

7<sup>TH</sup> INTERNATIONAL  
CONFERENCE ON  
ENERGY AND  
ENVIRONMENT  
2015

CLEAN AND SAFE POWER

**FINAL  
PROGRAM**



## ABOUT THE ORGANIZERS

### University POLITEHNICA of Bucharest



University POLITEHNICA of Bucharest is the largest technical university in the country and among the most prestigious universities in Romania.

The tradition of our institution, developed in over 195 years through the effort of the most important nation's schoolmasters and of the generations of students, is not the only convincing reason. Today, the University POLITEHNICA of Bucharest

is undergoing a continuous modernization process, being involved in a permanent dialogue with great universities in Europe and all over the world.

The mission of the University POLITEHNICA of Bucharest has been thought over as a blend of education, research and innovation, which represents a key towards a knowledge-based society and economy. Creating knowledge mainly by scientific research, giving it out by education and professional training, disseminating it by information technologies, as well as the use of technological innovation are elements that define the university distinctive profile.

The University POLITEHNICA of Bucharest wants to be present among the universities in Europe able to design and optimize processes that lead to a knowledge-based society, to reaching the goals of the sustainable economic growth, to better jobs, to stronger economic and social cohesion, in compliance with the provisions of the 2002 European Council in Lisbon and European Council in Barcelona in the same year.

At present, University POLITEHNICA of Bucharest integrates fifteen universities: Faculty of Electrical Engineering, Faculty of Power Engineering; Faculty of Automatic Control and Computer Science; Faculty of Electronics, Telecommunications and Information Technology; Faculty of Mechanical Engineering and Mechatronics; Faculty of Engineering and Management of Technological Systems; Faculty of Biotechnical Systems Engineering; Faculty of Transports; Faculty of Aerospace Engineering; Faculty of Material Science and Engineering; Faculty of Applied Chemistry and Materials Science; Faculty of Engineering in Foreign Languages; Faculty of Applied Sciences; Faculty of Medical Engineering; Faculty of Entrepreneurship, Business Engineering and Management.

## "Gheorghe Asachi" Tehnical University of Iasi



In 1562, Moldavia has become famous for the first attempts to lay the foundation of what later on had become higher education, all thanks to the setting up of the Latin School at Cotnari, near Iasi. Still, it was not until 1813 that the scholar Gheorghe Asachi founded the first school of land surveyors and civil engineers with

instruction in the Romanian language. This school can be considered the core of the technical higher education in Moldova. Later on, the school is developed within the Michaelian Academy (1835), and afterwards within the University of Iasi, established in 1860.

On the 7th of November 1912, after passing the regulations for the Faculty of Science, they set up the proper Polytechnic Institute, which aligned more technical specialties: the department of the electro-technical, applied chemical and agricultural sciences. This event represents what may be called the birth certificate for the The Polytechnic Institute of Iasi.

In March 1937, when the Parliament of Romania voted the Law of Education, the technical higher education is transferred to the new established Polytechnic School which was, at that time, one of the few higher education institution in Romania qualified to issue engineer's degrees. The new institution took from the very beginning the name of Gheorghe Asachi, the founder of the Romanian technical education, while professor Cristea Otin was elected its first rector.

As a result of some internal changes within the University, at present, "Gheorghe Asachi" Technical University integrates eleven universities: Faculty of Automatic Control and Computer Engineering, Faculty of Civil Engineering and Building Services, "G.M. Cantacuzino" Faculty of Architecture, Faculty of Chemical Engineering and Environmental Protection, Faculty of Machine Manufacturing and Industrial Management, Faculty of Electronics, Telecommunications and Information Technology, Faculty of Electrical Engineering, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Faculty of Material Science and Engineering, Faculty of Mechanical Engineering, Faculty of Textiles, Leather and Industrial Management.

## Academy of Romanian Scientists



At the first congress organised to celebrate 40 years since the Association of Romanian Scientists was established, with the topic „Science at the End of the Millennium”, General Professor Dr. Vasile Căndea, PhD. proposed the return of the institution to the appellation it had between 1935-1948, namely that of „ACADEMY”, while preserving certain elements of the title of the association, and thus the designation became „Academy of Romanian Scientists”, hereinafter abbreviated AOSR.

The adoption of the name of „Academy of Romanian Scientists (AOSR)” was approved by the General Assembly of AOSR of 22-24 May 1996, held under the title „First Congress of AOSR” in the Parliament House, and in the presence of many members of the Romanian Academy (Eugen Simion, Vice President of the Romanian Academy, Marius Sabin Peculea, General Secretary of the Romanian Academy, N.N. Constantinescu, former General Secretary of the Romanian Academy between 1990-1994, Alexandru Balaci, Mihnea Gheorghiu, President of the Section “Arts, Architecture and Audiovisual” of the Romanian Academy, Nicolae Cajal, President of the Section “Medical Sciences” of the Romanian Academy, Cristofor Simionescu, Vasile Stănescu, Toma Dordea, Constantin Bălăceanu-Stolnici, Gabriel Țepelea, Răzvan Teodorescu, Dorel Zugrăvescu), of prominent members of AOSR (Dan Amedeo Lăzărescu, Corneliu Coposu) and 40 scientists from abroad. Mr. Eugen Simion, Vice President of the Romanian Academy at that time, participated as member of the presidium general assembly. None of the attendees objected the proposal of debating the change of the name, and the decision was unanimously adopted.

The Academy of Romanian Scientists is the successor and only heir of the Academy of Sciences of Romania (1936-1948) and of the Association of Romanian Scientists, founded by HCM no.1012 / 30 May 1956, and which in 1996 changed its name from Association of Romanian Scientists in Academy of Romanian Scientists (court order of 3 October 1996, adopted by the Bucharest District 1 Court, File 231 / P.J. / 1996).

## WEC-Romanian National Committee



The World Energy Council is the principal impartial network of leaders and practitioners promoting an affordable, stable and environmentally sensitive energy system for the greatest benefit of all.

Formed in 1923, the Council is the UN-accredited global energy body, representing the entire energy spectrum,

with more than 3000 member organisations located in over 90 countries and drawn from governments, private and state corporations, academia, NGOs and energy-related stakeholders.

The World Energy Council informs global, regional and national energy strategies by hosting high-level events, publishing authoritative studies, and working through its extensive member network to facilitate the world's energy policy dialogue.

The World Energy Council is the world's principal network of energy leaders and practitioners. The organisation has a co-ordinating Secretariat based in London, United Kingdom, under the direction of the Secretary General who reports to the WEC's board, the Officers Council, under the leadership of an elected Chair.

The key functions of the WEC are guided by the Standing Committees, made up of elected members from across the world. The WEC gathers annually for an Executive Assembly to agree the strategic direction of the organisation.

WEC's National Member Committee operates independently under a regionalised structure, with elected Regional Vice Chair's to oversee activities and ensure coordination.

Since it was created in 1923, when visionary Daniel Dunlop brought together 40 countries to discuss the problems facing the global energy industry, the WEC has been non-governmental and non-commercial. Founded in the aftermath of war, it has withstood many changes, from geopolitical and economic upheavals to a complete shift in the way people understand and use energy. It has had to adapt to a changing world without ever straying from the initial concept of an organisation that is impartial, objective and realistic in its analyses and in its agendas for action in order to promote sustainable energy for all.

Today, the WEC has almost 100 national member committees, and its member list includes governments, businesses and expert organisations. The World Energy Congress, held over 20 times since the WEC's founding, is recognised as the world's premier energy gathering. As we move forward through the 21st century, the WEC continues to grow and expand, building on its long and stable history as one of the key players on the global energy scene.

## COMMITTEES

### Committee of Honour

**Members:** Ecaterina Andronescu; Vasile Candea; Mihnea Costoiu; Ion Giurma; Mircea Gusa; Iulian Iancu; Gigel Paraschiv; Tudor Prisecaru.

### Scientific Committee

Maricel Adam (Romania)	Marcel Istrate (Romania)
Anton Anton (Romania)	George Cristian Lazaroiu (Romania)
Dorin Bica (Romania)	Cosmin Marculescu (Romania)
Adrian Badea (Romania)	Sebastian Muntean (Romania)
Corneliu Balan (Romania)	Calin Munteanu (Romania)
Jocelyn Bonjour (France)	Florin Munteanu (Romania)
Constantin Bulac (Romania)	Horia Necula (Romania)
Michel Cervantes (Sweden)	Alexandru Ozunu (Romania)
Teodor Chirica (Romania)	Carmen Ema Panaite (Romania)
Gianfranco Chicco (Italy)	Adrian Pana (Romania)
Lucian Cioca (Romania)	Sorin Pavel (Romania)
Gabriel Dan Ciocan (Canada)	Daniela Popescu (Romania)
Mircea Eremia (Romania)	Luminita Popescu (Romania)
George Darie (Romania)	Ilie Prisecaru (Romania)
Cristian Dinca (Romania)	Elena Cristina Rada (Italy)
Daniel Dupleac (Romania)	Marco Ragazzi (Italy)
Virgil Dumbrava (Romania)	Romeo Susan-Resiga (Romania)
Michel Feidt (France)	Ralf Riedel (Germany)
Mihai Gavrilas (Romania)	Dan Robescu (Romania)
Maria Gavrilescu (Romania)	Lacramioara Diana Robescu (Romania)
Andrei-Mugur Georgescu (Romania)	Florian Statescu (Romania)
Sanda Carmen Georgescu (Romania)	Michel Toussaint (France)
Lucian Georgescu (Romania)	Ion Tristiu (Romania)
Stefan Gheorghe (Romania)	Serban Valeca (Romania)
Christian Ghiaus (France)	Gheorghe Vuc (Romania)
Manfred Hampe (Germany)	Wim Uijtewool (Holland)

## **Local Organizing Committee**

**Chairman:** Adrian Badea

**Members:** Corneliu Balan; Gheorghe Balan; Constantin Bulac; George Darie; Cristian Dinca; Virgil Dumbrava; Sanda Carmen Georgescu; Constantin Ionescu; Dumitru-Marcel Istrate; Dorin-Dumitru Lucache; Cosmin Marculescu; Horia Necula; Diana Lacramioara Robescu; Adrian Nicolae Stan; Ion Tristiu; Paul Ulmeanu; Elena Vasile



## CIEM 2015 AT-A-GLANCE FULL PROGRAM

### Thursday 22 October 2015

09:30-11:00	<p><i>Opening Ceremony</i>  <b>Plenary Session PS1</b>  <b>"Gheorghe Asachi" Aula</b></p>		
11:00-12:00	<p><b>Transfer by bus to Electrical Engineering, Energetics and Applied Informatics Faculty</b></p>		
12:00-16:00	<p><i>Registration</i>  <b>Electrical Engineering, Energetics and Applied Informatics Faculty</b></p>		
12:00-14:00	<p><i>Lunch</i></p>		
14:00-15:30	<p><b>Round Table RT1</b> <i>New challenges in the field of high voltage testing</i>  <b>(1)</b>  <i>Conference Hall "Dragomir Hurmuzescu"</i></p>	<p><b>Technical session T1</b>            Section 1 Renewables Energies <b>(1)</b>  <i>Hall - E2 "Vasile Petrescu"</i></p>	<p><b>Technical session T1</b>            Section 2 Energy Efficiency <b>(1)</b>  <i>Hall - E3 "Nicolae V. Botan"</i></p>
	<p><b>Technical session T1</b>            Section 5 Environmental Impact <b>(1)</b>  <i>Hall - E4 "Alexandru Poeată"</i></p>	<p><b>Technical session T1</b>            Section 6 Fluid Mechanics and Applications  <i>Hall - E1 "Cezar Parteni-Antoni"</i></p>	<p><b>Technical session T1</b>            Section 8 Nuclear-Power Engineering <b>(1)</b>  <i>Hall - EN 114</i></p>
15:30-16:00	<p><i>Coffee break</i></p>		
16:00-18:00	<p><b>Round Table RT1</b> <i>New challenges in the field of high voltage testing</i>  <b>(2)</b>  <i>Conference Hall "Dragomir Hurmuzescu"</i></p>	<p><b>Round Table RT2</b>  <i>Applied Fluid Mechanics in the Power Engineering Field</i>  <i>Hall - E1 "Cezar Parteni-Antoni"</i></p>	<p><b>Technical session T2</b>            Section 1 Renewables Energies <b>(2)</b>  <i>Hall - E2 "Vasile Petrescu"</i></p>
	<p><b>Technical session T2</b>            Section 2 Energy Efficiency <b>(2)</b>  <i>Hall - E3 "Nicolae V. Botan"</i></p>	<p><b>Technical session T2</b>            Section 5 Environmental Impact <b>(2)</b>  <i>Hall - E4 "Alexandru Poeată"</i></p>	<p><b>Technical session T2</b>            Section 8 Nuclear-Power Engineering <b>(2)</b>  <i>Hall - EN 114</i></p>

## Friday 23 October 2015

09:00-16:00	<i>Registration</i> <b>Electrical Engineering, Energetics and Applied Informatics Faculty</b>		
09:00-10:30	<b>Plenary Session PS2</b> <b>Conference Hall "Dragomir Hurmuzescu"</b>		
10:30-11:00	Coffee break		
11:00-12:30	<b>Round Table RT3</b> <i>Tehnologii moderne de exploatare a rețelelor electrice</i> <i>Conference Hall "Dragomir Hurmuzescu"</i>		
	<b>Technical session T3</b> Section 4 <i>Fossil Fuels Clean Technologies</i> <i>Hall - EN 119</i>	<b>Technical session T3</b> Section 1 Renewables <i>Energies (3)</i> <i>Hall - E2 "Vasile Petrescu"</i>	<b>Technical session T3</b> Section 2 <i>Energy Efficiency (3)</i> <i>Hall - EN 114</i>
	<b>Technical session T3</b> Section 9 <i>Power Systems &amp; Smart Grids (1)</i> <i>Hall - E3 "Nicolae V. Botan"</i>	<b>Technical session T3</b> Section 5 <i>Environmental Impact (3)</i> <i>Hall - E4 "Alexandru Poeată"</i>	<b>Technical session T3</b> Section 7 <i>Hydro-Power Engineering (1)</i> <i>Hall - E1 "Cezar Parteni-Antoni"</i>
12:30-14:00	Lunch		
14:00-15:30	<b>Round Table RT4</b> <i>Stabilirea direcțiilor strategice și a obiectivelor prioritare ale activităților de cercetare-dezvoltare și inovare în domeniul energetic în perioada 2016-2020 (1)</i> <i>Conference Hall "Dragomir Hurmuzescu"</i>		
	<b>Technical session T4</b> Section 1 Renewables <i>Energies (4)</i> <i>Hall - E2 "Vasile Petrescu"</i>	<b>Technical session T4</b> Section 7 <i>Hydro-Power Engineering (2)</i> <i>Hall - E1 "Cezar Parteni-Antoni"</i>	<b>Technical session T4</b> Section 9 <i>Power Systems &amp; Smart Grids (2)</i> <i>Hall - E3 "Nicolae V. Botan"</i>
15:30-16:00	Coffee break		
16:00-17:30	<b>Round Table RT4</b> <i>Stabilirea direcțiilor strategice și a obiectivelor prioritare ale activităților de cercetare-dezvoltare și inovare în domeniul energetic în perioada 2016-2020 (2)</i> <i>Conference Hall "Dragomir Hurmuzescu"</i>		
	<b>Technical session T5</b> Section 9 <i>Power Systems &amp; Smart Grids (3)</i> <i>Hall - E3 "Nicolae V. Botan"</i>	<b>Technical session T5</b> Section 7 <i>Hydro-Power Engineering (3)</i> <i>Hall - E1 "Cezar Parteni-Antoni"</i>	

## AT-A-GLANCE FULL PROGRAM

### Thursday 22 October 2015

#### **"Gheorghe Asachi" Aula**

##### **B-dul Carol I, nr. 11**

09:30 – 11:00 Opening Ceremony; Plenary Session PS1

11:00 – 12:00 Transfer by bus to Electrical Engineering, Energetics and Applied Informatics Faculty

#### ***Electrical Engineering, Energetics and Applied Informatics Faculty,***

##### ***B-dul Profesor Dimitrie Mangeron, nr. 21- 23***

12:00 – 16:00 Registration

12:00 – 14:00 Lunch

14:00 – 15:30

➤ Round Table RT1: *New challenges in the field of high voltage testing (Part 1)*

➤ Technical session T1:

- ◆ Section 1 Renewables Energies (Part 1)
- ◆ Section 2 Energy Efficiency (Part 1)
- ◆ Section 5 Environmental Impact (Part 1)
- ◆ Section 6 Fluid Mechanics and Applications
- ◆ Section 8 Nuclear-Power Engineering (Part 1)

15:30 – 16:00 Coffee break

16:00 – 18:00

➤ Round Table RT1: *New challenges in the field of high voltage testing (Part 2)*

➤ Round Table RT2: *Applied Fluid Mechanics in the Power Engineering Field*

➤ Technical session T2:

- ◆ Section 1 Renewables Energies (Part 2)
- ◆ Section 2 Energy Efficiency (Part 2)
- ◆ Section 5 Environmental Impact (Part 2)

- ◆ Section 8 Nuclear-Power Engineering (Part 2)

**Ciric Restaurant**

19:00 – 23:00      Gala Dinner

**Friday 23 October 2015****Electrical Engineering, Energetics and Applied Informatics Faculty,****B-dul Profesor Dimitrie Mangeron, nr. 21- 23**

09:00 – 16:00      Registration

09:00 – 10:30      Plenary Session

10:30 – 11:00      Coffee Break

11:00 – 12:30

➤ Round Table RT3: *Tehnologii moderne de exploatare a rețelelor electrice*

➤ Technical session T3:

- ◆ Section 1 Renewables Energies (Part 3)
- ◆ Section 2 Energy Efficiency (Part 3)
- ◆ Section 4 Fossil Fuels Clean Technologies
- ◆ Section 5 Environmental Impact (Part 3)
- ◆ Section 7 Hydro-Power Engineering (Part 1)
- ◆ Section 9 Power Systems & Smart Grids (Part 1)

12:30 – 14:00      Lunch

14:00 – 15:30

➤ Round Table T4: *Stabilirea direcțiilor strategice și a obiectivelor prioritare ale activităților de cercetare-dezvoltare și inovare în domeniul energetic în perioada 2016-2020 (Part 1)*

➤ Technical session T4:

- ◆ Section 1 Renewables Energies (Part 4)
- ◆ Section 7 Hydro-Power Engineering (Part 2)
- ◆ Section 9 Power Systems & Smart Grids (Part 2)

15:30 – 16:00      Coffee Break

16:00 – 17:30

- Round Table T4: *Stabilirea direcțiilor strategice și a obiectivelor prioritare ale activităților de cercetare-dezvoltare și inovare în domeniul energetic în perioada 2016-2020 (Part 2)*
- Technical session T5:
  - ◆ Section 7 Hydro-Power Engineering (Part 3)
  - ◆ Section 9 Power Systems & Smart Grids (Part 3)

## PLENARY SESSION PS1

TUESDAY 22 OCTOBER 2015 (9:30-11:00)

Location: "Gheorghe Asachi" Aula

SESSION CHAIR: ADRIAN BADEA

- ***A BRIEF HISTORY OF THE ELECTRICAL AND POWER ENGINEERING EDUCATION AT THE "GH. ASACHI" TECHNICAL UNIVERSITY OF IAȘI, ROMÂNIA*** - Adrian ADĂSCĂLIȚEI
- ***CONSTANTIN BUDEANU BELOVED TEACHER AND RESEARCHER*** – Alexander E. EMANUEL

## PLENARY SESSION PS2

FRIDAY 23 OCTOBER 2015 (9:00-10:30)

Location: Electrical Engineering, Energetics and Applied Informatics Faculty, "Gheorghe Asachi" Technical University of Iasi - Conference Hall „Dragomir Hurmuzescu”

SESSION CHAIR: CORNELIU BĂLAN

- ***ADVANCED CERAMICS FOR ENERGY CONVERSION AND STORAGE*** - Ralf RIEDEL
- ***FUEL CELLS: PROBLEMS AND POSSIBLE SOLUTIONS*** – Manfred HAMPE

## SECTION 1 - RENEWABLE ENERGIES

TUESDAY 22 OCTOBER 2015

**Technical Session T1 - S1 (14:00 – 15:30)**

**Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E2 "Vasile Petrescu"**

SESSION CHAIRS: CARMEN-EMA PANAITE, CARMEN-ANCA SAFTA

- **S1\_04** - *PHYSICO-MATHEMATICAL MODEL OF A HOT AIR ENGINE USING HEAT FROM LOW-TEMPERATURE RENEWABLE SOURCES OF ENERGY* – Vlad Mario HOMUTESCU, Marius-Vasile ATANASIU, Carmen-Ema PANAITE, Dan-Teodor BĂLĂNESCU
- **S1\_08** - *EXPERIMENTAL INVESTIGATION ON EMISSION PERFORMANCE OF DIESEL ENGINE FOR BIODIESEL-DIESEL BLENDS* – FAZAL UM MIN ALLAH, Alexandru GRUIA
- **S1\_10** - *VALUE ANALYSIS OF COMBUSTION SYSTEMS FOR MEDIUM SIZE PELLET BOILERS* - Andreea GHIOCEL, Timur MAMUT, Claudiu FERCU
- **S1\_12** - *NUMERICAL MODELLING OF HAZARDOUS EXPLOSIONS IN BIOGAS PLANT* – Cătălina Raluca MOCANU, Liviu Valentin BĂLĂNESCU, Gheorghe LĂZĂROIU
- **S1\_23** - *NUMERICAL SIMULATION ASSISTED DESIGN OF CONVECTIVE INDIRECT SOLAR DRYERS* - M. S. GUELLOUZ, A. ZRIBA
- **S1\_06** - *OPTIMIZING THE USE OF RENEWABLE ENERGIES AND HARNESSING THE POWER OF THE SUN IN THE EFDEN HOUSE*– Sabina PROCA

## SECTION 1 - RENEWABLE ENERGIES

TUESDAY 22 OCTOBER 2015

Technical Session T2 - S1 (16:00 – 17:30)

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E2 "Vasile Petrescu"

SESSION CHAIRS: SONIA LEVA, FLORIN MUNTEANU

- **S1\_09** - *PHOTOVOLTAIC POWER PLANT APPLICATION AT THE ELECTRICAL ENGINEERING FACULTY OF IAȘI* – Dragoș-Lucian MACHIDON, Marcel ISTRATE
- **S1\_15** - *INFLUENCE OF SHADING ON ENERGY PERFORMANCE OF PHOTOVOLTAIC PANELS* - Alexandra DANU, Vladimir TANASIEV, Adrian BADEA
- **S1\_16** - *HOT-SPOT PHENOMENA IN PV SYSTEMS WITH OVERHEAD LINES PARTIAL SHADING* - Alberto DOLARA, George Cristian LAZAROIU, Sonia LEVA
- **S1\_03** - *INFLUENCE OF NOZZLE INLET POSITION FOR CROSS-FLOW TURBINES WITH VERTICAL AXIS NOZZLE* - Bogdan CIOBANU
- **S1\_07** - *DATA MINING FOR WIND AVAILABILITY MODELING* - Florin MUNTEANU, Ciprian NEMES, Dragoș ASTANEI, Alexandra CIOBANU
- **S1\_19** - *FLOW OVER AN AIRFOIL WITH A NARROW SLOT* - Andrei DRAGOMIRESCU, Carmen-Anca SAFTA, Marius STOIA-DJESKA, Viorel ȘERBAN



## SECTION 1 - RENEWABLE ENERGIES

FRIDAY 23 OCTOBER 2015

**Technical Session T3 - S1 (11:00 – 12:30)**

**Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E2 "Vasile Petrescu"**

SESSION CHAIRS: MIHAI VARLAM, MARICEL ADAM

- **S1\_11** - *NUMERICAL ANALYSIS OF A HYBRID RENEWABLE ENERGY STORAGE SYSTEM BASED ON HYDROGEN AND SMES TECHNOLOGIES* - Mihai ANGHEL, Marian CURUIA, Adrian BADEA
- **S1\_21** - *NANOSTRUCTURED ELECTROCATALYSTS FOR LOW COST PEM FUEL CELLS* – Adriana MARINOIU, Adrian ENACHE, Constantin TEODORESCU, Irina PETREANU, Claudia SISU, Mihai VARLAM
- **S1\_20** - *IMPROVEMENT OF P&O MPPT ALGORITHMS USING CALCULATED P-U CURVES* - Mihai IONESCU
- **S1\_22** - *BALANCING MARKET – HIGH-VALUE MARKET FOR POWER-TO-GAS APPLICATIONS?* - Mihai BALAN, Mihaela-Ramona BUGA, Adrian BADEA
- **S1\_13** - *RENEWABLE POWER GENERATION LABORATORY IN INCESA RESEARCH INFRASTRUCTURE OF UNIVERSITY OF CRAIOVA* - Denisa RUSINARU, Cristian BRATU, Leonardo-Geo MANESCU, Marian CIONTU

## SECTION 1 - RENEWABLE ENERGIES

FRIDAY 23 OCTOBER 2015

**Technical Session T4 - S1 (14:00 – 15:30)**

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E2 "Vasile Petrescu"

SESSION CHAIRS: PHILIPPE DUQUENNE, VIRGIL DUMBRAVA

- **S1\_01** - *THE RESOURCE ALLOCATION IN THE CASE OF TRANSNATIONAL SUBSIDIES* - Arthur DAMBISCHI
- **S1\_02** - *THE OVERCOMPENSATION ANALYSIS OF THE GREEN CERTIFICATES SYSTEM FOR PROMOTING ELECTRICITY FROM RENEWABLE ENERGY SOURCES* - Pavel ATĂNĂSOAE, Radu PENTIUC
- **S1\_17** - *DEMAND RESPONSE OPTIMIZATION IN GRID-CONNECTED AND ISLANDED MICROGRIDS WITH RENEWABLE ENERGY SOURCES AND STORAGE SYSTEMS* - Virgil DUMBRAVA, George Cristian LAZAROIU, Gabriel BAZACLIU, Mihaela TELICEANU, Mariacristina ROSCIA, Michela LONGO, Dario ZANINELLI, Philippe DUQUENNE
- **S1\_05** - *CRITICAL ENVIRONMENTAL IMPACT ASSESSMENT OF THE DEVELOPMENT OF RENEWABLE ENERGY SOURCES BASED POWER PLANTS IN ROMANIA* - Florica POPA, Bogdan POPA
- **S1\_14** - *A POSITIVE ENERGY TERRITORY – CASE STUDY FOR PITEȘTI, ROMANIA* - Adrian CIOCĂNEA, Bogdan TOFAN, Mircea SCRIPCARIU, Ștefăniță PLUTEANU, Vlad MARTINAȘ, Andrei CONSFERENT, Andrei COMAN, Adrian ȘIȘMAN, Dragoș MATEI, Cosmin MARIUS VASILE, Bogdan TUDOR
- **S1\_24** - *INFLUENCE OF BOUNDARY LAYER SEPARATION IN LONG TERM EFFICIENCY OF WIND POWER FARMS* - Victorita RADULESCU, Sergiu DUMITRU
- **S1\_25** - *CONVERSION EFFICIENCY IN BIOMASS AIR GASIFICATION PROCESSES* - Raluca-Nicoleta TÎRTEA, Cosmin MĂRCULESCU, Adrian BADEA

## SECTION 2 - ENERGY EFFICIENCY

TUESDAY 22 OCTOBER 2015

Technical Session T1 - S2 (14:00 – 15:30)

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E3 "Nicolae V. Botan"

SESSION CHAIRS: JOCELYN BONJOUR, MIHAI VARLAM

- **S2\_07** - *SOME FUNDAMENTAL STEPS FOR THE IMPROVEMENT OF VARIOUS ENERGY CONVERSION TECHNOLOGIES: INVESTIGATING BOILING PHENOMENA IN AN EXTENDED RANGE OF THERMODYNAMIC CONDITIONS* - Jocelyn BONJOUR
- **S2\_11** - *MODELING AND SIMULATION OF AN AUTOMOTIVE AUXILIARY HEATER SYSTEM* - Florin RĂDOI , Ștefan SOROHAN , Nicolae VASILIU , Alexandrina MIHAI , Constantin CĂLINOIU
- **S2\_03** - *CORRELATION BETWEEN CONFORT AND ENERGY CONSUMPTION FOR AUTOMOTIVE SUSPENSIONS* - Alexandru DOBRE , Anton HADĂR , Daniela VASILIU , Nicolae VASILIU , Cristian Nicolae ANDREESCU
- **S2\_14** - *NEW CHALLENGES FOR ENERGY STORAGE TO GAIN MOMENTUM* - Adrian ENACHE, Mihai BALAN, Adriana MARINOIU, Mihai VARLAM, Ioan STEFANESCU
- **S2\_15** - *VARIABLE LOAD SUPPLY USING FUEL CELLS / ULTRACAPACITOR HYBRID ARCHITECTURE POWER SOURCE* - Mircea RACEANU, Mariana ILIESCU, Mihail CULCER, Mihai VARLAM, Ioan STEFANESCU

## SECTION 2 - ENERGY EFFICIENCY

TUESDAY 22 OCTOBER 2015

**Technical Session T2 - S2 (16:00 – 17:30)**

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E3 "Nicolae V. Botan"

SESSION CHAIRS: JOCELYN BONJOUR, MIHAI VARLAM

- **S2\_13** - *APPLICATION "MINIMALLY-TIME" MODEL OF RIDE FORKLIFT'S FOR CALCULATING ENERGY CONSUMPTION* - Paweł ZAJĄC
- **S2\_10** - *STATE OF THE ART FOR PHASE CHANGE SLURRIES* – Virginia VASILE
- **S2\_16** - *A THERMODYNAMIC EVALUATION OF A COMPRESSED AIR ENERGY STORAGE SYSTEM* – Alexandru CIOCAN, Mohand TAZEROUT
- **S2\_01** - *A NSPPSO APPROACH TO ECONOMIC HEAT EXCHANGER DESIGN* - George ANESCU
- **S2\_06** - *ENERGY RECOVERY FROM FOOD WASTE* - Adriana Raluca WÄCHTER, Mihail Reinhold WÄCHTER, Ioana IONEL

## SECTION 2 - ENERGY EFFICIENCY

FRIDAY 23 OCTOBER 2015

**Technical Session T3 - S2 (11:00 – 12:30)**

**Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – EN 114**

SESSION CHAIRS: ROXANA PĂTRAȘCU, VASILE RUGINĂ

- **S2\_08** - *LABORATORY SMART HOME ENERGY MANAGEMENT SYSTEM* - Ciprian Ionut PAUNESCU, Lucian TOMA, Constantin BULAC, Mircea EREMIA
- **S2\_09** - *EFFICIENT PRODUCTION AND USE OF BIOGAS IN A WASTEWATER TREATMENT PLANT* – Liviu Eduard PUNGARU, Marcel ISTRATE
- **S2\_05** - *ENERGY MANAGEMENT ON A WATER SUPPLY SYSTEM* – Liviu Eduard PUNGARU, Marcel ISTRATE
- **S2\_12** - *EVALUATION OF ENERGY EFFICIENCY IN MUNICIPAL WASTEWATER TREATMENT PLANTS* - Ramona ZGAVAROGEA, Violeta NICULESCU, Corina CIUCURE, Marius MIRICIOIU
- **S2\_02** - *EFFICIENCY OF BIOGAS UTILISATION FOR COGENERATION* - Eduard MINCIUC, Roxana PATRASCU, Elena Cristina RADA

## SECTION 4 - FOSSIL FUELS CLEAN TECHNOLOGIES

FRIDAY 23 OCTOBER 2015

Technical Session T3 - S4 (11:00 – 12:30)

Location: Electrical Engineering, Energetics and Applied Informatics Faculty, "Gheorghe Asachi" Technical University of Iasi - Hall – EN 119

SESSION CHAIRS: ADRIAN ADAM, CRISTIAN DINCĂ

- **S4\_04** - *CRITICAL ANALYSIS OF THE HEAT REQUIREMENT IN THE CO<sub>2</sub> CAPTURE BY CHEMICAL ABSORPTION PROCESS* - Adrian PASCU, Nela SLAVU, Adrian BADEA, Cristian DINCA
- **S4\_05** - *TECHNICO-ECONOMICAL EVALUATION OF CHEMICAL ABSORPTION TECHNOLOGY INTEGRATION IN CO<sub>2</sub> CAPTURE PRE-COMBUSTION PROCESS FOR ELECTRICITY GENERATION* – Nela SLAVU, Adrian PASCU, Adrian BADEA, Cristian DINCA
- **S4\_06** - *THE DETERMINATION OF NITROGEN OXIDE EMISSIONS FROM BURNING COAL IN A BOILER OF 2 MW* –Vlad-Florin STAVIRI
- **S4\_07** - *THE IMPACT OF USING A HEAT STORAGE TANK IN A DISTRICT HEATING SYSTEM* - Șerban IFTIME, Marcel ISTRATE
- **S4\_02** - *CONSIDERAȚII PRIVIND PROGNOZA CONSUMULUI DE GAZE DIN REPUBLICA MOLDOVA* - Elena NICOLAEV, Valeriu Nicolae PANAITESCU, Andrei BÎNZARI

## SECTION 5 - ENVIRONMENTAL IMPACT

TUESDAY 22 OCTOBER 2015

**Technical Session T1 - S5 (14:00 – 15:30)**

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E4 "Alexandru Poeată"

SESSION CHAIRS: MARIA GAVRILESCU, LĂCRĂMIOARA DIANA ROBESCU

- **S5\_01** - *THE EFFECT OF SEWAGE SLUDGE ON WHEAT PRODUCTIVITY AND QUALITY AND IMPLICATIONS ON HUMAN HEALTH* - Diana Mariana COCĂRȚĂ, Viorica Ruxandu SUBȚIRELU, Adrian Alexandru BADEA
- **S5\_02** - *EXPERIMENTAL RESEARCHES TO ESTIMATE THE DIFFERENCE BETWEEN EVAPORATION AND EVAPOTRANSPIRATION FOR A SOIL-WATER-PLANT SYSTEM* - Angelica GIURETE, C. BUCIN, C. POENARU, A. M. MARINOV
- **S5\_03** - *USING RISK ANALYSIS IN SELECTING LCA SCENARIOS FOR EVALUATING THE ENVIRONMENTAL IMPACT OF THE SEWAGE SLUDGE* - Andreea GHIOCEL, Dan IOACHIM, Valeriu PANAITESCU, Adrian GHEORGHE
- **S5\_04** - *PERFORMANCE AND ENVIRONMENTAL IMPACT OF A 33 KW CONDENSING BOILER. EXPERIMENTAL APPROACH* - Dan-Teodor BALANESCU, Carmen-Ema PANAITE, Marius-Vasile ATANASIU, Vlad-Mario HOMUTESCU
- **S5\_05** - *EXPERIMENTAL RESEARCH CONCERNING PUMPING REGIME INFLUENCE ON GROUNDWATER QUALITY IN THE PROXIMITY OF A POLLUTED LAKE* - Anca Marina MARINOV, Irina MARINOV, Mihaela Amalia DIMINESCU
- **S5\_07** - *OXYGEN DEFICIENCY DECREASE FROM THE TURBINED WATER* - Florentina BUNEA, Gabriel Dan CIOCAN, Diana Maria BUCUR, Georgiana DUNCA, Lucian PÎSLARU-DĂNESCU, Rareș CHIHAIA

## SECTION 5 - ENVIRONMENTAL IMPACT

TUESDAY 22 OCTOBER 2015

Technical Session T2 - S5 (16:00 – 17:30)

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E4 "Alexandru Poeată"

SESSION CHAIRS: FLORIAN STĂTESCU, DAN NICULAE ROBESCU

- **S5\_08** - *MODELING THE DEGRADATION OF ORGANIC MATTER IN WASTEWATER* – Liana Ioana VUJĂ, Gabriela Elena DUMITRAN, Vlad Florin PIRAIANU
- **S5\_09** - *CARBON FOOTPRINT OF PLASTIC PRODUCTS* – Elena Mădălina MAVRODIN, Gheorghe LĂZĂROIU
- **S5\_10** - *SOCIAL RESPONSIBILITY THROUGH THE ECOLOGICAL CONCEPT OF THE PRODUCTS* – Raluca Miruna ZAPCIU, Gheorghe HURDUZEU, Miron ZAPCIU
- **S5\_11** - *REDUCING THE EFFECT OF URBAN HEAT ISLAND: A CASE STUDY FOR BUCHAREST, ROMANIA* - Adrian CIOCANEA, Andrei DRAGOMIRESCU, Bogdan TOFAN, Raluca MANOLACHE
- **S5\_12** - *INCREASING THE ENERGY AND ECONOMIC EFFICIENCY AND DECREASING THE ENVIRONMENTAL IMPACT IN A ICE CREAM COMPANY* - Gheorghe HAZI, Aneta HAZI
- **S5\_13** - *MODELLING MORPHOLOGICAL CHANGES ALONG A LOWER DANUBE REACH* - Daniela NISTORAN GOGOĂȘE, Georgiana-Mihaela PĂTRU, Iuliana ARMAȘ, Cristina Sorana IONESCU, Ștefania GRIGORE
- **S5\_20** - *THE INFLUENCE OF DEEP AND SHALLOW EARTHQUAKES ON THE UNCONTROLLED EROSIONS OF THE BLACK SEA'S SHORES AND COASTAL ENVIRONMENT* – Victorița RĂDULESCU



## SECTION 5 - ENVIRONMENTAL IMPACT

FRIDAY 23 OCTOBER 2015

**Technical Session T3 - S5 (11:00 – 12:30)**

**Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E4 "Alexandru Poenă"**

**SESSION CHAIRS: CARMEN TEODOSIU, LĂCRĂMIOARA DIANA ROBESCU**

- **S5\_14** - *DISPERSION MODELING AND SIMULATION OF A AERATION TANK* - Corina IONESCU, Lăcrămioara Diana ROBESCU
- **S5\_15** - *INDUSTRIAL WASTEWATER TREATMENT – COMPARATIVE SCENARIOS FOR REDUCING OPERATIONAL COSTS* – Elena Elisabeta MANEA, Lăcrămioara Diana ROBESCU, Ioan NASCU, Grigore VLAD
- **S5\_16** - *REDUCING CARBON FOOTPRINT OF A WASTEWATER TREATMENT PLANT USING ADVANCED TREATMENT AND RENEWABLE ENERGY SOURCES* – Lăcrămioara Diana ROBESCU, Elena PRESURA, Elena Elisabeta MANEA
- **S5\_17** - *RESEARCH OF BANK PROTECTION WORKS ON ERODABLE STREAM BED OF THE RIVER* – Anca BĂLAN, Alexandru Lucian LUCA, Olga-Adelina POP, Maria PASTIA, Mihail LUCA
- **S5\_18** - *THE INFLUENCE OF SOME PROPERTIES CONCERNING WATER STABLE AGGREGATES OF SALINE SOILS* - Maria PASTIA, Florian STĂTESCU, Cristian PASTIA, Anca BALAN
- **S5\_19** - *INFLUENCE OF THE MINERAL PARTICLES MORPHOLOGY ON SOIL HYDRAULIC PROPERTIES* – Viorel FILER, Florian STĂTESCU, Daniela RUSU, Florica DOROFTEI
- **S5\_21** - *THE USE OF TIRE WASTE FEEDSTOCK IN ENERGY AND INDUSTRIAL SECTORS* - Iustina STANCIULESCU, Cosmin MARCULESCU, Adrian BADEA

## SECTION 6 - FLUID MECHANICS AND APPLICATIONS

TUESDAY 22 OCTOBER 2015

Technical Session T1 - S6 (14:00 – 15:30)

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E1 "Cezar Parteni-Antoni"

SESSION CHAIRS: DANIELA POPESCU, CORNELIU BĂLAN

- **S6\_01-** *THE DETERMINATION OF AN ORIFICE CONTRACTION COEFFICIENT USING NUMERICAL METHODS* – Andrei Lucian VOINEA, Lucian MÂNDREA, Valeriu PANAITESCU
- **S6\_04** - *FOCUSING AND DIFFUSION PROCESSES IN MICROCHANNELS* - Iulia-Rodica DAMIAN, Steffen HARDT, Corneliu BALAN
- **S6\_06** - *CAPILLARY BREAKUP EXTENSIONAL RHEOLOGY OF MEMBRANES USED IN MICRO-ENCAPSULATION* - Mihaela TURCANU, Lucia Frau TASCAN, Nadja SIEGERT, Corneliu BALAN, Crispulo GALLEGOS
- **S6\_07** - *OPTIMAL PARAMETRIC RUDDER SHAPE BASED ON NUMERICAL ANALYSIS USING COMMERCIAL SOFTWARE CFX* - Cosmin KATONA, Valeriu PANAITESCU, Ionuț-Cristian SCURTU
- **S6\_08** - *PARTICLE IMAGE VELOCIMETRY MEASUREMENTS ON A TURBULENT AIR JET OVER A FLAT PLATE* - Ștefan-Mugur SIMIONESCU, Ümran DÜZEL, Claudia ESPOSITO, Zdenek ILICH, Corneliu BĂLAN
- **S6\_11** - *BIOMECHANICAL APPLICATIONS IN DENTISTRY - CASE STUDIES* - Cristina BICĂ

## SECTION 7 - HYDRO-POWER ENGINEERING

FRIDAY 23 OCTOBER 2015

**Technical Session T3 - S7 (11:00 – 12:30)**

**Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E1 "Cezar Parteni-Antoni"**

SESSION CHAIRS: SANDA CARMEN GEORGESCU, MICHEL CERVANTES

- **S7\_12** - *CAM CURVE IN KAPLAN TURBINE, A SENSITIVITY ANALYSIS* – H. ISAKSSON, M. SENDELIUS, M.J. CERVANTES
- **S7\_02** - *PEAK HYDROPOWER PLANT OPERATION BASED ON STOCHASTIC DYNAMIC PROGRAMMING ANALYSIS* – Eliza Isabela TICĂ, Radu POPA
- **S7\_03** - *LOW FREQUENCY PRESSURE PULSATIONS AT HIGH LOAD IN A FRANCIS TURBINE* - Iulian BĂLĂUNȚESCU
- **S7\_13** - *CHLORINATION SCHEDULE IN THE WATER DISTRIBUTION SYSTEM OF A MEDIUM SIZED CITY WITH MULTIPLE PUMPING STATIONS* – Sanda-Carmen GEORGESCU , Andrei-Mugur GEORGESCU , Remus Alexandru MADULAREA
- **S7\_07** - *THE REENGINEERING OF THE HYDROELECTRIC POWER STATION AND IMPACT ON THE ENVIRONMENT- CASE STUDY HYDROELECTRIC POWER STATION DIMITRIE LEONIDA (STEJARU)* - Gabriela ZACHIA-ZLATEA, Carmen NAP, Maria-Isabela NEDELICU

## SECTION 7 - HYDRO-POWER ENGINEERING

FRIDAY 23 OCTOBER 2015

**Technical Session T4 - S7 (14:00 – 15:30)**

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E1 "Cezar Parteni-Antoni"

SESSION CHAIRS: MICHEL J. CERVANTES, ANDREI MUGUR  
GEORGESCU

- **S7\_04** - *NUMERICAL SIMULATION OF THE FLOW THROUGH A KAPLAN DRAFT TUBE* – Raluca Gabriela IOVANEL, Georgiana DUNCA, Diana Maria BUCUR, Ionuț Stelian GRECU, Valeriu Nicolae PANAITESCU, Michel J. CERVANTES
- **S7\_08** - *CAVITATION RESERVE FOR FRANCIS TURBINE* - Marius-Cristian GRECU, Valeriu Nicolae PANAITESCU
- **S6\_05** - *MODELLING TRANSIENT MULTIPHASE FLOW IN PIPELINE* - Livia Ioana PITORAC, Diana Maria BUCUR, Georgiana DUNCA, Michel J. CERVANTES
- **S7\_11** - *PHYSICAL MODEL FOR LABORATORY TESTING OF THE SUBMERGED WAVE ENERGY CAPTURING DEVICE* - Gabriel TATU , Alexandru DIMACHE , Iulian IANCU , Andreea COVEIANU
- **S7\_05** - *ADDED PROPERTIES EFFECT IN HYDRAULIC TURBINES: A REVIEW* - Răzvan ROMAN, Diana Maria BUCUR, Georgiana DUNCA, Valeriu Nicolae PANAITESCU, Michel J. CERVANTES

## SECTION 7 - HYDRO-POWER ENGINEERING

FRIDAY 23 OCTOBER 2015

**Technical Session T5 - S7 (16:00 – 17:30)**

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E1 "Cezar Parteni-Antoni"

SESSION CHAIRS: SANDA CARMEN GEORGESCU, MICHEL CERVANTES

- **S7\_10** - *TECHNICAL SOLUTIONS APPLIED TO CONTROL THE SWIRLING FLOW IN THE DISCHARGE CONE OF A FRANCIS TURBINE* - Marius-Cristian GRECU, Carmen-Anca SAFTA, Valeriu Nicolae PANAITESCU
- **S7\_01** - *SMALL SCALE EXPERIMENTAL MODELLING FOR WATER INTAKES EMBEDDED IN SLUICE GATES* - Rareş – Andrei CHIHAIA, Lucian MÂNDREA, Ileana POPA
- **S7\_09** - *CRITICAL INFRASTRUCTURE* – Gabriela-Andreea DESPESCU, Gheorghe LĂZĂROIU
- **S7\_06** - *DYNAMIC CHARACTERISTICS OF A HYDRAULIC TURBINE USING FINITE ELEMENT METHOD* - Răzvan ROMAN, Georgiana DUNCA, Diana Maria BUCUR, Valeriu Nicolae PANAITESCU, Michel J. CERVANTES

## SECTION 8 - NUCLEAR-POWER ENGINEERING

TUESDAY 22 OCTOBER 2015

**Technical Session T1 - S8 (14:00 – 15:30)**

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – EN 114

SESSION CHAIRS: CHIRICĂ TEODOR

- **S8\_12** - *NUCLEAR ENERGY IN A COMPLICATED REGIONAL CONTEXT* – Chiriță TEODOR
- **S8\_01** - *RING TESTS ON CANDU FUEL ELEMENTS SHEAT SAMPLES* - Veronica ANDREI , Ilie PRISECARU
- **S8\_07** - *ANALYSIS OF THE CANDU-6 PLANT BEHAVIOR IN CASE OF VERY LATE STEAM GENERATORS DEPRESSURIZATION AND WATER INJECTION FOLLOWING A STATION BLACK-OUT ACCIDENT*- Elena DINCA, Daniel DUPLAC, Ilie PRISECARU
- **S8\_08** - *OVERVIEW OF THE SCDAPSIM/RELAP5 STUDIES PERFORMED AT POLITEHNICA UNIVERSITY OF BUCHAREST ON THE CANDU 6 ACCIDENT ANALYSIS* - Daniel DUPLAC, Ilie PRISECARU, Dominic Eugeniu MORARU
- **S8\_09** - *CANDU NUCLEAR POWER PLANT PRESSURE TUBE OXIDATION MODELING* - Andrei BUDU, Gabriel PAVEL, Ilie PRISECARU, Dominic MORARU
- **S8\_10** - *BEHAVIOR THORIUM FUEL CYCLE IN PRESSURIZED HEAVY WATER REACTOR AND ADVANCED CANDU REACTOR* - Florentina SELAVIRTEA, Gheorghe SINDILARU

## SECTION 8 - NUCLEAR-POWER ENGINEERING

TUESDAY 22 OCTOBER 2015

**Technical Session T2 - S8 (16:00 – 18:30)**

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – EN 114

SESSION CHAIRS: CHIRICĂ TEODOR

- **S8\_02** - *A STUDY FOR AN INTEGRATED RESPONSE TO THE RISKS INDUCED BY THE NATIONAL CONTEXT IN THE PLANNING OF THE GEOLOGICAL REPOSITORY IN ROMANIA* - Veronica ANDREI , Ilie PRISECARU
- **S8\_03** - *VALIDATION OF A NUMERICAL APPROACH FOR WOOD'S METAL INJECTION IN WATER* – Radu SECAREANU, Riccardo MEREU, Fabio INZOLI, Ilie PRISECARU
- **S8\_04** - *NON UNIFORM MAGNETIC FIELD AND LIQUID METAL INTERACTION, MAGNETO HYDRO DYNAMIC MODELING* – Gabriel GHITA, Ilie PRISECARU
- **S8\_05** - *LECOTELO - INSTALLATION FOR TESTING STRUCTURAL MATERIALS CORROSION / EROSION IN MOLTEN LEAD. PRESENTATION AND COMMISSIONING* – Virgil COJOCARU, Nicolae MARINESCU, Gelu DUNA, Ilie PRISECARU
- **S8\_06** - *A POSSIBLE TRIGGERING FACTOR FOR THE RELAXATION OF THE GARTER SPRING SPACER* - Tiberiu GYONGYOSI, Bogdan CORBESCU, Gheorghe DELOREANU, Dumitru PUIU, Ilie PRISECARU
- **S8\_11** - *NUCLEAR INDUSTRY AND PUBLIC PERCEPTION IMPROVEMENT* – Gabriel Lazaro PAVEL, Andrei Razvan BUDU
- **S8\_13** - *SIMULATIONS OF HYDROGEN DEFLAGRATION WITH THE ASTEC CODE* - Gabriela RADU , Ilie PRISECARU

## SECTION 9 - POWER SYSTEMS & SMART GRIDS

FRIDAY 23 OCTOBER 2015

**Technical Session T3 - S9 (11:00 – 12:30)**

**Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E3 "Nicolae V. Botan"**

SESSION CHAIRS: CĂLIN MUNTEANU, CONSTANTIN BULAC

- **S9\_08** - *CONFIGURING DIGITAL PROTECTIONS FOR MEDIUM VOLTAGE ELECTRIC MOTORS IN ISOLATED NEUTRAL NETWORK* – Gheorghe HAZI, Aneta HAZI
- **S9\_15** - *OPTIMISATION OF PV PANELS CONNECTED TO AN INVERTER TO MINIMIZE POWER LOSSES* – Andrei NEAGOE, Nicolae GOLOVANOV, Radu PORUMB, Andreea NEAGOE-STEFANA
- **S9\_04** - *DYNAMIC INFLUENCE OF STATIC VAR COMPENSATOR ON THE ROMANIAN POWER SYSTEM IN PRESENCE OF RENEWABLE SOURCES* - Gabriela IORDACHE, Sergiu Stelian ILIESCU
- **S9\_06** - *FAULT RIDE-THROUGH POTENTIALITY AND DAMPING IMPROVEMENT IN DFIG WIND TURBINES USING LVRT SCHEME* – MINH QUAN DUONG, A. DOLARA, F. GRIMACCIA, S. LEVA, M. MUSSETTA, G. SAVA
- **S9\_07** - *HARMONIC ANALYSIS OF SIGNALING AND TELECOMMUNICATION DEVICES FOR REGIONAL RAILWAY TRANSPORTATION SYSTEM* - Morris BRENNAN, Alberto DOLARA, Federica FOIADELLI, Sonia LEVA, Michela LONGO
- **S9\_21** - *RECENT ADVANCES IN CAD MODELING OF ELECTROMAGNETIC FIELD DISTRIBUTION IN HV SUBSTATIONS* – Marius PURCAR, Calin MUNTEANU, Florin MIRON, Ioan T. POP



## SECTION 9 - POWER SYSTEMS & SMART GRIDS

FRIDAY 23 OCTOBER 2015

Technical Session T4 - S9 (14:00 – 15:30)

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E3 "Nicolae V. Botan"

SESSION CHAIRS: MARICEL ADAM, ION TRIȘTIU

- **S9\_02** - *EFFECTS OF A PHOTOVOLTAIC POWER PLANT INTEGRATION ON DISTRIBUTION NETWORK* – Lucian Ioan DULĂU, Mihail ABRUDEAN, Dorin BICĂ
- **S9\_05** - *MULTI-OBJECTIVE PARETO OPTIMIZATION FOR RADIAL DISTRIBUTION SYSTEMS* - Georgeta BANCESCU, Ovidiu IVANOV, Mihai GAVRILAS, Gianfranco CHICCO
- **S9\_17** - *CHARACTERIZATION AND FLEXIBILITY OF THE ELECTRICAL DEMAND IN SMART GRIDS* - Gianfranco CHICCO
- **S9\_16** - *RULE-BASED BALANCING STRATEGY IN A MICROGRID BY CONTRIBUTION OF ELECTRIC VEHICLES* - Andreea NEAGOE-ȘTEFANA , Mircea EREMIA , Lucian TOMA , Andrei NEAGOE
- **S9\_18** - *APPLICATION OF MONTE CARLO METHOD IN MODELING WIND SPEED DISTRIBUTIONS FOR EVALUATING THE ENERGY DELIVERED* - Constantin GHINEA, Mircea EREMIA, Ion TRIȘTIU
- **S9\_13** - *ASPECTS OF ADOPTING CIM STANDARD BY ENTSO-E AND COMMON GRID MODEL EXCHANGE STANDARD IMPLEMENTATION IN TRANSELECTRICA* - Oana MÂNICUȚĂ , Mircea EREMIA
- **S3\_01** - *INNOVATIVE IMPLEMENTATION OF FUZZY LOGIC IN PASSIVE HOUSES* - Liviu Andrei NEGREA , Vladimir TANASIEV, Adrian BADEA, Alexandra DANU

## SECTION 9 - POWER SYSTEMS & SMART GRIDS

FRIDAY 23 OCTOBER 2015

**Technical Session T5 - S9 (16:00 – 17:30)**

**Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E3 "Nicolae V. Botan"**

**SESSION CHAIRS: MIHAI GAVRILAȘ, GHEORGHE VUC,  
GIANFRANCO CHICCO**

- **PS\_04** - *HISTORICAL EVOLUTION OF POWER COMPONENTS DEFINITIONS* - Adrian ADĂSCĂLIȚEI, Alexander E. EMANUEL
- **S9\_10** - *ASPECTS ABOUT THE TRANSIENT STABILITY OF THE ROMANIAN POWER SYSTEM CONSIDERING WIND POWER PLANTS INTEGRATION* - Oana MÂNICUȚĂ, Mircea EREMIA
- **S9\_12** - *ASPECTS ABOUT INTEGRATING LARGE SCALE WIND GENERATION USING HVDC IN THE ROMANIAN POWER SYSTEM* – Oana MÂNICUȚĂ, Mircea EREMIA
- **S9\_19** - *CONGESTION MANAGEMENT BY USING A PHASE SHIFTING TRANSFORMER* - Dorian SIDEA, Mircea EREMIA, Lucian TOMA
- **S9\_20** - *ACTIVE POWER LOSSES MINIMIZATION AND VOLTAGE CONTROL USING GENETIC ALGORITHMS* - Constantin BULAC, Ana Maria VĂDUVA, Ion TRIȘTIU, Lucian TOMA
- **S9\_09** - *ECONOMIC DEVELOPMENT AND GREEN/SUSTAINABILITY INITIATIVES IN NATIONAL ECONOMIES* - MAREK ĆWIKLIŃSKI, MARIUS DAN GAVRILETEA, ŁUKASZ JABŁOŃSKI
- **S9\_11** - *ASPECTE CONCURENTIALE IN FUNCTIONAREA PIETEI DE ENERGIE ELECTRICA* - Luiza DRAGHICI, Virgil DUMBRAVA

## ROUND TABLE RT 1

# NEW CHALLENGES IN THE FIELD OF HIGH VOLTAGE TESTING

TUESDAY 22 OCTOBER 2015

14:00 – 15:30 & 16:00 – 17:30

Location: Electrical Engineering, Energetics and Applied Informatics Faculty, "Gheorghe Asachi" Technical University of Iasi - Conference Hall „Dragomir Hurmuzescu”

SESSION CHAIRS: ANDREAS HORETH, MARIAN COSTEA

- **DEMANDS OF DIELECTRIC TESTING OF HVAC AND HVDC POWER CABLES WITH EXTRUDED INSULATION** – Andreas HORETH, Stefan MÄTZOLD
- **NEW TENDENCIES IN ROMANIA REGARDING HIGH VOLTAGE EQUIPMENT TESTING** - Traian FĂGĂRĂȘAN, Adrian FARCAȘ, Marius OLTEAN
- **TESTS OF HVDC UNDERGROUND AND SUBMARINE CABLES** - Andrei MARINESCU, Dorin POPA, Teodor VASCAN, Aurel UNGUREANU, Sorin COATU, Dan RUCINSCHI
- **SPECIAL DIELECTRIC TESTS FOR COMPOSITE INSULATORS** - Marian COSTEA, Ileana BĂRAN, Tudor LEONIDA

## ROUND TABLE RT 2

# APPLIED FLUID MECHANICS IN THE POWER ENGINEERING FIELD

TUESDAY 22 OCTOBER 2015

16:00 – 17:30

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Hall – E1 „Cezar Parteni-Antoni”

SESSION CHAIRS: WIM UIJTTEWAAL, CORNELIU BALAN

- **MIXING AND TRANSPORT IN SHALLOW RIVER FLOWS** – Wim UIJTTEWAAL
- **INFLUENCE OF THE PATTERNED SURFACES ON THE FLOW SPECTRUM AROUND THE IMMERSED BODIES** - Nicoleta Octavia TANASE, Diana BROBOANA
- **COALESCENCE PHENOMENON AT THE INTERFACE BETWEEN IMMISCIBLE FLUIDS** - Ioana Laura OMOCEA, Mona MIHAILESCU, Corneliu BALAN
- **AN EXPERIMENTAL STUDY ON AN ULTRA LOW HEAD CROSS FLOW TURBINE INSTALLED AT THE END OF AN OPEN CHANNEL** - Daniela POPESCU, Constantin POPESCU, Mircea BĂRGLĂZAN
- **SEDIMENT DYNAMICS ALONG A LOWER REACH OF DANUBE RIVER** - Daniela NISTORAN GOGOĂȘE, Georgiana-Mihaela PĂTRU, Iuliana ARMAȘ, Cristina Sorana IONESCU, Ștefania GRIGORE
- **INFLUENCE OF AIR ADMISSION ON THE QUASI-STAGNANT REGION IN A DECELERATED SWIRLING FLOW** - Constantin TANASA, Alin BOSIOC, Sebastian MUNTEAN, Romeo SUSAN-RESIGA

## ROUND TABLE RT 3

# TEHNOLOGII MODERNE DE EXPLOATARE A REȚELELOR ELECTRICE

FRIDAY 23 OCTOBER 2015

11:00 – 12:30

Location: Electrical Engineering, Energetics and Applied Informatics Faculty, "Gheorghe Asachi" Technical University of Iasi - Conference Hall „Dragomir Hurmuzescu”

SESSION CHAIRS: SIMONA MIHAELA CIOCAN COVALIU, ION TRIȘTIU, MIHAI GAVRILAȘ

- **INFLUENȚA SURSELOR DISTRIBUITE ASUPRA REȚELELOR ELECTRICE DE DISTRIBUȚIE** - Ion TRIȘTIU, Constantin BULAC, Alexandru MANDIȘ, Lucian TOMA
- **INFLUENȚA REGLAJULUI DE TENSIUNE ASUPRA PIERDERILOR DE PUTERE ȘI ENERGIE ÎN REȚELELE DE DISTRIBUȚIE DE JOASĂ TENSIUNE** - Mihai GAVRILAȘ, Gheorghe GRIGORAȘ, Ovidiu IVANOV, Cătălin STRUGARU, Andrei IOAN
- **ANALIZA PIERDERILOR DE ENERGIE ÎN REȚELELE ELECTRICE DE JOASĂ TENSIUNE DEZECHILIBRATE** - Nicolae GOLOVANOV, Cornel TOADER, Ion TRIȘTIU, Constantin BULAC, Cristian LĂZĂROIU
- **ESTIMAREA CPT TEHNIC ÎN REȚELELE DE DISTRIBUȚIE DE JOASĂ TENSIUNE DEZECHILIBRATE** - Gheorghe GRIGORAȘ, Mihai GAVRILAȘ, Florina SCARLATAȚHE, Mihaela CAZACU, Gabriela COȘARCĂ
- **ASPECTE PRIVIND FUNCȚIONAREA REȚELELOR ELECTRICE DE DISTRIBUȚIE DE JOASĂ TENSIUNE ÎN REGIM PERMANENT NESINUSOIDAL** - Bogdan NEAGU, Gheorghe GEORGESCU

## ROUND TABLE RT 4

# STABILIREA DIRECȚIILOR STRATEGICE ȘI A OBJECTIVELOR PRIORITARE ALE ACTIVITĂȚILOR DE CERCETARE-DEZVOLTARE ȘI INOVARE ÎN DOMENIUL ENERGETIC ÎN PERIOADA 2016-2020

FRIDAY 23 OCTOBER 2015

14:00 – 15:30 & 16:00 – 17:30

Location: Electrical Engineering, Energetics and Applied Informatics Faculty,  
"Gheorghe Asachi" Technical University of Iasi - Conference Hall „Dragomir  
Hurmuzescu”

SESSION CHAIRS: ADRIAN ADAM, CRISTIAN DINCĂ

- **EVALUAREA POTENTIALULUI NATIONAL DE CERCETARE STIINTIFICA IN DOMENIUL ENERGETIC** - Adrian ADAM, Vasile RUGINĂ, Marian DOBRIN, Cristian DINCĂ, Sergiu NICOLAE
- **ANALIZA SISTEMULUI ENERGETIC NATIONAL** – Marian DOBRIN
- **DIRECTII STRATEGICE SI OBJECTIVE PRIORITARE PENTRU ACTIVITATEA DE CERCETARE-DEZVOLTARE ÎN DOMENIUL ENERGETIC ÎN PERIOADA 2016-2020** - Mihai VARLAM, Adrian ADAM
- **CONSECINȚELE INTEGRĂRII TEHNOLOGIEI DE CAPTARE CO<sub>2</sub> ÎN CADRUL SISTEMELOR ENERGETICE CLASICE** - Cristian DINCĂ, Adrian ADAM
- **FEZABILITATEA INTEGRĂRII PROCESOR CCS IN CADRUL CTE** - Nela SLAVU, Adrian BADEA, Cristian DINCĂ
- **SIMULAREA PROCESULUI DE ABSORBȚIE CHIMICĂ ÎN ASPEN HYSYS UTILIZÂND ALKANOLAMINI** - Adrian PASCU, Adrian BADEA, Cristian DINCĂ