

# SIELMEN 2015



## **10<sup>th</sup> International Conference and Exhibition on Electromechanical and Power Systems**

---

### **Conference Program**

---

**October 6, Craiova, Romania**

**October 8 – 9, Chișinău, Republic of Moldova**





# 10<sup>th</sup> International Conference and Exhibition on Electromechanical and Power Systems

## Conference Program

Organized by

Faculty of Electrical Engineering – Craiova

Faculty of Electrical Engineering – Iași

Faculty of Power and Electrical Engineering – Chișinău

*with technical support*

*Romanian Academy of Technical Sciences*



October 6, Craiova, Romania

October 8 – 9, Chișinău, Republic of Moldova

# PROGRAM COMMITTEE

## Founders

Prof.dr.ing. Tudor AMBROS, Republic of Moldova  
Prof.dr.ing. Lorin CANTEMIR, Romania  
Prof.dr.ing. Aurel CÂMPEANU, Romania  
Prof.dr.ing. Petru TODOS, Republic of Moldova

## Conference Chairs

Prof.dr.ing. Marian CIONTU – Romania  
Prof.dr.ing. Victor POGORA – Republic of Moldova  
Prof.dr.ing. Marcel ISTRATE – Romania

## Members

Maricel ADAM – Romania  
Valentin ARION – Republic of Moldova  
Vladimir BERZAN – Republic of Moldova  
Iulian BIROU – Romania  
Alexandru BITOLEANU – Romania  
Radu BOJOI – Italy  
Maria BROJBOIU – Romania  
Dagmar CAGANOVA – Slovakia  
Andrei CHICIUC – Republic of Moldova  
Mihail CHIORSAC – Republic of Moldova  
Daniel CISMARU – Romania  
Radu CIUPA – Romania  
Vasile DOBREF – Romania  
Adrian Mircea DRIGHICIU – Romania  
Sorin ENACHE – Romania  
Mihai GAVRILAȘ – Romania  
Marian GĂICEANU – Romania  
Nicolae GOLOVANOV – Romania  
Adrian GRAUR – Romania  
Cristian Gyozo HABA – Romania  
Mikuláš HUBA – Slovakia  
Mihai IORDACHE – Romania  
Virginia IVANOV – Romania  
Roman KAMNIK – Slovenia  
Gheorghe LIVINȚ – Romania  
Nikolay MADJAROV – Bulgaria  
Dan MIHAI – Romania  
Viktor MILARDIC – Croatia  
Alexandru MOREGA – Romania  
Nazih MOUBAYED – Lebanon  
Calin MUNTEANU – Romania  
Florin MUNTEANU – Romania  
Radu MUNTEANU – Romania  
Valentin NĂVRĂPESCU – Romania  
Rachid OUTBIB – France  
Sorin PAVEL – Romania  
Radu PENTIUC – Romania  
Camelia PETRESCU – Romania  
Victor PETRUSHIN – Ukraine  
Ion PIROI – Romania  
Claudia POPESCU – Romania  
Mihaela POPESCU – Romania  
Mihai Octavian POPESCU – Romania  
Francisco RESTIVO – Portugal  
Raphael ROMARY – France  
Alexandru SĂLCEANU – Romania  
Gheorghe SCUTARU – România  
Alecsandru SIMION – Romania  
Ion SOBOR – Republic of Moldova  
Ion STRATAN – Republic of Moldova  
Eleonor STOENESCU – Romania  
Jana SUJANOVA – Slovakia

Lucian MANDACHE – Romania  
Gheorghe MANOLEA – Romania  
Andrei MARINESCU – Romania  
Corneliu MARINESCU – Romania

Dan TELTEU NEDELCU– SABCA, Belgium  
Mihai TÎRȘU – Republic of Moldova  
Ion VONCILĂ – Romania  
Ion VLAD – Romania  
Ivan YATCHEV – Bulgaria

## **Organizing Committee**

**Sergiu IVANOV – Romania – Conference Chair**

**Dorin Dumitru LUCACHE – Romania – Co-Chair**

**Ilie NUCĂ – Republic of Moldova – Co-Chair**

Mihaela POPESCU – Romania  
Cristian-Győző HABA – Romania  
Lucian MANDACHE – Romania  
Ion VLAD – Romania  
Mircea Adrian DRIGHICIU – Romania  
Daniel CISMARU – Romania  
Mircea-Emilian ARDELEANU – Romania  
Florin RAVIGAN – Romania  
Alexandra PREDA – Romania  
Marcel BURDUNIUC – Republic of Moldova  
Victor GROPA – Republic of Moldova  
Corina CHELMENCIUC – Republic of Moldova  
Ludmila VASILICĂ – Republic of Moldova  
Ala TVERDOHLEB – Republic of Moldova  
Petru VÎRLAN – Republic of Moldova  
Vadim CAZAC – Republic of Moldova  
Tudor RADILOV – Republic of Moldova  
Marin PRIPA – Republic of Moldova

## Conference Sections

<b>AIIS</b>	<b>Applied Informatics And Intelligent Systems</b>
<b>AR</b>	<b>Automations &amp; Robots</b>
<b>BE</b>	<b>Biomedical Engineering</b>
<b>EA</b>	<b>Electrical Apparatus</b>
<b>EETD</b>	<b>Electrical Energy Transport And Distribution</b>
<b>EEU</b>	<b>Electrical Energy Utilizations</b>
<b>EMD</b>	<b>Electrical Machines &amp; Drives</b>
<b>ETAE</b>	<b>Electrical Traction And Automotive Equipments</b>
<b>EEE</b>	<b>Engineering Education &amp; Evocations</b>
<b>EECO</b>	<b>Electroecology</b>
<b>EFEC</b>	<b>Electromagnetic Field And Electrical Circuits</b>
<b>ME</b>	<b>Management And Entrepreneurship</b>
<b>MMS</b>	<b>Metrology And Measurement Systems</b>
<b>MTEE</b>	<b>Materials And Technologies In Electrical Engineering</b>
<b>PEM</b>	<b>Power Electronics &amp; Mechatronics</b>
<b>RD</b>	<b>Reliability And Diagnosis</b>
<b>PGRE</b>	<b>Power Generation &amp; Renewable Energy</b>
<b>PS</b>	<b>Posters Session</b>

# CONFERENCE AGENDA

<b>Tuesday, October 6</b> <b>University of Craiova, Faculty of Electrical Engineering</b>	
<b>09:30-13:00</b>	<b>Workshop</b> <b>New trends in automotive industry</b> <i>Council Hall, Faculty of Electrical Engineering, 107 Decebal Blv., Craiova</i>
Moderators: <i>Prof.dr.ing. Lucian MANDACHE, Conf.dr.ing. Nicolae CRĂCIUNOIU</i>	
<b>Thursday, October 8</b> <b>Chişinău – Republic of Molodova</b>	
<b>12:00-14:00</b>	<b>Registration of participants and distribution of conference materials</b> <i>Rectorat building (Building 1) of the Technical University of Moldova, Chişinău, 168 Ştefan cel Mare şi Sfânt Bd.</i>
<b>12:00-17:00</b>	<b>Workshop</b> <b>Advances in Electrical and Power Engineering</b> <i>Rectorat building (in the yard) of the Technical University of Moldova. Moderator – Asoc.Prof.dr.ing.Ilie NUCĂ</i>
<b>14:00-14:30</b>	<b>Opening Ceremony of SIEMEN 2015 Conference</b> <i>Auditorium, Rectorat building (Building 1) of the Technical University of Moldova, Chişinău 168 Ştefan cel Mare şi Sfânt Bd.</i>
<b>14:30-16:00</b>	<b>Plenary session - Keynote Speeches – Part 1</b>
<b>16:00-16:30</b>	<b>Coffee break</b>
<b>16:30-17:00</b>	<b>Posters Session</b>
<b>17:00-18:30</b>	<b>Plenary session - Keynote Speeches – Part 2</b>
<b>19:00</b>	<b>Festive dinner</b>

**Friday, October 9**  
**Chişinău – Republic of Moldova**

**Paper presentations (Sections)**

*Faculty of Power and Electrical Engineering, Chişinău*

**9:00-10:30**

**EMD 1, EA – Room 2- 117**

**EMD 2, ETAE – Room 2 - 137**

**AR, BE, RD – Room 2 - 112**

**EETD 1 – Room 2 - 236**

**PEM – Room 2 - 222**

**MMS – Room 2 - 229**

**10:30-11:00**

**Coffee break**

**Paper presentations (Sections)**

*Faculty of Power and Electrical Engineering, Chişinău*

**11:00-12:30**

**EEE, ME – Room 2 - 212**

**AIIS – Room 2 - 222**

**EETD 2, EEU – Room 2 - 236**

**EECO, EFEC – Room 2 - 229**

**PGRE – Room 2 - 218**

**12:30-13:00**

**Closing Session of the SIELMEN 2015 Conference**  
*Auditorium, Rectorat building (Building 1) of the Technical  
University of Moldova, Chişinău,  
168, Ştefan cel Mare şi Sfânt Bd.*

**13:00-14:00**

**Farewell lunch**

**14:00-17:30 Trip to the famous Mileştii Mici wine cellars (optional)**



**Tuesday, October 6**

**Workshop**  
**New trends in automotive industry**

*Council Hall, Faculty of Electrical Engineering, 107 Decebal Bd.*  
09:30 – 13:00

**Moderators:**  
**Lucian MANDACHE, Nicolae CRĂCIUNOIU**

---

- W1 Automation of railway level crossings with imposing of integrated safety level - *Florin Velea, Marcel Nicola, Dumitru Sacerdoțianu*
- W2 Hydrogenerator Stator Insulation Assessment by Partial Discharges Measurement - *Sorin Dumitrescu , Petru V. Notingher*
- W3 The Surveillance of a High Voltage Capacitors Group to Increase the Safety of Personnel and Equipments – *Marinel Popescu*
- W4 The LabView Interfaces Used for the Interactive Generation of the Frequency Characteristics and of the Associated Files for the Analyzed Electrical Circuits - *Marinel Popescu*
- W5 Temperature monitoring system using ARM microcontroller and Android - *Florin Ravigan, Niculae Boteanu*
- W6 Differential Protection Relay - *Traian-Titi Șerban*
- W7 Object Oriented System based on Grammars for Video Information Retrieval - *Eugen Ganea*
- W8 Embedded system for acquisition and real-time processing vibration in automotive industry - *Ion Marian Popescu*
- W9 Model implementation of a program to increase the reliability and maintenance in a modern plant - *Alexandru Crăciun, Aurel Mogosan, Emil Goace, Daniela Mihai, Marius Fetoiu*
- W10 Aspecte noi în optimizarea proiectării motoarelor de curent continuu fără perii folosite în acționarea vehiculelor electrice - *Ion Vlad, Sorin Enache, Monica Adela Enache, Lucian Mandache*
- W11 Kinematic Analysis of a Steering Mechanism from a Road Vehicle Structure - *Nicolae Dumitru, Nicolae Crăciunoiu, Adrian Sorin Roșca, Ilie Dumitru*

**Thursday, October 8**

---

**Plenary session – Keynote Speeches – Part 1**

*Auditorium, Rectorat building (Building 1)  
Technical University of Moldova, Chişinău  
14:30 – 16:00*

---

**Session chairs :**

**Petru TODOS, Aurel CAMPEANU**

---

1. Obiective strategice ale sectorului energetic: stadiul actual – *Valentin Arion*
2. Contribuții privind analiza regimurilor dinamice ale mașinilor electrice de curent alternativ – *Aurel Câmpeanu*
3. ELECTROALFA o companie de succes prin cercetare-dezvoltare de produse și tehnologii - *Decebal Mighiu, Roman Stelea*

**Thursday, October 8**

---

**Posters Session**

*Auditorium, Rectorat building (Building 1)  
Technical University of Moldova, Chişinău  
16:30 – 17:00*

---

**Session chairs : Ion PIROI, Maria BROJBOIU**  
**Co – chairs : Simion BARANOV, Virginia IVANOV**

---

1. Use of Electrical Resistivity Tomography in the Detection of Hydrocarbons Soil Pollution - *Monica Moraru, Mihai Maftciu*
2. Software Assisted Diagnosis for Shunting, Repeater, and Failure Light Signals in Stations with Electrodynamical Interlocking Systems – *Elisabeta Spunei, Ion Piroi, Florina Piroi*
3. A Study on the Voltage Control Loop of a Self excited Synchronous Generator in a Micro Hydroelectric Power Plant - *Elisabeta Spunei, Ion Piroi, Florina Piroi*
4. Study of the Gallium Arsenide Layers Growing Process on the Own Oxide Surface by HVPE Method - *Simion Baranov, Alexandu Burlacu, Irina Cojuhari, Ion Fiodorov, Dumitru Moraru*
5. Conceptual model of a Hall sensor based system for magnetic field mapping - *Ion Dobrin, Tiberiu Bogdan Sava, Bogdan Savu, Dan Enache, Marius Popa*
6. Analysis of Operation Characteristics of Alternating Current Motors Rated at Low Powers and Energetic Consumptions - *Ion Vlad, Aurel Câmpeanu, Sorin Enache, Monica-Adela Enache*
7. Virtual Instrument for Study of Connecting Synchronous Generator on the Network - *Gheorghe-Eugen Subţirelu, Mircea Dobriceanu, Monica-Adela Enache*
8. Energy efficiency analysis on the buildings belonging to Technical University of Cluj-Napoca - *Andrei Ceclan, Krisztina Vezzer Bogdan Bărgăuan, Dan D. Micu, Levente Czumbil*
9. Diagnoza Defectelor la Liniile Electrice în Cablu - *Marius Florian Preduş, Elisabeta Spunei, Ion Piroi, Monica Roşu*

10. Integration of Renewable Energy Sources in a Micro Smart Grid - *Laurențiu Alboteanu, Gheorghe Manolea, Sergiu Ivanov*
11. Parameter Influence on the Operation of an Induction Heating Device - *Claudia Constantinescu, Călin Munteanu, Adina Răcășan, Claudia Păcurar*
12. Analysis of Electromagnetic Disturbances Produced by Various Appliances through Conduction within the Supply Network - *Flaviu Pop, Călin Munteanu, Adina Răcășan, Claudia Constantinescu*
13. Influence of Non-Homogeneities of the Nerve Fibers Located Inside the Spinal Cord upon their Activation Threshold - *Laura Darabant, Mihaela Crețu, Radu Ciupa*
14. Aplicarea materialelor cu schimb de fază în anvelopa clădirii - *Dumitru Bostan, Larisa Tcaci, Nicolae Baboi*
15. Wind power. Legislative and financial framework. Possibilities of exploitation in Republic of Moldova - *Ivan Rabei*
16. Monitoring Methods of the Circuit Breakers using a Microcontroller Experimental System - *Virginia Ivanov, Maria Brojboiu, Sergiu Ivanov, Dan Stănescu*
17. Predictive Technique Applied in Induction Motor Drives - *Sergiu Ivanov, Vladimir Rășvan, Eugen Bobașu, Dan Popescu, Florin Stîngă*
18. Determination of Mitigation Operating Curve "Ri(F)" for a Homogeneous Plan Wall - *Gabriel-Cosmin Buzatu, Paul Mihai Mircea, Felicia Elena Stan Ivan*
19. Concerning the faults diagnosis of the static converters that supply the auxiliary services from the electric locomotive - *Maria Brojboiu, Virginia Ivanov, Andrei Săvescu, Adelaida Duinea*
20. Contributions to Highlight the Particular Matrices Used for Defining and Representation of Clock Hour Figure Mathematical Model - *Mihaela Poienar, Ovidiu Magdin Țanța, Adrian Neculai Romanescu, Mihai Cenușă, Elena-Daniela Olariu*

**Thursday, October 8**

---

**Plenary session – Keynote Speeches – Part 2**

*Auditorium, Rectorat building (Building 1)  
Technical University of Moldova, Chişinău  
17:00 – 18:30*

---

**Session chairs :**

**Petru TODOS, Aurel CAMPEANU**

---

1. Computation of the Overvoltage Distribution Across the High Voltage Winding of the Electric Power Transformer - *Gloria Cimbulea, Sorin Deleanu, Mihai Iordache, Ciprian Curteanu, Neculai Galan, Anastasie Moscu*
2. Sergiu Rădăuţan – promotor al legăturilor cu comunitatea ştiinţifică mondială - *Petru Todos, Gheorghe Manolea*
3. Critical Analysis Of Investment in LEDs for General Lighting Applications - *Dorin Dumitru Lucache, Cătălin Daniel Gălăţanu Elena Dănilă*

## Friday, October 9

**EMD 1, EA**

**Room 2-117 09:00 – 10:30**

**Session chairs : Tudor AMBROS , Ion VLAD**

1. Wind and Hydro Variable Speed Energy Conversion System with Dual Stator Winding Induction Generator - *Sorin Ioan Deaconu, Lucian Nicolae Tutelea, Tihomir Latinovic, Cristian Barz*
2. Dynamic Regimes of Asynchronous Motors Caused by Some Disturbances - *Sorin Enache, Aurel Câmpeanu, Ion Vlad, Monica-Adela Enache*
3. Numerical Studies on a DC Limited Angle Torque Motor - *Ioana Ionică, Mircea Modreanu, Alexandru Morega*
4. Operation of the synchronous generators with permanent magnets in parallel to the power grid - *Tudor Ambros, Mihail Kiorsak*
5. Forțele de Interacțiune Dintre Părțile Frontale ale Înfășurărilor Mașinilor Electrice - *Tudor Ambros, Maricel Burduniuc*
6. Design and 2D Numerical Modeling of a Single Phase AC Inductors with Ferromagnetic Core - *Ioan Popa, Alin-Iulian Dolan, Constantin Florin Ocoleanu*

## Friday, October 9

### EMD 2, ETAE

Room 2-137 09:00 – 10:30

Session chairs : **Ilie NUCĂ, Mihai CENUȘĂ**

1. Comparative Energetic Analysis of Drive Systems with Space-Vector Static Converters and Induction Motors with Different Powers - *Mihăiță Lincă, Constantin Vlad Suru, Alexandru Bogdan Lupu*
2. Adjusting of the Control System of Asynchronous Motor Drive for Wire Drawing Machine and Winding Mechanism - *Vadim Cazac, Ilie Nucă*
3. Mathematical modeling of the asynchronous motors for underwater vehicle drives - *Ilie Nucă, Petru Todos, Alexandru Jalbă*
4. Information Technologies used in Electric Public Vehicles - *Ilie Nucă, Iurie Nucă, Alexander Motroi, Vitalie Eșanu*
5. Aspects Regarding the Development of Solutions in the Unprotected Submersible Electrical Motors within the EMAD Research Centre - *Mihai Cenușă, Mihaela Poienar, Ovidiu Magdin Țanța, Adrian-Neculai Romanescu, Elena Daniela Olariu*
6. Using the Bidirectional Separator Circuit in the Implementation of Park Transformation - *Livia Cociu, Voinea Radu Cociu*

## Friday, October 9

AR, BE, RD

Room 2-212 09:00 – 10:30

**Session chairs : Bartolomeu IZVOREANU, Mircea-Adrian DRIGHICIU**

1. Analytical Algorithms for Synthesis of the State Space Controllers for the Control Systems with Aperiodic Step Response - *Ion Fiodorov, Bartolomeu Izvoreanu, Irina Cojuhari, Dumitru Moraru*
2. A Hybrid Petri Net Model for a Packing System - *Mircea-Adrian Drighiciu, Constantin Daniel Cismaru*
3. System for medical data acquisition and patient health state telemonitoring - *Lucian Niță, Lenuța Alboaie*
4. Verification of a Software Solution for computation of indirect biochemical parameters against Welmec Guide 7.2 and SR EN ISO 15189:2013 - *Alina E. Taina, Cosmin Dinu*
5. The Development and Tests of a New Hybrid FES-Exoskeleton Upper Limb Assisting Device for Disabled Patients - *Serea Florin, Hartoșanu Sergiu, Poboroniuc Marian, Irimia Dănuț*
6. Reliability Indicators for Mass Production Laser Pointer - *Dan Iudean, Radu Munteanu jr., Titus Crișan, Alexandru Crețu, Carla Costea*
7. Structural design and verification of locomotive bogies using combined analytical and experimental methods - *Ion Manea, Ioan Sebeșean, Gheorghe Ghiță, Gabriel Popa, Gabriel Prenta*



## Friday, October 9

### EETD 1

Room 2-236 09:00 – 10:30

**Session chairs : Mihaela ALBU, Dorin Dumitru LUCACHE**

1. New measurement topics in power engineering. A teaching experience from UPB - *Mihaela Albu, Viorel Petre, Florin Argatu*
2. Mathematical Model of Flexible Alternating Current Link Based on Phase-Shifting Transformer with Circular Rotation of the Phase Angle - *Valeriu Boşneagă, Victor Suslov, Vitaly Postolaty*
3. Operating Reliability Evaluation of Distribution Networks 10 kV - *Victor Popescu*
4. Privire scurtă asupra problemei de ajustare optimală a protecției prin relele într-un sistem energetic vast - *Ilie Macovei, Tudor Ambros, Dumitru Rujanschi*
5. Unele aspecte privind protecția și metoda de calcul a curenților de scurtcircuit în sistemele eoliene cu viteză variabilă - *Ilie Macovei, Victor Gropa, Dumitru Rujanschi*
6. Metodă rapidă de calcul al inversei matricei Jacobi - *Victor Gropa, Ion Stratan*
7. Reducing Light Pollution using Microprofile for Building Façade - *Cătălin Daniel Gălățanu, Dorin Dumitru Lucache*

## Friday, October 9

### PEM

Room 2-222 09:00 – 10:30

Session chairs : Mihaela POPESCU, Marian GĂICEANU

1. Flexible PWM Scheme of Voltage Synchronization for Three-Level Cascaded Converter - *Valentin Oleschuk, Vladimir Ermuratskii*
2. Optimized Modulation Based on dSpace Platform - *Marian Găiceanu, Răzvan Buhosu Sorin Stătescu*
3. Space Vector Modulation Based on dSpace platform - *Marian Găiceanu, Răzvan Buhosu, Sorin Stătescu*
4. p-q Theory Based Control in Active DC-Traction Substation with 12-Pulse Parallel Rectifier - *Mihaela Popescu, Alexandru Bitoleanu, Alexandra Preda*
5. The Energy Performances of a Regeneration System for DC Active Traction Substations - *Alexandru Bitoleanu, Mihaela Popescu, Mihăiță Lincă*
6. Understanding the Active Power Filter Role Using Matlab GUI - *Cristina Alexandra Preda, Mihăiță Lincă, Constantin Vlad Suru*
7. Study of Indirect Current Control Methods for a Filtering and Regeneration System Designed for Urban Traction DC Substations - *Constantin Vlad Suru, Mihaela Popescu, Ionuț Diaconu*
8. The model and characteristics of circular phase convertor - *Mihai Tîrșu, Lev Calinin, Dimitrii Zaițev, Irina Golub, Viktor Spivak*

**Friday, October 9**

**MMS**

**Room 2-229 09:00 – 10:30**

**Session chairs : Alexandru SĂLCEANU, Cosmin DINU**

1. Proficiency assessment of laboratories performing climatic chambers calibrations - *Cosmin Dinu, Radu Ilinca*
2. Approach on the Compliance of Magnetic Field Emissions with the TCO Guidelines - *Andrei Sălceanu, Valeriu David, Marius Valerian Paulet, Silviu Ionuț Ursache*
3. Affordable Attempt for Determining the Electric and Magnetic Field Associated with the Electros-tatic Discharges - *Silviu Ursache, Oana Neacșu, Andrei Sălceanu*
4. Low Cost System for Person Identification Based on ECG Signal - *Marius Valerian Paulet, Oana Maria Neacșu, Andrei Sălceanu*
5. Study upon Main Causes of Changeability in ESD-Textiles' High Resistance Measurements - *Alexandru Sălceanu, Iulian Gabriel Lupuleasa, Oana Maria Neacșu*
6. On the relationship between surface resistivity and static decay for non-homogeneous fabrics - *Iulian Gabriel Lupuleasa, Andrei Sălceanu, Marius Valerian Paulet*
7. Comparative study of the electric field emissions for various displays - *Andrei Sălceanu, Valeriu David, Eduard Lunca*
8. Application for determining the symmetrical components in a penta-phase voltage and currents system - *Călin Mureșan, Romul Copîndean, Florin Drăgan, Vasile Mureșan*

**Friday, October 9**

**EEE, ME**

**Room 2-212 11:00 – 12:30**

**Session chairs : Adrian ADĂSCĂLIȚEI, Alexandru TARLAJANU**

1. Unele aspecte privind istoria MCHE din Republica Moldova - *Tudor Ambros, Nicolai Ursatii*
2. Causes of School Dropout after the First Year of Faculty - *Mircea-Emilian Ardeleanu, Dan-Gabriel Stănescu*
3. Technology enhanced electrical engineering education in context of CRUNT TEMPUS Project - *Adrian Adăscăliței, Petru Todos, Nicolae Secrieru*
4. Instrumente de e-learning utilizate la predarea dis-ciplinei Grafică Inginerească - *Angela Șuletea, Sergiu Dîntu*
5. Calitatea educației prin prisma nevoilor clienților - *Alexandru Tarlajanu*
6. Instruirea inginerilor și instrumentele virtuale - *Petru Vîrlan*
7. Technical - economic analysis for solar domestic hot water production - *Carmen-Elena Stoenoiu, Olga Pop*

## Friday, October 9

<b>AIIS</b>		
<b>Room</b>	<b>2-222</b>	11:00 – 12:30
<b>Session chairs : Dan MIHAI, Cristian-Gyözö HABA</b>		

1. Fuzzy Controllers for Variable Speed Pump Control - *Daniela Popescu, Jenica-Ileana Corcău*
2. Charge-discharge optimization of rechargeable battery pack - *Constantin Daniel Oancea, Florin Călin*
3. On Multi-motor Control by a Single Microcontroller and a VHL Programming Language. The Software Design - *Dan Mihai*
4. On Multi-motor Control by a Single Microcontroller and a VHL Programming Language. The Hardware Platform - *Dan Mihai*
5. Effective diagnosis for vitiligo skin disease a neural network approach - *Viviana Mihaela Bostan, Brândușa Pantelimon*
6. Improving of 2-D FEM Modeling of a SMES Device Using the Response Surface Methodology Applied on 3-D FEM Modeling - *Alin-Iulian Dolan, Florian Ștefănescu*
7. Power Monitoring System with Wireless Connectivity for Legacy PLC based Systems - *Cristian-Gyözö Haba, Liviu Breniuc*
8. Tuning the Parameters for the DWT Analysis of Waveforms Acquired from a Power Plant - *Ileana-Diana Nicolae, Petre-Marian Nicolae, Dinuț-Lucian Popa, Ionuț Smarandescu*

**Friday, October 9**

**EETD 2, EEU**

**Room 2-236 11:00 – 12:30**

**Session chairs : Ion STRATAN, Mihail CHIORSAC**

1. Principiul de elaborare a protecției prin relee a LEA cu autocompensare la scurtcircuite nesimetrice dintre fazele apropiate - *Mihail Chiorsac, Lilia Turcuman, N. Turturică*
2. Optimal Placement of Synchronized Phasor Measurement Technologies Based on Different Methods of Optimization - *Ecaterina Murdid, Ion Stratan*
3. Funcționarea instalațiilor eoliene cu generator cu dublă alimentare tip DFIG în regim cuazistaționar - *Ilie Macovei, Ion Stratan, Victor Gropa, Dumitru Rujanschi*
4. Metodă practică de evaluare a puterii active maxime admisibile printr-o secțiune a sistemului electroenergetic - *Victor Gropa, Ion Stratan, Ilie Macovei*
5. Analyses of Main Parameters at Electrophysical whey Processing for Raising Energy Efficiency - *Elvira Vrabie, Cătălin Mihai, Mircea Bologa, V. Gonciaruc, A. Polikarpov*
6. Considerations on the Improvement of Energetic Indicators of Coal Mills from a Power Plant - *Silvia-Maria Digă, Daniela Popescu, Maria Brojboiu, Nicolae Digă*
7. The Accumulated Heat in a Cylindrical Wall – Quick Estimation - *Mitică Iustinian Neacă, Andreea Maria Neacă*

## Friday, October 9

### EECO, EFEC

Room 2-229 11:00 – 12:30

Session chairs : Alexandru BITOLEANU, Arhip POTÂNG

1. Time-Domain Analysis of Nonlinear Lumped Circuits with Excess Elements based on an Improved Modified Nodal Approach - *Lucian Mandache, Mihai Iordache, Ioana Gabriela Sirbu*
2. Steady-State Magnetic Field Computing in Non-homogenous Media by Dipolar Model of Magnetized Body - *Sergiu Ivas, Mădălin Costin, Ion Voncilă*
3. Superconducting Dipolar Magnets for Particle Accelerators. Two Constructive Models - *Dan Enache, Ion Dobrin, Alexandru Mihail Morega, Simona Apostol*
4. Effects of Lighting Strikes on Power Lines to Nearby Metallic Structures - *Denisa Șteț, Levente Czumbil, Dan Doru Micu, George Seritan*
5. Studiul regimului de sarcină în linia lungă prin suprapunerea regimurilor mers la gol și scurtcircuit - *Arhip Potâng, Ghenadie Terteia, Adrian Rotaru*
6. Specific Issues of Equivalent Longitudinal Resistances Calculation for Three Windings Transformers – *Nicolae Golovanov, Radu Porumb, Cornel Toader, Constantin Bulac, Ion Triștiu, George Seritan*
7. Mathematical Models Reported to the Formation and the Reduction of Nitrogen Oxides Emissions using Thermal Mechanism - *Vlad-Florin Staviri*

## Friday, October 9

### PGRE

Room 2-218 11:00 – 12:30

**Session chairs : Ion SOBOR, Corneliu MARINESCU , Valentin ARION**

1. Aspects concerning the performance of a hybrid PV supply system interconnected with the local distribution network - *Dan-Gabriel Stănescu, Mircea-Emilian Ardeleanu, Ioana-Gabriela Sîrbu*
2. Practical Research of Two Structures of Agricultural Solar Installations - *Vladimir Ermuratskii, Mikhail Gritsai, Vladimir Oleschuk*
3. Alternative Energy System based on the Vertical Axis Wind Turbine Helical Rotor - *Gavril Porcescu*
4. Moldova's Wind Power Potential and Levelised Cost of Energy - *Vasile Rachier, Ion Sobor*
5. Possibilities to increase the energy efficiency of buildings - *Mihai Tirsu, Svyatoslav Postoronca, Ion Martnos*
6. Heat Pump Installation for Dairy Plants - *Mikhail Sit, Vitaly Burciu, Anatolii Ioisher, Boris Sit, Dmitry Timcenco*
7. Considerarea inflației în evaluarea proiectelor de eficiență energetică și energii regenerabile (abordare macroeconomică) - *Valentin Arion, Larisa Bugaian, Viorica Hlusuov, Călin Negură*
8. Photovoltaic Pumped Storage System for Small and Large Scale Applications - *Andreea-Busca Forcos, Corneliu Marinescu*
9. Electrical Power Generation with Low-Temperature Organic Rankine Cycle Machines - *Vasile Minea*
10. The thermodynamic benefits of the integration of cogeneration installations in bakery ovens - *Corina Chelmenciuc*
11. Estimation of the theoretical cogeneration potential in Republic of Moldova - *Corina Gutu-Chetrusca, Denis Tumuruc*





*10<sup>th</sup> International Conference on Electromechanical an Power Systems*  
*SIEMEN 2015*



*10<sup>th</sup> International Conference on Electromechanical an Power Systems  
SIEMEN 2015*

## Conference sponsors:

*Publication sponsor*

**Autoritatea Națională pentru Cercetare și Inovare - Romania**



## Sponsors from Romania:



## Sponsors from Republic of Moldova:



*Producător de cabluri și conductori electrice din Moldova!*



10<sup>th</sup> International Conference and Exhibition  
on Electromechanical and Power Systems

**SIELMEN - 2015**

October 6 – Craiova – Romania

October 8 – 9 – Chişinău – Republic of Moldova

**CONFERENCE AGENDA**

**Tuesday, October 6 – Craiova, Romania**

Workshop - New trends in automotive industry

**Thursday, October 8 – Chişinău, Republic of Moldova**

Rectorat Building 1

12:00 – 14:00 Registration of participants

12:00 – 17:00 Workshop “Advances in Electrical and Power Engineering”

14:00 – 14:30 Opening Ceremony of SIELMEN 2015

14:30 – 16:00 Plenary Session – Part 1

16:00 – 16:30 Coffee Break

16:30 – 17:00 Posters Session

17:00 – 18:30 Plenary Session – Part 2

19.00 Festive dinner –NUCARUL Restaurant

**Friday, October 9 – Chişinău, Republic of Moldova**

Faculty of Power and Electrical Engineering

09:00 – 10:30 Paper presentations

10:30 – 11:00 Coffee Break

11:00 – 12:30 Paper presentations

12:30 – 13:00 Closing Session of SIELMEN 2015 - Rectorat Building 1

13:00 – 14:00 Farewell lunch

14:00 – 17:30 Trip to the famous Mileştii Mici wine cellars (optional)