



ACADEMY OF  
ROMANIAN SCIENTISTS



University POLITEHNICA of Bucharest  
Romanian National Committee of World Energy Council



with the support of:



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of Timisoara



The "Gheorghe Asachi"  
Technical University of Iasi

# 4<sup>th</sup> International Conference on Energy and Environment 2009

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# Final Program



## International Conference on Energy and Environment

The International Conference on ENERGY and ENVIRONMENT (CIEM) is organised by the University POLITEHNICA of Bucharest, University POLITEHNICA of Timisoara, The "Gheorghe Asachi" Technical University of Iasi and WEC-Romanian National Committee in collaboration with the main Romanian companies, agencies and associations from the energy and environment sectors. The Conference is held also under the auspices of Romanian Academy and Academy of Romanian Scientists. The aims of CIEM is to respond to challenges in the rapidly developing fields of Power Engineering and Environmental Engineering, and to inspire both research studies and practical applications by promoting interaction among scientists from universities, research institutions, and industry.

Like the previous events, CIEM2009 will provide an ideal venue for the development of new partnerships.

We look forward to welcoming you to Bucharest.

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**Editing and informatics resort:** Tudor Petrovici; Adrian Nicolae Stan

**4<sup>th</sup> International  
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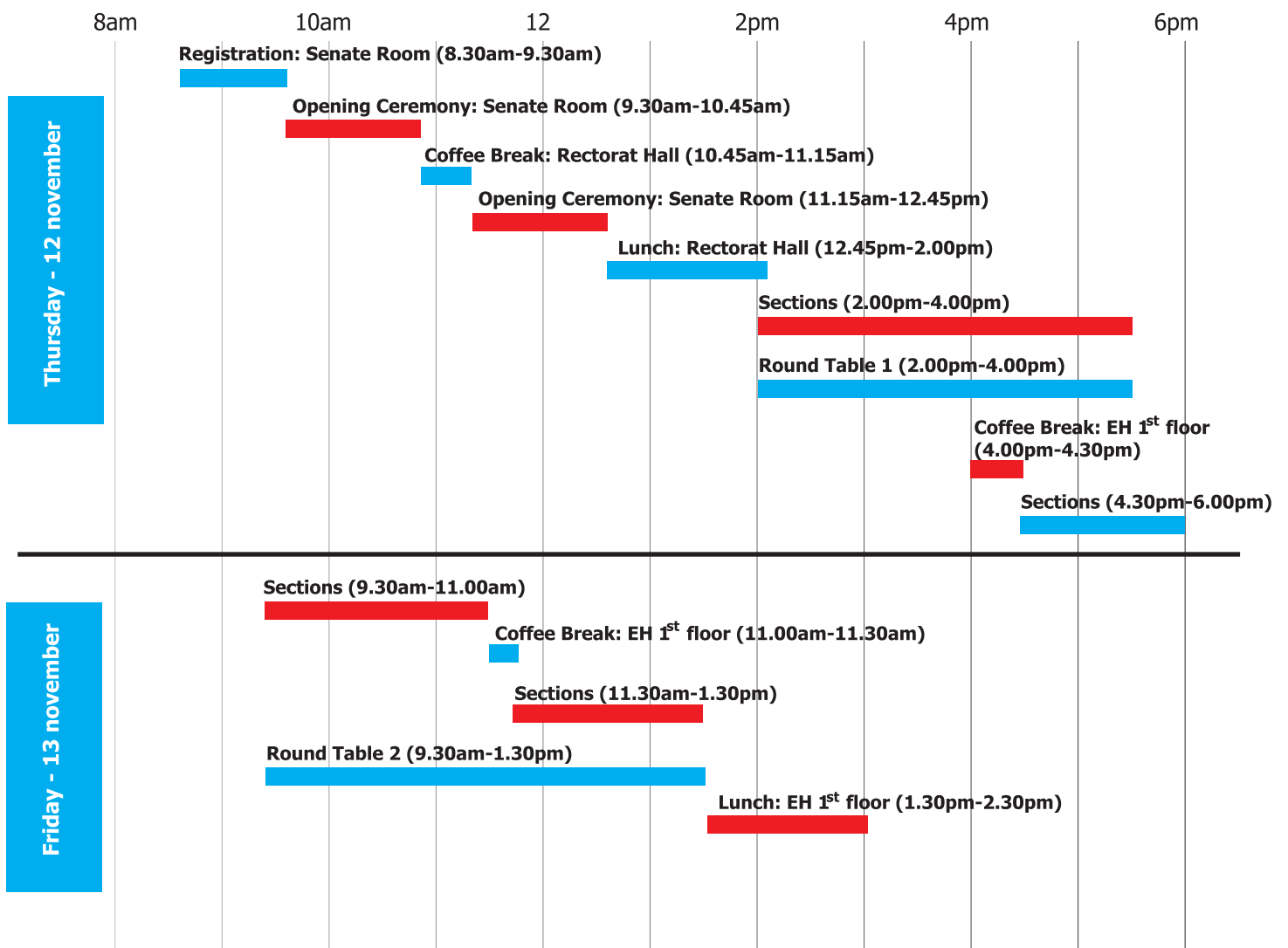
**Final Program**







# Conference Program



# Conference Program

## Opening Ceremony (SENATE ROOM)

Conference Opening (Adrian Badea, President CIEM 2009)  
Welcome Messages

### *Invited speakers:*

*Stephan Albrecht Skirchinger (World Energy Council)*

*Paal Frisvold (Bellona - Europe)*

*Pompiliu Budulan (SNN)*

*Victor Ionescu (OPCOM)*

## Sections

### **Section 1. Renewable Energies** (room ENc 001)

Thursday, 12.11.2009, 2.00pm - 6.00pm

Friday, 13.11.2009, 9.30am - 1.30pm

### **Section 2. Energy Efficiency** (room EH 017)

Friday, 13.11.2009, 9.30am - 1.30pm

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

Thursday, 12.11.2009, 2.30pm - 6.00pm

### **Section 4. Fossil Fuels Clean Technologies** (room EH 110)

Friday, 13.11.2009, 9.30am - 1.30pm

### **Section 5. Environmental Impact** (room ELa 024)

Thursday, 12.11.2009, 2.00pm - 6.00pm

Friday, 13.11.2009, 9.30am - 1.30pm

### **Section 6. Hydraulics and Water Management** (room ELa 216 & ELa 217)

Thursday, 12.11.2009, 2.00pm - 6.00pm

### **Section 7. Power Equipment and Control Systems** (room ELa 216)

Thursday, 12.11.2009, 2.00pm - 6.00pm

Friday, 13.11.2009, 9.30am - 1.30pm

### **Section 8. Nuclear-Power Engineering** (room ENb 104)

Thursday, 12.11.2009, 2.00pm - 6.00pm

Friday, 13.11.2009, 9.30am - 1.30pm

### **Section 9. Power Systems** (room ENb 104)

Friday, 13.11.2009, 9.30am - 1.30pm

## Round Tables

### **Round Table 1. CO<sub>2</sub> Capture and Storage** (room EH 017)

Thursday, 12.11.2009, 2.30pm - 6.00 pm

### **Round Table 2. Critical Infrastructures Protection**

(Academy of Romanian Scientists - Splaiul Independentei nr. 54, sector 5, 050094 Bucharest, ROMANIA)

Friday, 13.11.2009, 9.30am - 1.30pm

## Section 1. Renewable Energies (room ENc)

**Moderators: Adrian Badea, Michel Feidt**

**Fermentation of Olive Cake to Produce Hot Water** (Taha M. Rababah, Mohamad I. Al-Widyan)

**Comparison of Two Types of hybrid Electric Vehicles: Battery-Fuelcell and Fuelcell-Ultracapacitor** (Mihai-Constantin Peste, Ioan Matlac)

**Energy Sources from PET, HDPE and Tires, for Power Generation** (Cosmin Marculescu, Adrian Badea, Tiberiu Apostol)

**Pyrolysis Parameters Influencing the Bio-Char Generation from Wooden Biomass** (Cora Bulmău, Cosmin Mărculescu, Adrian Badea, Tiberiu Apostol)

**A Proposal for Spent Grape Marc Exploitation in Romania** (Simona Ciută, Luca Fiori, Elena Cristina Rada, Marco Ragazzi, Tiberiu Apostol)

**Dimensioning Calculations for a Modular Fresnel Mirror Designed for a 25 kW Stirling Solar Engine** (Camelia Petre, Stoian Petrescu, Michel Feidt, Monica Costea, Octavian Mălăncioiu)

**The Hydrogen Production Using Electrical Discharges of Cold Plasma Type** (Eugen Hnatiuc, Bogdan Gavril, Gabriel Todirasi)

**Case Study: Solutions for Powering up a Romanian Isolated Touristic Site** (Gabriel Lazaro Pavel, Eduard Minciuc, Mircea Scripcariu, Ioan Bitir Istrate)

**Research Concerning The Design Of Medium Thermal Power Boilers For Biomass Combustion In Suspension** (Gheorghe Lăzăroiu, Lucian Mihăescu, Tudor Prisecaru, Ion Oprea, Ionel Pișă, Gabriel Negreanu, Elena Popa)

**The Feasibility Report about Economic Aspects of Greenhouse Gas Emissions Reduction by Utilization of Solar Energy to Produce Electricity** (Ilknur Çolak, Figen Kadirgan, Deniz Yildirim)

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**Moderators: Mircea Degeratu, Tiberiu Apostol**

**Characterisation and Optimisation of Biodiesel's Production from Waste Cooking Oil** (Sary Awad, Ioana-Adela Basa, Maria Paraschiv, Senthil Kumar, Mohand Tazerout)

**Environmental Regulations Regarding Wind Energy Investments** (Magdalena Matei, Lucian Matei, Barbara Soare, Otilia Nedelcu, Cornel Salisteanu, Simona Mihaiescu, Iulian Udriou)

**The Market Integration of Energy Climate Change Package** (Magdalena Matei, Lucian Matei, Barbara Soare, Otilia Nedelcu, Cornel Salisteanu, Simona Mihaiescu, Iulian Udriou)

**Wind Power Cost Assessment at Batna in Algeria** (Mounir Aksas, Fouad Khaledi)

**Estimating Photovoltaic System Output** (Doina Dragomir, Nicole Golovanov, Petru Postolache, Cornel Toader)

**Thermal Solar Installation with High Efficiency that Utilize Plane Solar Collectors** (Liliana Dumitrescu, Florin Georgescu, Catalin Dumitrescu, Adrian Mirea)

**Modelling of the Wind Effect on a Double-Tracking PV Platform** (Andrei Damian, Andrei Georgescu)

**Gasification of Corn Stover** (Erol Murad, Cristian Sima, Tudor Cherecheș)

**Implementation of the First Pilot Station Delivering Electric Energy into National System from Photovoltaic** (Victorita Radulescu, Gheorghe Cristea, Alexandra Radulescu)

**Experimental Data, Modelling and Implementing a Wind Power Pilot Station** (Victorita Radulescu, Gheorghe Cristea, Razvan Cojoc, Zsigmond Zetenyi, Alexandra Radulescu)

**Laboratory Research on Modelling of the Romanian Black Sea Seashore Waves Interaction with Energy Capturing Devices** (Mircea Degeratu, Georgeta Bandoc, Nicolae Ioan Alboiu)

Thursday 12.11.2009

Friday 13.11.2009

## Section 2. Energy Efficiency (room EH 110)

**Moderators:** André Lallemand, Horia Necula

**Invited speakers:** Michel Feidt (Energy Efficiency and Environment)

**The Increase of Energy Efficiency Through the Conversion of a Thermal Power Plant into a Cogeneration Plant** (Petre Blaga, Horia Necula, Constantin Ionescu)

**Modeling a Counterflow Plate Heat Exchanger** (Roxana Grigore, Sorin Popa)

**Paper Machine Influence on Industrial Energy System** (Aneta Hazi, Gheorghe Hazi)

**Increasing Efficiency by Introducing Automated Systems to Manage Technical Documentation in Energy** (Gheorghe Hazi, Aneta Hazi)

**Power, Heat and Cold Supply for a University: A Case Study** (Eduard Minciuc, Roxana Pătrașcu)

**Comparative Study of Heat Production by Cogeneration or Heat Pump** (André Lallemand, Lingai Luo, Renaud Gicquel)

**Special Designed Regenerative Blower for Biphase Fluid Flows** (Adrian Ciocanea, Tudor Prisecaru, Sanda Budea)

**The Market Integration of Energy Climate Change Package** (Magdalena Matei, Lucian Matei, Barbara Soare, Otilia Nedelcu, Cornel Salisteanu, Simona Mihaiescu, Iulian Udroi)

**Simulation Model in TRNSYS of a Small Substation from Romania** (Rodica Frunzulică, Andrei Damian, Iolanda Colda)

**Energy Efficiency of the Heating Systems for Residential and Industrial Buildings in Romania** (Mirela Sanda Țoropoc, Rodica Frunzulică)

**Asset Management Technique for Electrical Systems** (Virgil Dumbrava, Paul Ulmeanu, Mircea Scutariu, Philippe Duquenne)

**Comparative Analysis of Production and Processing of Glassware and Technical Glass** (Roxana Pătrașcu, George Darie, Eduard Minciuc, Cristian Răducanu, Adina Stănculea)

**Passive House Concept in European Union** (Mădălina Anastasiu, Adriana Milandru)

**Risk analysis models in assessing the level of structural integrity-SIL** ( Costin Ilinca, Liviu Toader, Gheorghe Spireanu, Nicolae Persicanu, Serban Iacob, Virgil Dumbrava)

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

**Moderators:** Gheorghe Cârțină, Mircea Eremia

**Control Method of Symmetrical Components for Electrical Power Networks** (Carol Zoller, Sorina Costinaș, Remus Dobra)

**Addressing Consumer-Oriented Electricity Networks with Embedded Distributed Generation** (Radu Porumb, Gabriel Pavel)

**Opportunities to Conserve Energy Right from Distribution Installations** (Gheorghe Cârțină, Gheorghe Grigoraș, Elena-Crenguța Bobric)

**Strategies Regarding Operating Voltage Levels in Distribution Networks** (Gheorghe Cârțină, Gheorghe Grigoraș)

**An Evolutionary Programming Application to Optimal Reactive Power Dispatch** (Florin Ionescu, Ioana Pistică, Constantin Bulac, Ion Triștiu, Lucian Toma)

**Impact of the Fuel Cells Integration into Electric Distribution Networks for End-Use Consumers** (Adrian Badea, Nicolae Golovanov, Gabriel Pavel, Radu Porumb)

**Parameters Identification of a Power Plant Model for the Simulation of Islanding Transients** (Alberto Borghetti, Mauro Bosetti, Carlo Alberto Nucci, Mario Paolone)

**Steady-State Stability Limit Identification for Large Power Systems** (Florin Ciaușiu, Mircea Eremia)

**Voltage Control and Reactive Power Management in the Day-Ahead Electricity Market** (Adrian Vlad Morar, Alberto Berizzi, Cristian Bovo, Marco Merlo, Mircea Eremia)

**Statistical Methods for Wind Speed Modeling and Forecasting** (Petre-Cristian Răzuși, Gianfranco Chicco)

**Vulnerabilities introduced by the interdependencies between electrical grid and the ICT systems: diagnostic indices for the power grid** (Claudia Done, Maria Viziteu)

## Section 4. Fossil Fuels Clean Technologies (room EH 110)

**Moderators: Ion Melinte, George Darie**

**Experimental Aspects of the Use of LPG at Diesel Engine** (Constantin Pana, Niculae Negurescu, Marcel Ginu Popa, Alexandru Cernat)

**Convection dryers under cogeneration** (Erol Murad, Georgeta Haraga, Marius Bulearcă, Marina Bădileanu)

**Experimental and Numerical Performance Tests of the New 150 MW Unit of CHP Paroşeni** (Gabriel-Paul Negreanu, Ionel Pîşă, Lucian Mihăescu, Ion Oprea, Tudor Prisecaru, Viorel Berbece)

**Integrated system for modelling thermoenergetic 50 MW groups destined to energetically personnel training** (Gheorghe Lăzăroiu, Ioan Arsenie Badea, Marioara Itoafă, Andrei Gusti, Radu Teacă, Constantin Alexandru, Ludmila Țânțăreanu, Rita Drăgan)

**Correlatively Optimizing the Reheat Pressure and the Regenerative Preheat Line Temperature Growth's Repartition, for USC High Power TPP Units** (Victor - Eduard Cenușă, Florin - Niculae Alexe, Horia-Ionuț Petcu)

**Thermodynamic Analyses for Optimizing the Design and Predicting the Performances of Oxy Fuel Ericsson-Joule Cycle in Semi-Closed Loop, with Fragmented Compression, Inter-Cooling, and RHE** (Florin - Niculae Alexe, George Radu Filip, Victor - Eduard Cenușă)

**Design and operation strategies for a gas turbine based CHP scheme used for district heating** (Cristian Răducanu)

**Life Cycle Impact Assessment of Fossil Fuels** (Cristian Florian Dincă, Adrian Badea, Tiberiu Apostol)

**New Methods for the Assessment and the Reduction of the CO<sub>2</sub> Emissions in Iron and Steel Processes and Thermo-Electric Power Stations, Based on an Integrated Approach** (Ion Melinte, Mihaela Balanescu, George Darie, Carmencita Constantin)

**Economical CO<sub>2</sub> Capture from Fossil Fuel Utilization** (Elena David, Ioan Ștefănescu, A. Armeanu)

**Future obligation and opportunities in European Union Emission Trading System** (Carmencita Constantin, Irene Roxana Samoilă, Oana Corina Nihfidov)

**Legislative Challenges for Romanian Large Combustion Plants (LCPs)** (Carmencita Constantin, Claudia Tomescu, Ioana Iulia Mircea)

**The Evaluation of Performances of Installations by Power Plants from Romania Concerning Professional Risks Case Studies Rovinari Power Plant** (Alice Răducanu, Angela Stanca, Aurica Suvergel, Stamate Popescu, Sandu Varlan, Aurelia Meghea)

## Section 5. Environmental Impact (room ELA 024)

**Moderators: Dan Robescu, Vladimir Rojanschi**

**Modeling of the Combustion of Municipal Solid Waste** (Raluca Oana Iancu, Gabriela Dumitran)

**Forecasting the Eutrophication of Izvorul Muntelui Lake** (Gabriela Elena Dumitran, Liana Ioana Vuță)

**SIM-E&H - IT Tool for the Environmental Health Risk Assessment** (Marius Bontos, Daniela Vasiliu, Vlad Florin Pîrăianu, Georgiana Claudia Negoită)

**Comparative Analysis of Production and Processing of Glassware and Technical Glass** (Roxana Pătrașcu, George Darie, Cristian Răducanu, Eduard Minciuc, Adina Stănculea)

**Ecological Quantification Methodologies for Glass Manufacturing and Processing Industry** (Adina Stanculea, Roxana Patrascu, George Darie, Gheorghe Pauna, Cristian Jalba, Adrian Stan, Bogdan Sava, Mihail Elisa, Cristina Niculescu)

**Human Health Risk Assessment from the Emissions of a Romanian Thermoelectric Power Plant** (Diana Cocârță, Adrian Badea, Gianluca Antonacci, Andrea Cemin, Gianluca Vignoli);

**Electrochemical Remediation Efficiency VS Treatment Configuration** (Irina Aura Istrate, Adrian Badea, Gianni Andreottola, Giuliano Ziglio, Tiberiu Apostol)

**Disposal of Plastic Scraps Arising from Food and Pharmaceutical Industry. Comparison between Direct Combustion and Pyrolysis Processes** (Gabriela Ionescu, Marco Ischia, Tiberiu Apostol, Roberto dal Maschio, Maurizio Grigiane, Marco Baratieri, Marco Ragazzi, Elena Cristina Rada)

**New Perspective of Electrochemical Method Applied to Site Remediation: Lab Scale Study for Leachate Treatment** (Lica Carmen Georgiana, Andreottola Gianni, Istrate Irina Aura, Rada Elena Cristina, Ragazzi Marco, Apostol Tiberiu)

**A Comparison Between Different Scenarios of MSW Management through an Innovative Approach** (Constantin Stan, Tiberiu Apostol, Elena Cristina Rada, Marco Ragazzi, Marina Venturi, Elisa Mallocci)

**Pollutant Dispersion Modeling in Natural Streams** (Liviu Valentin Balanescu, Catalina Raluca Mocanu, Dan Robescu)

**Moderators: Anca Marina Marinov, Lăcrămioara Diana Robescu**

**Researches on Mechanical Pollution of Agricultural Soil** (Vergil Muraru, Petru Cardei, Nicolae Vasiliu, Raluca Sfiru)

**Electromagnetic Pollution Levels Due to Electric Power Installations and Suitable Mitigation Methods** (Marian Costea)

**Soil composition and texture influence on the nitrogen transport through unsaturated soils** (Anca Marina Marinov, Tudorel Petrovici, Viorica Nisteanu, Roxana Ivan)

**A mathematical generalized approach to estimate soil moisture retention characteristics from texture classes** (Tudorel Petrovici, Anca Marina Marinov)

**The Improvement of Filtration Systems for Water Purification** (Aurora Alexandrescu, Diana Maria Bucur)

**Designing Methods Based on Mathematical Modelling and Numerical Simulations for Compact Wastewater Treatment Plants** (Ioana Corina Mandiș, Diana Robescu, Bogdan Năsărimbă, Gabriel Petrescu, Alina Poruț)

**Assessment of the Noise Pollution Due to the Traffic in Bucharest Case Studies** (Talida Mirona Cirloru, Valeriu Panaitescu)

**Theoretical and experimental researches on the performance of an aeration system used for hybrid wastewater treatment** (Lăcrămioara-Diana Robescu, Aurelia Călin)

**Numerical Model of Minimization of Uncontrolled Effects Due to Repeated Floods Near Vicinity of Rivers** (Victorita Radulescu, Dana Roxana Horhoianu, Z. Zetenyi, Alexandra Radulescu)

**New Methods to Combat the Excess Developed Vegetation into the Hydropower Lakes** (Victorita Radulescu, Dana Roxana Horhoianu, Z. Zetenyi, Alexandra Radulescu)

**Theoretical and experimental researches regarding the influence of an industrial pollutant on an artificial lake** (Dinca Mihai)

**Biological Effects Induced by Cold Plasma Treatments** (Bogdan Gavril, Eugen Hnatiuc, Gabriel Todirasi) - Poster

**Cold Plasma Electrochemical Reactors: Performances and Environmental Impact** (Gabriel Todirasi, Eugen Hnatiuc, Bogdan Gavril) - Poster



## Section 6. Hydraulics and Water management (room ELa 217)

**Moderators:** Eugen Constantin Isbășoiu, Anton Anton

**PMA - IT Tool for Adaptive Water Management** (Vlad Florin Pîrăianu, Marius Bontos, Daniela Vasiliu, Constantin Drăgoi)

**Numerical Quantification of Energy Consumption for the “Teiul Doamnei” Pumping Station** (Sorin Perju, Andrei-Mugur Georgescu)

**Water Distribution Networks Optimal Design Using the Honey Bees Mating Optimization Algorithm** (Radu Popa, Sanda-Carmen Georgescu)

**Application of Honey Bees Mating Optimization Algorithm to Pumping Station Scheduling for Water Supply** (Sanda-Carmen Georgescu, Radu Popa)

**Aspects Concerning Aeration Using Environmental Friendly Turbines** (Florentina Bunea, Gabriela Oprina, Gabriel Dan Ciocan, Gheorghe Băran, Lucian Mândrea)

**Alternative for Small Hydraulic Turbines** (Diana Maria Bucur, Nicoleta Octavia Tănase, Călin Mihail Ghergu, Eugen Constantin Isbășoiu)

**Weekly-Term Optimization for a Hydro Power Plant Cascade with Reversible Units. Mathematical Model** (Radu Popa, Florica Popa, Bogdan Popa, Manuela Nicolescu)

**Weekly-Term Optimization for Lower Olt Sector, a Hydro Power Plant Cascade with Reversible Units** (Radu Popa, Florica Popa, Bogdan Popa, Manuela Nicolescu)

**Fine Bubbles Generator** (Nicolae Băran, Gheorghe Băran, Gabriela Mateescu)

**Flow of Non-Newtonian Fluids in a Pipe and Considerations Regarding Dynamics of Dilute Polymer Solutions** (Cornelia Marieta Chiujea, Sanda Budea)



## Section 7. Power Equipment and Control Systems (room ELa 216 & ELa 217)

**Moderators: Michel Toussaint, Sebastian Muntean (room ELa 216)**

**Analysis of Mean Circulation in the Fluid Couplings** (Cornel Velescu)

**Mean Value Modeling of a Variable Nozzle Turbocharger** (Daniel Cristian Dinescu, Mohand Tazerout)

**Modeling of the Flow in Sliding Control Valves** (Victor Bălăşoiu, Mircea Popoviciu, Călin Raszga, Ilarie Bordeaşu)

**Cavitation Damage at Francis Turbine Runners** (Gheorghe Băran, Cătălin Tilea, Gabriela Oprina, Florentina Bunea)

**The Assessment of Opportunities Regarding Power Electronics' Application at the Specific Driving from one HPP** (Daniela Comănescu, Basarab Guzun, Ioniță Dăescu, Gheorghe Comănescu, Călin Mucichescu, Gabriel Ghiță)

**Parallel Operating of Wind Turbines by Using Electrohydraulic Transmissions** (Ilie Catană, Carmen Anca Safta, Valentin Panduru)

**Power Optimisation Control System of Wind Turbines by Changing the Pitch Angle** (Ilie Catană, Carmen Anca Safta, Valentin Panduru)

**Comparative Analysis of Secondary and Primary Adjustment In Fluid Power Systems** (Teodor Costinel Popescu, Constantin Călinoiu)

**Mean Circulation in the Torque Converters of the First-Class** (Cornel Velescu)

**Mean Circulation in the Torque Converters of the Second-Class** (Cornel Velescu)

**The Increasing of Energy Efficiency of the Road Motor Vehicles through the Implementation of the Kinetic Energy Recovery Hydraulic Systems** (Corneliu Cristescu, Petrin Drumea, Petrica Krevey, Bogdan Lupu)

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**Moderators: Michel Toussaint, Romeo Susan-Resiga (room ELa 217)**

**3D Numerical Analysis of the Impeller - Stator Interaction into a Storage Pump** (Georgiana Dunca, Sebastian Muntean, Eugen Constantin Isbăşoiu)

**Numerical Analysis of the Flow in the Old Francis Runner in order to Define the Refurbishment Strategy** (Sebastian Muntean, Ioan Ninaci, Romeo Susan-Resiga, Alexandru Baya, Ioan Anton)

**Experimental Investigations into a Francis Turbine with Low Specific Speed** (Sebastian Muntean, Viorel Constantin Câmpian, Adrian Cuzmoş, Cosmin Dumbravă, Nicolae Brebu, Ladislau Augustinov)

**Numerical 2D Hydrodynamic Optimisation of Channelling Devices for Cross Flow Water Turbines** (Thierry Maître, Ane Mentxaka Roa, Christian Pellone, Jean-Luc Achard)

**Experimental versus Numerical Results on the Velocity Field in the Wake of a Hydropower Farm Equipped with Three Achard Turbines** (Andrei-Mugur Georgescu, Sanda-Carmen Georgescu, Costin Ioan Coşoiu, Nicolae Ioan Alboiu, Ana-Maria Petre)

**Development of an Experimental Facility for Cross Flow Water Turbines Models** (Vivien Aumelas, Thierry Maître)

**Iron Gates II- Romania, 10 Bulb Units Upgrading** (Dragoş Novac, Elena Popescu, Dragoş Pantelimon)

**Bifurcating Solutions of the Flow Induced by a Free Rotating Impeller of a High Pressure Fan** (Andrei Dragomirescu, Valeriu Nicolae Panaitescu)

**Speed Position Control System for DC Motor** (Violeta Ciucur)

Thursday 12.11.2009

Friday 13.11.2009

**Section 8. Nuclear - Power Engineering (room ENb 104)****Moderators: Petre Ghitescu, Constantin Bilegan****Invited speakers: Teodor Chirica, Marius Condu (Nuclear Power Development in the Current Economical Context)****Void Reactivity Reduction in CANDU Reactors Using Burnable Absorbers and Advanced Fuel Designs** (Iosif Prodea, Cristina Alice Mărgeanu, Andrei Rizoiu, Ilie Prisecaru, Nicolae Dănilă)**Computational Fluid Dynamic Approach for CANDU 6 and ACR1000 Fuel Channel Coolant Flow** (Alexandru Catană, Ilie Prisecaru, Daniel Dupleac, Nicolae Dănilă)**Influence of Preheater Loss in Regeneration Efficiency on the Secondary Circuit** (Ilie Prisecaru, Iulian Pavel Nita, Daniel Dupleac)**Structural Strengthening of Buildings for Future Earthquakes Without Interrupting the Activities and Evacuation of Tenants** (Adrian Panait, Viorel Serban, Marian Androne, George Ciocan)**Analysis of Some Critical Points that may Influence Cernavoda Npp Nuclear Safety During an Earthquake And Solutions to Increase the Safety Margin** (Viorel Serban, Ilie Prisecaru)**Evaluation of Heat Transfer in a Dry Storage Module of CANDU Fuel Employing ANSYS-CFX** (Gh-Ghiocel Simionescu, Radu M. Bilegan)**Moderators: Petre Ghitescu, Constantin Bilegan****The Optimisation of Decontamination Methods Selected for Surface and Deep Contaminated Areas Used in Decommissioning Of A Candu-600 Nuclear Power Plant** (Gheorghe Barariu, Roxana Cristiana Georgescu, Florin Sociu, Corneliu Bîlbie, Cristian Bucur)**Thorium - A Nuclear Fuel Option for the Next Generation Reactors** (Petre Ghițescu, Elena Nineta Bălaș)**Opportunity of Hydrogen Production in a Nuclear Cycle** (Petre Ghițescu, Gabriel Pavel, Elena Nineta Bălaș)**Assessment of the Human Factor for Accident Conditions in NPP** (Mita Farcasiu, Ilie Prisecaru)**Nuclear Power Development in the Current Economical Context** (Marius Condu, Teodor Chirica, Nicolae Danila, Ilie Prisecaru)**The Improvement Of The Fire Protection In A Candu-6 Type Nuclear Power Plant By The Use Of Water-Mist Extinguishing Systems** (Nicolae-Andrei Branzeu, Daniela Necula)**Calibration Of An Experimental Model Of Tritium Storage Bed Designed For "In Situ" Accountability** (Gheorghe Bulubasa, Nicolae Bidica, Ioan Stefanescu, Mariea Deaconu, Ciprian Bucur)**Providing of the cooling water flow rate, necessary for the operation of Cernavodă nuclear power plant** (Mihăilescu Neculai, Ghindă Theodor, Dan Paul)**Environmental impact of the nuclear power plants' cooling systems** (Mihăilescu Neculai, Ghindă Theodor, Dan Paul)**Modelling and simulation of thermal pollution spread at Cernavodă Nuclear Power Plant (CNPP)** (Mihăilescu Neculai, Ghindă Theodor, Dan Paul)

Thursday 12.11.2009

Friday 13.11.2009

## Section 9. Power Systems (room EI 204)

**Moderators: Constantin Bulac, Florin Munteanu**

**Human Factor Reliability Influence on Availability of Power Distribution Networks** (Florin Munteanu, Ciprian Nemeş)

**Real Efficiency of Intelligent Switching of High Voltage Circuit-Breakers** (Florin Munteanu, Ciprian Nemeş)

**Negative Effects of Energy-Saving, Non-Linear Loads on LV Systems: Causes and Recommendations** (Mbuyamba Tshibanda, Ciprian Nemeş, Prof Jan- Harm C Pretorius)

**Influence Factors on the Transmitted Overvoltages from High Voltage to Low Voltage Networks** (Marian Costea, Bogdan Nicoară).

**Correlations between Radiofrequency Disturbances Radiated and Injected in a Power Line by a High Voltage Equipment** (Marian Costea, Ileana Băran, Sorin Coatu, Dan Rucinski)

**DC Arc Furnace Modelling for Power Quality Analysis** (Cristian Lăzăroiu, Dario Zaninelli).

**Propagation of Disturbances from 6-20 kV Grids to Low Voltage Grids According to the 6-20 kV Grid Neutral Earthing Mode** (Alexandru Dina, Dan Basarab Guzun, Gheorghe Comănescu, Călin Mucichescu)

**Principal Aspects Regarding the Measurement of Ground Electrical Field for Overhead Lines** (Alexandru Mandiş, Gheorghe Măgureanu)

**Technical and Economical Assessment of Shielding Wire Elimination in Iran'S 400kv Transmission Lines** (Bahman Eskandari, S. M. T. Bathaee)

**Round table 1. CO<sub>2</sub> Capture and Storage (room ENb 104)****Moderators: Paal Frivold, Carmencita Constantin**

## Speakers

Ana - Elena Voitinovici (Bellona - Romania)  
 Cristiana Ion (Ministry of Economy - Romania)  
 Claudia Tomescu (ISPE)  
 Serban Iosifescu (ISPE)  
 Constantin Sava (GEOECOMAR)  
 Lavinia Stoica (CONSUS)  
 Ion Melinte (ICEM)  
 Dumitru Manea (ALSTOM)  
 Peter Erich Arnold (ALSTOM)  
 Leigh Hackett (ALSTOM)  
 Arnaud Van der Beken (Schlumberger Carbon Services)

Thursday 12.11.2009

**Round table 2. Critical Infrastructures Protection(AOSR\*)****Moderators: Adrian Badea, Liviu Mureşan**

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## Speakers

Adrian Valciu (Transelectrica)  
 Paul Ulmeanu (UPB)  
 Radu Dragomir (UTI Systems)  
 Mircea Degeratu (AOSR)  
 Ion Chiuta (AOSR)  
 Constantin Mincu (AOSR)  
 Alexandru Chiuta (UPB)  
 Cristea Dumitru (AOSR)  
 Simona Rus (Diving Center Constanta)  
 Mihai Diaconu (Diving Center Constanta)  
 Sorina Costinas (UPB)  
 Nicolae Opris (Transelectrica)  
 Nicolae Alboiu (UTCB)  
 Georgeta Busuioc (University of Bucharest)

Friday 13.11.2009

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