session

Thursday 22.11.2007

*Tehnologii curate de producere a energiei (General Electric)*

*To the problem of free gas flow modeling in the energy efficient stove for private house and office (Alexey Bobkov, Ivan Kazachkov, Igor Kuznetsov)*

*The influence of flue gas desulphurization implementation on lignite combustion power plants performance (Adrian Albeanu, Viorel Tudor)*

*Sulfur dioxide emission reduction from power plants - case study (Magdalena Matei, Lucian Matei, Ciprian Ana, Otilia Nedelcu, Simona Mihaescu, Laura Matei, Barbara Soare)*

*Experimental results concerning flue gas cleaning technologies applying SNCR and combined methods (Ioana Ionel, Francisc Popescu, Gavrilă Trif Tordai, Corneliu Ungureanu, Alexandru Savu, Daniela Ionela Ciolea, Carmencita Constantin)*

*Computational case study of biomass co-combustion in a pilot fluidised bed reactor (Paul-Dan Oprișă-Stănescu, Ioana Ionel, Vasile Gruescu, Gavrilă Trif Tordai, Corneliu Ungureanu)*

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*Design & construction of a prototype modular system for industrial gases depollution (Viorel Serban, Madalina Zamfir, George Ciocan, Marian Androne, Ioana Florea, Ilie Prisecaru, George Darie)*

*The energetic revaluation, by burning, of the combustible sludge resulted from the paper producing industry (Manuela Elena Georgescu, Vasile Matcașu, Elena Popa, Tudor Prisecaru, Ionel Pișă, Lucian Mihăescu)*

*Technical optimization of the regenerative preheat line temperature growth's repartition, for reheat steam cycles (Florin Alexe, Victor Cenușă, Horia Petcu)*

*Computer modeling of power generation gas turbines, issued from turbojet or turbofan air propellers (Victor Cenușă, Florin Alexe)*

*Expert system for steam turbines driving (Nicolae Mihăilescu, Sebastian Alexiu)*

*The influence of energy demand over the optimal sizing, from a technical-economical point of view, of cogeneration plants equipped with a gas engines (Alexandru Cosmin Pavel)*

*Experimental research on co-combustion process of pit coal with agricultural biomass (Ioana Ionel, Gavrilă Trif Tordai, Adrian Tenche, Dumitru Cebrucean, Alexandru Savu)*

*Carbon dioxide separation from co-combustion process of fossil fuels with biomass (Dumitru Cebrucean, Ioana Ionel, Alexandru Savu, Corneliu Ungureanu, Luisa-Izabel Dungan)*

*Integration of ecologically sustainable development into the power plants waste managements strategies in Romania (Andreia Petcu, Horia Ionuț Petcu)*

Friday 23.11.2007

### Poster Session

*Mathematical designing of correction diagrams for steam turbines (Nicolae Mihailescu, Sebastian Alexiu)*

*Optimal work conditions determination for DKUL 50-1 steam turbine (Nicolae Mihailescu, Sebastian Alexiu)*

*The impact of European environmental regulation on co-generation heat and power plant (Magdalena Matei, Lucian Matei, Cornel Salisteanu, Iulian Udrouiu, Otilia Nedelcu, Laura Matei, Traian Ivanovici)*

## Section 5. Wastes Management (room Ela 023)

**Chairman: Tiberiu Apostol**

**Referees: Marco Ragazzi, Nicolae Mihailescu**

### Plenary Session

*Municipal wastes as a possible energy source for a city* (Roxana Pătrașcu, Cora Gheorghe, Adriana Pribeanu)

*The effect of superficial gas velocity on bubble size distribution in diffused aeration systems* (Irina Pincovschi, Gabriela Oprina, Florentina Bunea)

*Wastewaters sewage sludge disposal by pyrolysis and oxycombustion treatments* (Marco Ischia, Chiara Perazzolli, Roberto Dal Maschio, Lorenzo Tognana, Marco Ragazzi)

*Waste pre-treatment before final disposal: the Romanian perspective* (Elena Cristina Rada, Marco Ragazzi, Tiberiu Apostol, Valeriu Panaitescu, Marina Venturi)

*Refuse derived fuel and the industrial sector: the Romanian perspective* (Marco Ragazzi, Elena Cristina Rada, Tiberiu Apostol, Alessio Franzinelli, Stefano Odorizzi)

*University and industry cooperation for zootechnical waste management optimisation* (Matteo Zandonai, Marco Ragazzi, Elena Cristina Rada, Tiberiu Apostol)

*Working parameters evaluation of the stand of hydrodynamic performances of valves* (Carmen Anca Safta, Gheorghe Băran, Mircea Dimitrie Cazacu)

*Solid waste to energy solutions for small and medium scale power generation* (Cosmin Mărculescu, Adrian Badea, Tiberiu Apostol)

*The HRA<sub>IRC</sub> software for assessing the human health risk from Waste-to-Energy Plants* (Diana Cocârță, Marco Ragazzi, Adrian Badea, Tiberiu Apostol)

*Technical and economical concepts in using the wastewater transport pipes as a pre-treatment method* (Cătălina Raluca Mocanu, Dan Robescu)

### Poster Session

*Biodegradable waste treatments Technical aspects* (Carmencita Constantin, Ramona Jelescu, Radu Filip)

*Waste management practical approach* (Mircea Grigoriu, Elena Dumitru, Doina Dinu)

*Efficient surface aerator for waste water treatment* (Mircea Dimitrie Cazacu, Iuliana Monica Boiangiu)

*Effective solution for municipal waste waters station sludge* (Mircea Grigoriu, Gheorghe Ciobanu, Anton Beioglu)

Friday 23.11.2007



## Section 6. Environmental Energy Impact (room Ela 024)

**Chairman: Dan Robescu**

**Referees: Margareta Nicolau, Michel Toussaint**

### Plenary Session

*Transport of reactive pollutants in groundwater. Theoretical and numerical approaches* (Anca Marina Marinov, Mihaela Amalia Diminescu)

*The influence of velocity variability on pollutant dispersion in groundwater* (Anca Marina Marinov, Mihaela Amalia Diminescu)

*Comparison between chemical and electrochemical techniques for the remediation of PAH contaminated sediments* (Irina Aura Oprea, Elisa Ferrarese, Adrian Badea, Giuliano Ziglio, Gianni Andreottola, Marco Ragazzi, Tiberiu Apostol)

*The principal risks caused by the fire* (Oleg Susan, Valeriu Panaitescu)

*Potassium permanganate oxidation treatment for the polycyclic aromatic hydrocarbons contaminated soils* (Lionel Choplin, Gheorghe Lăzăroi, Cătălina Raluca Mocanu)

*The determination of the production energy costs for different cogeneration systems applying the ECO-taxes - Case analysis* (Roxana Pătrașcu, Cora Gheorghe)

*Adjustment of Bánki hydraulic turbine in order to obtain electrical energy from wind potential* (Ioana Corina Moga, Diana Robescu, Dan Robescu, Mircea Bărglăzan)

*Environmental databases for Iron Gates Hydropower Stations* (Daniela Vasiliu, Stefania Sbârcea, Dragoș Ion Guță, Marius Bontos)

*Modeling of attached growth biological wastewater treatment processes* (Diana Robescu, Dan Robescu, Raluca Mocanu, Corina Moga)

*Oxygen consumption in benthic sediments: Experimental analysis of the temperature influence on sediment oxygen demand* (Maurizzio Righetti, Gabriela Dumitran, Dan Robescu, Cristian Teodoru, Aurelia Călin)

*Ecological footprint as a method for socio-ecological systems approach* (Adrian Ciocănea)

### Poster Session

*Aspects regarding the impementation of guidelines for the monitoring and reporting of Greenhouse gas emissions* (Carmencita Constantin, Irene Roxana Samoilă, Oana Nihfidov)

*The research of the emergency situations consequences over the environment in underground transportation. Seismic stability of Metro tunnels by a Finite Element program* (Cătălin Netcu, Valeriu Panaitescu)

*Effects of fire on air* (Ion Anghel, Constantin Popa, Valeriu Panaitescu)

*Effects of fire on soil and water* (Constantin Popa, Mihai Poenaru, Cătălin Netcu, Valeriu Panaitescu)

*Bioremediation systems for contaminated soil and ground water* (Gabriela Elena Dumitran)

*Environmental impact of low frequency electromagnetic fields produced by electric power installations* (Marian Costea)

*The European integrated energy-climate change strategy Direct implication for Romania* (Magdalena Matei, Lucian Matei, Otilia Nedelcu, Simona Mihăescu, Laura Matei, Barbara Soare)

*Effects of environmental conditions to online process and risk monitoring of power systems* (Gheorghe Florescu, Valeriu Panaitescu, Aurel Ionescu, Mihail Cojan, Mirela Nitoi, Minodora Apostol, Mita Farcasiu)

*Elements of impact on the environment as a result of a fire at the fuel ground of a thermoelectric power station* (Gheorghe Lupu, Daniel Ivascu, Valeriu Panaitescu)

*The danger of smoke presence for the buildings ocupants and its management in the event of a fire* (Oleg Susan, Constantin Țuleanu, Daniel Lazar)

*Assesment of SHP's effects onto environment* (Liana-Ioana Vuță, Gabriela Dumitran, Mihaela Diminescu, Georgiana Dunca, Viorica Nistreanu)

*Geochemical atlas of heavy metals from the soils of the Iași city and surroundings Preliminary data* (Ovidiu Gabriel Iancu, Nicolae Buzgar, Laviniu Apostoae, Radu Lăcătușu, Emanoil Gandrabura, Ciprian Popa, Eugen Teodorescu-Soare, Mihaela Lungu, Oana Stan, Cristian Patriche)

*The use of the electromagnetic actuators in Diesel fuel injection systems which are EURO 2 and EURO 3 norm with compliance* (Lucian Pîslaru-Danescu, Valeriu Nicolae Panaitescu, Mircea Ignat, Victor Stoica)

*Promotion and juridical protection of social value associated to "energy" and "environment"* (Gabriel Poenaru)

## Section 7. Hydro-Power Engineering and Water Management (room Ela 217)

**Chairman: Eugen Constantin Isbăşoiu**

**Referees: Mircea Bărglăzan, Virgil Petrescu**

### Plenary Session

*An evaluation of drag reduction effect in turbulent flows of fluids with polymer additives* (Cornelia Marieta Chiuşdea)

*Influence de la geometrie amont sur les caractéristiques au pompage des compresseurs centrifuges* (Michel Toussaint)

*Two-dimensional simulation of the unsteady flow through the Achard turbine: COMSOL Multiphysics versus Fluent results* (Sanda-Carmen Georgescu, Andrei-Mugur Georgescu, Sandor Ianos Bernad)

*Pumping stations operating parameters upon a variable demand, determined numerically for the water distribution network of Oradea* (Andrei-Mugur Georgescu, Sanda-Carmen Georgescu, Tudor Petrovici, Magda Culcea)

*Transient behavior analysis. Study case: pumping station Gâlceag* (Georgiana Dunca, Diana Maria Bucur, Eugen Constantin Isbăşoiu, Constantin Călinoiu)

*Contributions to the analysis of nutrients exchange in a lacustrine ecosystem* (Raluca Iancu, Gabriela Dumitran)

*Water jet control technique for swirling flows in Francis turbines diffuser* (Sebastian Muntean, Romeo Susan-Resiga, Alin Bosioc, Sandor Bernad, Ioan Anton)

*Development a new test rig for analysis and control of swirling flows* (Alexandru Baya, Alin Bosioc, Adrian Stuparu, Sebastian Muntean, Romeo Resiga, Teodor Miloş, Liviu Eugen Anton)

*Typification of SHP's development* (Liana-Ioana Vuţă, Diana Bucur, Mihaela Diminescu, Valeriu Nistreanu)

*Suitability of achieving a hydropower development at Măcin on the Danube River* (Gabriela Dimu, Cornelia Codreanu, Manuela Nicolescu, Bogdan Popa)

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*Increasing the energy performance of Iron Gates I HPP through refurbishment and upgrading activities* (Bedros Petru Naianu, Mihai Ionescu, Elena Popescu, Traian Lăcătuşu)

*CAD techniques used to obtain the blade surface intersections with horizontal cutting planes for Francis turbine runner* (Teodor Miloş, Mircea Bărglăzan)

*An ecological decision tool for new small hydroelectric plants on Alpine rivers and streams in Trentino, Italy* (Paolo Negri, Maurizio Siligardi, Catia Monauni, Sabrina Pozzi, Raffaella Canepel)

*Theoretical investigations of temperature variation in torque converters operating with two-phase flow* (Mircea Bărglăzan, Eugen Dobândă, Teodor Miloş, Cătălin Daniel Stroiţă)

*Experimental results of temperature variation in torque converters operating with two-phase flow* (Mircea Bărglăzan, Adriana Manea, Cornel Velescu, Cătălin Daniel Stroiţă)

*Boundary Element Method applied to axial aerodynamic profiles cascade* (Ionel Doru Baci, Mircea Bărglăzan)

### Poster Session

*Arranging dissimilar centrifugal pumps in series and parallel* (Hassan Haydar)

*The study of the behaviour of the Galbeni channel* (Lucian Mândrea, Florentina Bunea, Gabriela Oprina, Gheorghe Băran)

*Composite material for plating the axial bearings of hydrogenerators* (Lelian Cioroianu, Lucia Lăcătuşu)

*Hydro-energy production and water works face to face with "Environmental Flow Approach" in Romania* (N. Mihailescu, Al. Varduca, Liviu N. Popescu, Ioana Cristina Varduca)

*Micro Hydro Power Station "Professor Dorin Pavel" with many utilities* (Mircea Cazacu, Ovidiu Gabor, Dan Basarab Guzun)

*Groundwater flow simulation using FEM. case study Motru Dam* (George Cătălin Tilea, Cătălin Popescu)

*Dam removal sedimentation evaluation. Case study Vadeni Dam* (George Cătălin Tilea, Cătălin Popescu)

*The potential of the hydro-power arrangements of rivers and basins in Republic of Moldova* (Petru Pleşca, Eugen Pleşca)

*The recovery and the preservation of the energy of the water supply systems from Republic of Moldova* (P. Pleşca, A. Pleşca)

*Refurbishment and upgrading the Lower Olt HPP-s An important contribution to increasing Hidroelectrica's capacity of providing ancillary services* (Bedros Petru Naianu, Mihail Ionescu, Elena Popescu, Florin Puiu)

*Notes on the optim design of turbotransmissions, regarding a hydrodynamic torque converter of Lysholm Smith type* (Eugen Dobândă, Mircea Bărglăzan)

*About the braking of linear hydraulic motors at the end of motion* (Ilare Bordeaşu, V. Bălăşoiu, Anton Hadăr, Rodica Bădărău, Mircea Popoviciu, Johann-vValentin Krier)

*Theoretical determination of characteristic curves of first class torque converters operating with two-phase flow* (Cornel Velescu, Mircea Bărglăzan, Cătălin Daniel Stroiţă)

*Experimental results and procedure for the analysis of flow in proportional control valve* (Victor Bălăşoiu, Călin Raszga, Mircea Popoviciu, Ilarie Bordeaşu)

Thursday 22.11.2007

Friday 23.11.2007

## Section 8. Nuclear Energy (room Enb 104)

**Chairman: Ilie Prisecaru**

**Referees: Petre Ghitescu, Teodor Chirica**

### Plenary Session

*CANDU severe accident analysis* (Gheorghe Negut, Alexandru Catana, Ilie Prisecaru, Daniel Dupleac)

*Modelling of a corium progression in reactor vessel and containment during severe accidents at NPP* (Sejed Aslkhademi, Ali Mogaddam, Ivan Kazachkov)

*Void effect studies concerning advanced CANDU fuel projects* (Cristian-Andrei RizoIU, Iosif Prodea)

*Pressure drop variation as a function of axial and radial power distribution in CANDU fuel channel with standard and CANFLEX 43 bundles* (Alexandru Catana, Nicolae Danila, Ilie Prisecaru, Daniel Dupleac)

*Reactor, turbine and feedwater regenerative system - Assembly behavior* (Melania Biġu, Mircea Tenescu, Iulian Pavel Nita, Ilie Prisecaru, Daniel Dupleac)

*PSA support safety analysis using RELAP5 for the reactivity insertion event at TRIGA 14 MW reactor* (Mirea Mladin, Daniela Mladin, Ilie Prisecaru, Nicolae Danila, Daniel Dupleac)

*CANDU-6 NPP life extension aspects* (Dan Vidican, Marian Badea, Virgil Ionescu, Ilie Prisecaru, Daniel Dupleac)

*CANDU fuel cycle economic efficiency assessments using the IAEA-Message-V Code* (Iosif Prodea, Cristina Alice Margeanu, Corina Aioanei)

*Romanian knowledge transfer network in nuclear physics and engineering REFIN* (Petre Ghitescu, Ilie Prisecaru)

*Isolation of I&C cabinets against shocks, vibrations and seismic movements* (George Ciocan, Madalina Zamfir, Ioana Florea, Marian Androne, Viorel Serban, Ilie Prisecaru)

### Poster Session

*Modelling human factor with PETRI Nets* (Basarab Guzun, Luminița Bedreaga)

*Impact of nuclear information on the public acceptance. Case study for young people in Cernavoda and Pitesti towns* (Marin Constantin, Daniela Diaconu)

*The dependence level analysis between the human actions for research reactors* (Mita Farcasiu, Mirela NitOI, Minodora Apostol, Gheorghe Florescu, Ilie Turcu)

*Radiological safety system based on real-time Tritium-in-air monitoring in working areas and gaseous effluents* (Nicolae Bidica, Nicolae Sofalca, Ovidiu Balteanu, Iuliana Stefan)

*Cernavoda NPP steam generator analysis* (Budu Madalina, Budu Andrei)

*Cernavoda NPP: Status of Romanian nuclear power since 10 years of operation* (Teodor Chirica, Alexandru Havris, Ilie Prisecaru, Daniel Dupleac)

*Impact of the alternative fuel with Plutonium and minor actinides on a CANDU reactor* (Balas (Ghizdeanu) Elena Nineta, Nicolae Danila)

*Environmental impact of a radioactive waste container for the spent nuclear fuel* (Alexandru Octavian Pavelescu, Dan Gabriel Cepraga)

*World market potential for district heating* (Monica-Cristina Dumitrescu)

*Elastic couplings with damping for to reduce the shocks and vibrations at equipment and to enhance their reliability* (Zamfir Madalina, George Ciocan, Marian Androne, Viorel Serban, Ioana Florea, Ilie Prisecaru)

Thursday 22.11.2007