



# **2016 International Conference on Electrical and Power Engineering EPE 2016**

**Iasi, 20-22 October 2016**

**Technical Program**



# EPE 2016 Technical Program

## 20 October 2016

08.30 - 09.30	Greeting and reception of participants
09.30 - 10.00	Opening Ceremony
10.00 - 11.00	Keynote lectures
11.00 - 12.00	Visit of Culture Palace
12.30 - 13.30	Lunch
13.30 - 14.30	Poster Session 1
14.30 - 16.00	Oral Sessions 1, Workshops
16.00 - 16.30	Coffee Break
16.30 - 18.00	Oral Sessions 2, Workshops, Meetings
19.00 - 23.00	Gala Dinner

## 21 October 2016

09.30 - 11.00	Oral Sessions 3, Workshop EMC&EMB Keynote and IEEE Distinguished Lectures
10.30 - 11.30	Poster Session 2
11.00 - 11.30	Coffee Break
11.30 - 13.00	Keynote Lectures, Workshops
13.00 - 14.30	Lunch
14.30 - 15.00	Closing Ceremony



# Detailed Technical Program

**20 October 2016**

08.30 - 09.30

## **Greeting and reception of participants**

“Henri Coandă Hall”, Culture Palace

09.30 - 10.00

## **Opening Ceremony**

“Henri Coandă Hall”, Culture Palace

10.00 -11.00

## **Keynote Lectures**

“Henri Coandă Hall”, Culture Palace

Chairman: Alexandru Sălceanu (RO)

<b>Prof. Antonio Cruz Sera (PT)</b> University of Lisbon, Portugal	Managing a Universities Merger
<b>Prof. Radu Bojoi (IT)</b> Politecnico di Torino	Multiphase Electrical Machines and Drives - A Viable Solution for Energy Generation and Transportation Electrification

11.00 -12.00

## **Visit of Culture Palace**

Museum of Science and Technology „Ștefan Procopiu”, Culture Palace

12:30-13:30

Lunch

13:30-14:30

## Poster Session 1

13:30-14:30, Faculty Hall, Building E

Chairmen: Emil Vremeră (RO) , Livia Cociu (RO)

1019	Considerations Regarding the Practical Implementation of the Heliothermic Actuator in the Form of Flat Spiral Spring	(ELM)	Adrian Neculai Romanescu (RO), Dumitru Cernuşcă (RO), Mihaela Poienar (RO), Dan Laurenţiu Milici (RO)
1100	CEUS Figures Finite Element Modelling	(ELM)	Ovidiu-Magdin Ţanţa (RO), Elena Daniela Olariu (RO), Mihaela Poienar (RO), Dan Laurenţiu Milici (RO)
1205	Theoretical and Experimental Contribution of Using Special Actuators and Materials with Shape Memory	(ELM)	Dumitru Cernuşcă (RO), Dan Laurentiu Milici (RO), Constantin Ungureanu (RO)
1568	Low-Speed Sensorless Field-Oriented Control of Asynchronous Machine based on Adaptive Flux Error Suppression Method	(ELM)	Patarachai Chevathananon (DE), Ruili Wang (DE), László Farkas (DE)
1571	Single-Tooth Winding Induction Motor with External Rotor for Electric Vehicle Applications	(ELM)	Adrian Munteanu (RO), Leonard Livadaru (RO), Alecsandru Simion (RO), Bogdan Vîrlan (RO)
1670	Real-Time FPGA Model in the Loop Analysis of Permanent Magnet Synchronous Machine for LEV	(ELM)	Mircea Ruba (RO), Nagy Hunor (RO), Horia Hedesiu (RO), Claudia Martis (RO)
1685	Design and Analysis of Slot-Pole Combination for Synchronous Reluctance Machine with Concentrated Windings for Automotive Applications	(ELM)	F. P. Pop (RO), R. Marţiş (RO), A. Dărămus (RO), C. Marţiş (RO), A.-C. Pop (DE), I. Vintiloiu (DE)
1301	Interactive System for Optimizing the Operation of a Transformer with Continuously Adjustable Voltage	(ELM)	Elena Daniela Olariu (RO), Mihaela Poienar (RO), Daniela Irimia (RO), Vasile Ududec (RO), Toader Macovei (RO)
1703	Modelling of an In-Wheel Motor with Integrated Magnetic Gear for Electric Vehicle Applications	(ELM)	Claudia Violeta Pop (RO), Daniel Fodorean (RO)

1711	Multiphysics Design, Analysis and Optimisation Platform of PMSM for Automotive Applications	(ELM)	Radu Siecoban (RO), Radu Martiș (RO), Claudia Martiș (RO), Calin Husar (RO), Lucian Coadălată (RO), Cristi Irimia (RO)
1767	Fractional Slot Permanent Magnet Machine with Outer Rotor	(ELM)	M.S. Bodea (RO), Al. Simion (RO), L. Livadaru (RO), A. Munteanu (RO), B. Vîrlan (RO), B. Anghel (RO)
2068	Symmetrical Components Expression of the Stator Current of an Induction Machine under Internal Fault	(ELM)	Voinea Radu Cociu (RO), Livia Cociu (RO), Vladimir Berzan (MD)
2071	Analyzing the Symmetrical Components of the Stator Current of an Induction Machine under Internal Fault	(ELM)	Voinea Radu Cociu (RO), Livia Cociu (RO)
2083	An Efficient Approach for 3D Toroidal Transformers Simulation	(ELM)	Adrian Munteanu (RO), Leonard Livadaru (RO), Alecsandru Simion (RO), Bogdan Virlan (RO), Ana-Maria Crauciuc (RO)
986	Therapy's Individualization of Bone Injuries with the Magnetic Field Applicators	(EMC & EMB)	Przemyslaw Syrek (PL), Mikolaj Skowron (PL), Antoni Ciesla (PL)
1015	Methodological Challenges in Near-Field Exposure Assessment of Personnel Operating Military Radio Equipment Using Personal Exposimeters: Possible Difficulties in Compliance Analysis	(EMC & EMB)	Annamaria Paljanos (RO), Călin Munteanu (RO), Jolanta Karpowicz (PL)
1034	Wearable Ballistocardiography System for Heartbeat Detection	(EMC & EMB)	Alexandru Barleanu (RO), Marius Hagan (RO), Oana Geman (RO), Iuliana Chiuchisan (RO)
1037	A Comparison between Healthy and Neurological Disorders Patients using Nonlinear Dynamic Tools	(EMC & EMB)	Roxana Todorean (Aldea) (RO), Oana Geman (RO), Iuliana Chiuchisan (RO), Anca Mihaela Lazar (RO)
1040	Trends in Embedded Systems for e-Health and Biomedical Applications	(EMC & EMB)	Iuliana Chiuchisan (RO), Oana Geman (RO)
1052	A Novel Device for Peripheral Neuropathy Assessment and Rehabilitation	(EMC & EMB)	Oana Geman (RO), Marius Hagan (RO), Iuliana Chiuchisan (RO)

1109	Simple 1D Models for Neuro-signals Transmission along Axons	(EMC & EMB)	Ruxandra Bărbulescu (RO), Daniel Ioan (RO), Jean Ciurea (RO)
1142	Vibro-Acoustic Behavior vs. Conductive Interferences in PMSM drives	(EMC & EMB)	Radu Martiș (RO), Radu Sיעoban (RO), Loránd Szabó (RO), Claudia Martiș (RO)
1187	A Study on the Efficient Tracking of ERD Based on the Adaptive Identification of the Subject's Reactive Band	(EMC & EMB)	M.M.C.Ștefan (RO), I. E. Nicolae (RO), R. Strungaru (RO), G. M. Ungureanu (RO) M. Vasile (RO), O.A. Băjenaru (RO)
1223	Non-Contact Heart Rate Estimation from a Video Sequence	(EMC & EMB)	Dragos Daniel Taralunga (RO), Irina Nicolae (RO), Bogdan Hurezeanu (RO), Mihaela Ungureanu (RO), Rodica Strungaru (RO)
1508	Indoor and Outdoor Measurements of the Low Frequency Magnetic Fields in an Urban Area	(EMC & EMB)	Silviu Ursache (RO), Andrei Salceanu (RO), Oana Neacsu (RO)
1640	Radiation Reduction Capabilities of Some Woven Fabrics with Metallic Yarns Attached to Mobile Phones Emitting in 2G- and 3G-Communication Standards	(EMC & EMB)	Alina-Lacramioara Apreutesei (RO), Antonela Curteza (RO), Annamaria Paljanos (RO), Simona Miclaus (RO), Paul Bechet (RO), George Mihai (RO), Angel Marian Aron (RO), Octavian Baltag (RO)
1676	Analysis, Identification and Minimization the Parasitic Effects of the Multilayer Spiral Inductors	(EMC & EMB)	Adina Racasan (RO), Calin Munteanu (RO), Claudia Pacurar (RO), Vasile Topa (RO), Claudia Constantinescu (RO), Flaviu Pop (RO), Mihaela Cislariu (RO)
1782	Evaluating the Cumulative Exposure to Low Frequency Electric Fields	(EMC & EMB)	Alexandru Salceanu (RO), Marius Paulet (RO), Silviu Ursache (RO), Maria Magdalena Poenaru (RO)
1899	On the Survey of the Magnetic Fields in Power Distribution Substations	(EMC & EMB)	Ionel Pavel (RO), Valeriu David (RO)
1970	The Recovery of the Ppostural Equilibrium by Balancing the Baric Pressure at the Level of the Lower Limbs for Patients who Had a Stroke by Using the MBT Device	(EMC & EMB)	Călina Sînziana Silisteanu (RO), Francisc Tadeus Danelciuc (RO), Mihai Constantinescu (RO)
1973	The Importance of the Sensor Devices in the Recovery of the	(EMC & EMB)	Călina Sînziana Silisteanu (RO), Daniela Maria Crăciun (RO),

	Patients with the Carpal Tunnel Syndrome	EMB)	Marius David (RO)
926	Automatic Control of Robotic Swarm during Convex Shape Generation	(PED)	Andrey Ronzhin (RU), Irina Vatamaniuk (RU), Nikita Pavluk (RU)
1250	A New Mathematical Model for the Command Sequence Generator of a Two-Phase Hybrid Stepper Motor	(PED)	George Mihalache (RO), Gheorghe Livint (RO), Vasile Horga (RO), Alexandru Arcire (RO)
1511	A Solution for Study of Positioning Control of Two Axes	(PED)	Mihai Rață (RO), Gabriela Rață (RO)
1526	Resonant Inverter with ALL Digital PLL Control	(PED)	Goran Danailov Goranov (BG), Nikolay Dimitrov Madzharov (BG), Iskren Ognianov Kandov (BG)

14:30-16:00

## Oral sessions

### Applied Informatics and Automation

14:30-16:00, E108 Hall, Building E

Chairmen: Dan Milici (RO), Marian Poboroniuc (RO)

1256	Distributed Processing of Data Streams on the Edge Devices	(AIA)	Cristinel Costea (RO), Liviu Neamt (RO), Olivian Chiver (RO), Cristian Cola (RO), Vasile Sambor (FR)
1286	A Neuro-Fuzzy Algorithm for Middle-Term Load Forecasting	(AIA)	Laura Davlea (RO), Bogdan Teodorescu (RO)
1366	Nature-inspired Algorithms based Multispectral Image Fusion	(AIA)	Silviu-Ioan Bejinariu (RO), Ramona Luca (RO), Hariton Costin (RO)
1577	Typical-Situations Aware Systems	(AIA)	L.Dan Milici (RO), Alexandru Caragea (RO), Aron Jinaru (RO), George Niculescu (RO)
1688	Temperature Intelligent Control Based On Soft Computing Technology	(AIA)	Lucian Mastacan (RO), Constantin-Catalin Dosoftci (RO)



1849	Web service-based monitoring system for smart management of the buildings	(AIA)	Vladimir Tanasiev (RO), Horia Necula (RO), George Darie (RO), Adrian Badea (RO)
1979	H-Infinity Control of Automatic Vehicle Steering	(AIA)	Razvan Rafaila (RO), Gheorghe Livint (RO)

## Electrical Apparatus 1

14:30-16:00, EN009 Hall, Building EN

Chairmen: Maricel Adam (RO)

1115	Modeling and Simulation of a Supply System from Electric Traction	(EAP)	Adrian Munteanu (RO), Maricel Adam (RO), Mihai Andrușcă (RO), Alin Dragomir (RO)
1151	Aspects Regarding the Nonintrusive Load Monitoring and Electrical Equipment Diagnosis from Power Substations	(EAP)	Micu Marian-Bogdan (RO), Adam Maricel (RO), Andrusca Mihai (RO), Boghiu Elvis (RO)
1154	Aspects Regarding the Controlled Switching of the Shunt Reactors	(EAP)	Boghiu Elvis (RO), Maricel Adam (RO), Mihai Andrușcă (RO), Marian Micu (RO)
1271	Considerations regarding the Influence of Contact Resistance on the Contacts of Low Voltage Electrical Equipment	(EAP)	Mihai Andrușcă (RO), Maricel Adam (RO), Radu Burlica (RO), Adrian Munteanu (RO), Alin Dragomir (RO)
1391	About the Dynamic Contact Resistance of the Circuit Breakers	(EAP)	Maricel Adam (RO), Mihai Andrușcă (RO), Adrian Munteanu (RO), Alin Dragomir (RO)

## Electrical Machines 1

14:30-16:00, E106 Hall, Building E

Chairmen: Aurel Câmpeanu (RO), Al. Simion (RO)

	Utilizarea modelelor matematice din teoria circuitelor pentru analiza proceselor dinamice din masinile sincrone de mare putere		A. Câmpeanu
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1484	Simulation of Some Dynamic Regimes Specific to Permanent-Magnet Motors Used for Electrical Motor-Scooters	(ELM)	Sorin Enache (RO), Aurel Campeanu (RO), Ion Vlad (RO), Monica-Adela Enache (RO)
1064	The Magnetic Field of Asynchronous Machines with Concentrated Winding	(ELM)	Tudor Ambros (MD), Marcel Burduniuc (MD)
1514	Development of a Complete Motor-Drive Solution for Light EV Based on a SRM	(ELM)	Mircea Ruba (RO), Daniel Fodorean (RO)
1697	Tridimensional Modeling for a DC, Limited Angle, Torque Motor of Size 16	(ELM)	Ioana Ionică (RO), Mircea Modreanu (RO), Cristian Boboc (RO), Alexandru Morega (RO)

## Metrology and Measurement Systems 1

14:30-16:00, E202 Room, Building E

Chairmen: Antonio Serra (PT), Octavian Postolache (PT)

1013	Recognition of Multiple Traffic Signs Using Keypoints Feature Detectors	(MMS)	Monika Lasota (PL), Marcin Skoczylas (PL)
1112	Java Technology Used to Facilitate Measuring Activity Performed By Students in Laboratory	(MMS)	Marius Branzila (RO), Constantin Sarvasanu (RO), Alexandru Mihai (RO)
1964	Interconnection of Medical Data Acquisition Systems	(MMS)	Lucian Nita (RO)
1920	Geometry Influence on the Precision of Light Flux Measurement with Ulbricht Integrating Sphere	(MMS)	Cătălin Daniel Gălățanu (RO)
1837	IoT Enabled Aquatic Drone For Environmental Monitoring	(MMS)	João Matos (PT), Octavian Adrian Postolache (PT)

## Power Electronics and Electrical Drives

14:30-16:00, EN001 Room, Building EN

Chairmen: Sergiu Ivanov (RO), Mihai Albu (RO)

1049	Sliding Mode Control for Efficient Utilization of Renewable Energy Sources in DC Micro Grid: A Comparison with a Linear PID Controller	(PED)	Abdul Rehman Yasin (PK), Muhammad Ashraf (PK), Aamer Iqbal Bhatti (PK), Shahzad Ahmad (PK), Muhammad Rashid (PK)
1160	Micro-Inverter for Photovoltaic Modules	(PED)	Vladimir Berzan (MD), Iurie Ermurachi (MD), Sveatoslav, Postoroncă (MD), Radu Cociu (RO)
1376	Power MOSFET Load Switch SPICE Modelling	(PED)	Lidia Dobrescu (RO), Raluca Smeu (RO), Dragos Dobrescu (RO)
1726	Rapid Control Prototyping of a Speed Control Strategy for a Switched Reluctance Machine	(PED)	Hunor Nagy (RO), Mircea Ruba (RO), Horia Hedesiu (RO), Claudia Martis (RO)
2038	Continuous Direct Torque versus Predictive Control of the Induction Motor	(PED)	Sergiu Ivanov (RO), Virginia Ivanov (RO), Vladimir Rasvan (RO), Eugen Bobasu (RO), Dan Popescu (RO)

## Power Systems 1

14:30-16:00, EN109 Room, Building EN

Chairmen: Constantin Bulac (RO), Mihai Gavrilas (RO)

965	Hybridization of Cuckoo Search Algorithm and Chemical Reaction Optimization for Economic Load Dispatch Problem	(POS)	Deepro Sen (IN), Parimal Acharjee (IN)
1517	The Problems of Dissolved in Oil Gases Analysis Results' Interpretation in Information Analytical Systems	(POS)	Alexandra I. Khalyasmaa (RU), Dmitry I. Bliznyuk (RU), Andrey M. Verkhozin (RU), Konstantin V. Ovchinnikov (RU)

977	The Study of Possibility to Use the Current Transformer for Power Conversion	(POS)	Constantin Vlaicu (RO), Constantin Daniel Oancea (RO)
1283	Power Quality System Analysis on Embarked Systems	(POS)	Elena Nedelcu (RO), Radu Dumitru Pentiu (RO), Nicolae Golovanov (RO), Stefan Dordea (RO)
1976	On a Demand Response Pilot Demonstration in the Technical University of Cluj-Napoca	(POS)	Dan D. Micu (RO), Bogdan Bârgăuan (RO), Andrei Ceclan (RO), Denisa Șteț (RO), Levente Czumbil (RO), Andrei Cătinean (RO), Alexis Ploycarpou (CI)
1295	A Solution to Obtain Precise Fault Location Using a Two-End Data Algorithm	(POS)	Marian Dragomir (RO), Alexandru Miron (RO), Marcel Istrate (RO), Alin Dragomir (RO)

## Renewable Energy

14:30-16:00, EN114 Room, Building EN

Chairmen: Mircea Gușă (RO), Cipiran Nemeș (RO), Dragoș Machidon (RO)

1003	Energy Recovery of Municipal Solid Waste for Combined Heat and Power Production	(REN)	Pavel Atănăsoae (RO), Radu Pentiu (RO), Eugen Hopulele (RO)
1027	PV Fault Detection Using the Least Squares Method	(REN)	Todizara Andrianajaina (MG), Eric Jean Roy Sambatra (MG), Charles Bernard Andrianirina (MG), Tsivalalaina David Razafimahefa (FR), Nicolas Heraud (FR)
1259	Annual Energy Production Estimation based on Wind Speed Distribution	(REN)	D. Astanei (RO), C. Nemes (RO), F. Munteanu (RO), A. Ciobanu (RO)
1307	Numerical Simulations of Flow Through a Low Head Cross-Flow Hydro-Turbine Nozzle	(REN)	Bogdan Ciobanu (RO)
1448	Numerical Investigation of the Flow in a Modified Bánki Turbine with Nozzle Foreseen with Guide Vanes	(REN)	Andrei Dragomirescu (RO)

1529	Operating Regime Efficiency Analysis of a Small Photovoltaic Power Plant	(REN)	Machidon Dragos-Lucian (RO), Istrate Marcel (RO)
1807	Photovoltaic Power Plant on the ENERED research platform of the Electrical Engineering Faculty of Iasi	(REN)	Machidon Dragos-Lucian (RO), Istrate Marcel (RO)

## Workshop EMC & EMB 1

14:30-16:00, "Dragomir Hurmuzescu" Conference Hall, Building E

Chairmen: Simona Miclaus (RO), Radu Ciorap (RO)

1009	Model Identification for Assisted Tennis Training of the Sportsmen with Kinetic Disabilities	(EMC & EMB)	Adrian Danila (RO)
1328	Human Body Coupling to Near Field of VHF Antennas: An Indoor Expo-Dosimetric Survey	(EMC & EMB)	Simona Miclaus (RO), Paul Bechet (RO), Jolanta Karpowicz (PL)
1334	Real-Time Eye Movement Detection Analysis: Comparison Between Image Based Algorithm and Electrooculogram	(EMC & EMB)	Bogdan Hurezeanu (RO), G. Mihaela Ungureanu (RO), Irina Nicolae (RO), Dragos Taralunga (RO), Rodica Strungaru (RO), Werner Wolf (DE)
2030	Cardiac Arrhythmia Classification Using T-Complexity Measure	(EMC & EMB)	Dragos Arotaritei (RO), Hariton Costin (RO), Cristian Rotariu (RO), Alexandru Pasarica (RO)

16:00-16:30

Coffee Break

16:30-18:00

## Electrical Apparatus 2

16:30-18:00, EN009 Hall, Building EN

Chairmen: Radu Burlică (RO)

1406	Aspects Concerning the Influence of Environmental Factors in Infrared Monitoring of Electrical Equipment	(EAP)	Alin Dragomir (RO), Maricel Adam (RO), Mihai Andrușcă (RO), Adrian Munteanu (RO)
1430	The Dynamic Behavior of Electromagnetic Plunger Drivers For Electrical Apparatuses with Contacts	(EAP)	Burlica Radu (RO), Astanei Dragos (RO), Andrusca Mihai (RO), Hnatiuc Eugen (RO)
1454	Overcurrent Protection using a New Type of Electric Fuse	(EAP)	Adrian Pleșca (RO), Cătălin Dumitrescu (RO), Guoqiang Zhang (CN), Dong Han (CN)
1563	Overview on Energy Efficiency Parameters in Data Centres	(EAP)	Cătălin Dumitrescu (RO), Adrian Pleșca (RO)

## Electrical Machines 2

16:30-18:00, E106 Hall, Building E

Chairmen: Tudor Ambros (MD), Leonard Livadaru (RO)

1493	Analysis of Low Power Asynchronous Motors Operation at Variable Voltages and Frequencies	(ELM)	Ion Vlad (RO), Aurel Campeanu (RO), Sorin Enache (RO), Monica Adela Enache (RO)
1709	Hybrid Optimization Design of a High-Speed Permanent Magnet Machine Used for EV Traction	(ELM)	Daniel Fodorean (RO), Lhassane Idoumghar (FR)
1601	A Novel Synchronous Reluctance Motor with Outer Rotor for an Electric Bike	(ELM)	Razvan Alexandru Inte (RO), Florin Nicolae Jurca (RO)
1313	Study of the Evolution of an Inter Turns Short Circuit Fault in Induction Machine	(ELM)	Tsivalalaina David Razafimahefa (FR), Eric Jean Roy Sambatra (MG), Nicolas Heraud (FR)

1682	Transient Analysis of Wound Rotor Synchronous Motor Synchronisation Using Finite Elements Method	(ELM)	Olivian Chiver (RO), Liviu Neamt (RO), Eleonora Pop (RO)
1788	Electrical Machines Solutions for Air Conditioning System in Automotive Industry	(ELM)	Dan-Cristian Popa (RO), Daniel Fodorean (RO)

## Metrology and Measurement Systems 2

16:30-18:00, E202 Room, Building E

Chairmen: Alexandru Sălceanu (RO), Marinel Temneanu (RO)

1370	Ultrasonic Radar	(MMS)	Marius Valerian Paulet (RO), Andrei Salceanu (RO), Oana Maria Neacsu (RO)
1791	Assessing The Close Field Non-Ionizing Emissions of PC-Monitors	(MMS)	Alexandru Salceanu (RO), Eduard Lunca (RO), Oana Neacsu (RO), Fanel Iacobescu (RO)
1457	Discharge Simulation Based on Particle Methods	(MMS)	Tudor Alexandru Ilaș (RO), Vasile Dan Ani (RO), George-Andrei Ursan (RO), Maria Ursan (RO)
1466	Fire Behavior Analysis for New Retardant Nanocomposite Formulations with Minimum Risk to Health and Safety	(MMS)	George-Andrei Ursan (RO), Maria Ursan (RO), Anca Pîntea (RO), Răzvan Ioan Grăpina (RO)

## Power Systems 2

16:30-18:00, EN109 Room, Building EN

Chairmen: Gianfranco Chicco (IT), Radu Porumb (RO)

1229	AGC of Practical Power System Using Backtracking Search Optimization Algorithm	(POS)	Santigopal Pain (IN), Parimal Acharjee (IN)
1658	Electrical Equipment Condition Based Maintenance Strategy	(POS)	Evgenii L. Kokorin (RU), Alexandra I. Khalyasmaa (RU)
1958	Comparative Analysis of Different Means of Biogas Production Used in Cogeneration	(POS)	Andreea Badicu (RO), Roxana Patrascu (RO), Eduard Minciuc (RO)
1908	Energetic Analysis of the Subcritical Low-Temperature ORC by Imposing the Hot Source Outlet Temperature	(POS)	Victor-Eduard Cenușă (RO), George Darie (RO)
1421	Knowledge-Based Decisions in Smart Grids	(POS)	Radu Porumb (RO), Dan Apetrei (RO), Elena Macsim (RO)
1380	Power Quality Assessment for Microgrid Scenarios	(POS)	George Serîțan (RO), Ion Triștiu (RO), Oana Ceaki (RO), Tudor Boboc (RO)

## Quality, Reliability and Safety

16:30-18:00, EN114, Building EN

Chairmen: Florin Munteanu (RO), Sorin Pavel (RO)

950	Bayesian Networks Utilization for Reliability Evaluation of Power Systems	(QRS)	Alexandra Ciobanu (RO), Florin Munteanu (RO), Ciprian Ne mes (RO)
1412	A Fuzzy Hybrid Approach for Reliability Optimization Problem in Power Distribution Systems	(QRS)	Avishek Banerjee (IN), Mihai Gavrilas (RO), Gh. Grigoras (RO)



1574	Major Influences in Households and Business Spaces – Wi-Fi, Telecommunication Masts Outputs and Electrical Pollution	(QRS)	Francis Markho (NZ), Ioan Tuleasca (NZ)
1828	Additional Indicators for Short Time Overvoltages and Voltage Impulses	(QRS)	Virgil Maier (RO), Sorin G. Pavel (RO), Horia G. Beleiu, Vasile Fărcaș (RO)
1628	An Analysis of Influence of Different Type of Light Sources to the Power Quality	(QRS)	Florin Ciprian Argatu (RO), Constantin Daniel Oancea (RO)
2062	Root-Cause Analysis of Cascaded Ground Faults on an Ungrounded Distributed Network	(QRS)	Adrian Aparaschivei (RO), Marvyn Steglich (NL), Gabriel Chiriac (RO), Dorin Lucache (RO)

## Workshop EMC & EMB 2

16:30-17:30, "Dragomir Hurmuzescu" Conference Hall, Building E

Chairmen: Călin Munteanu (RO), Alexandru Morega (RO)

1735	A Two Layer Ground Computational Model for the Numerical Simulations of the Earthing Systems	(EMC & EMB)	Marius Purcar (RO), Calin Munteanu (RO), Alex Avram (RO), Adrian Bojita (RO)
1737	Study on the Influence of Wireless Communication Technology on Infusion Pumps	(EMC & EMB)	C. Luca (RO), D.Andrițoi (RO), C.Corciovă (RO), R.Ciorap (RO)
1961	An Overview of RF-EMF Monitoring Systems and Associated Monitoring Data	(EMC & EMB)	Eduard Lunca (RO), Alexandru Salceanu (RO)
1548	Performance Assessment for Mountain Bike Based on WSN and Cloud Technologies	(EMC & EMB)	Tiago Ribeiro (PT), Octavian Postolache (PT), Pedro Passos (PT)

## IEEE EMC&EMB Meeting

17:30-18:00, "Dragomir Hurmuzescu" Conference Hall, Building E

## **Workshop on Trends in Innovation and Technological Transfer**

16:30-18:00, EN012, Building EN

Chairmen: Dorin Lucache (RO), Cristian-Gyozo Haba (RO)

19:00-23:00

**Gala Dinner**

Motel Bucium Restaurant

**21 October 2016**

9:30-11:00

**Oral sessions**

**Bio-, Nano- materials and Technologies Applied in Electrical Engineering**

09:30-11:00, E002, Building E

Chairmen: Romeo Ciobanu (RO), Darko Belavic (SI), Daniela LaRosa (IT)

956	Comparative study of gas sensing microsensors based on sulfonated CNTs and CNTs/Polyaniline mixture	(BNM)	Eusebiu Ilarion Ionete (RO), Stefan Ionut Spiridon (RO), Bogdan Florin Monea (RO)
1136	Improving Electromanipulation Capacity of Dielectrophoretic Arrays Based on Variation of Interdigitated Microelectrode's Geometry	(BNM)	Olariu Marius (RO), Arcire Alexandru (RO)
1385	LTCC-based ceramic microsystems with integrated fluidic elements and sensors LTCC-based ceramic microsystems with integrated fluidic elements and sensors	(BNM)	D. Belavič (SI), M. Hodnik (SI), M. Santo (SI), H. Uršič (SI), A. Bradeško (SI), B. Malič (SI), A. Benčan (SI), K. Makarovič (SI), P. Fanjul Bolado (ES), I.-F. Mercioniu (RO), R. C. Ciobanu (RO), C. Schreiner (RO)
1460	Fluid Model Used for Simulating Streamer Breakdown in SF6 and SF6-N2 Mixtures	(BNM)	Tudor Alexandru Ilaș (RO), Tudor Coteș (RO) George-Andrei Ursan (RO), Maria Ursan (RO)
1463	Analysis of New Formulations for Nano-filled Concrete, Bituminous Coatings and Insulation	(BNM)	George-Andrei Ursan (RO), Maria Ursan (RO), Anca Pîntea (RO), Răzvan Ioan Grăpina (RO)
1801	IoT System for Monitoring Vital Signs of Elderly Population	(BNM)	Sabin Banuleasa (RO), Radu Munteanu Jr. (RO), Alexandru Rusu (RO) Gabriela Tonș (RO)

## Electromagnetic Field and Electrical Circuits

09:30-11:00, E102 Room, Building E

Chairmen: Camelia Petrescu (RO)

983	Characterization of Different Types of Gliding Discharges: Electrical Parameters and Breakdown Simulation	(EFEC)	B. Hnatiuc (RO), A. Sabău (RO) Camelia Petrescu (RO), M. Wartel (FR)
1005	Numerical Simulations of the Electric Parameters of the Plate-Type Electrostatic Precipitators Supplied with DC Voltage	(EFEC)	Gabriel Nicolae Popa (RO), Corina.Maria Diniş (RO), Sorin Ioan Deaconu (RO)
1274	Study of TEM Waves with Oblique Incidence at the Boundary Between Charged, Lossy Dielectrics	(EFEC)	Camelia Petrescu (RO)
1810	Induced Fault Current Simulation of a Three Phase Miniature Circuit Breaker	(EFEC)	Conecici Lucian Madalin (RO), Munteanu Calin (RO), Purcar Ioan Marius (RO)

## Industry Applications

09:30-11:00, E108 Room, Building E

Chairmen: Maria Brojboiu (RO), Virginia Ivanov (RO)

941	Experimental Investigations of a Hydroelectric Power Plant	(IAP)	Deaconu Sorin Ioan (RO), Popa Gabriel Nicolae (RO), Cunţan Corina Daniela (RO)
1247	The Effect of Gas and Solution Flow Rate on Nitrates and H <sub>2</sub> O <sub>2</sub> Generation in NTP Discharges	(IAP)	Iuliana Delicia Dirlau (RO), Radu Burlica (RO), Dumitru Astanei (RO)
1322	Students Course “Introduction to Industrial Image Recognition”	(EDU)	Claudius Klaus Jalba (DE), Avdo Muminovic (DE), Rolf Jung (DE), Steffen Epple (DE)
1361	Automation with MFD Titan for Lighting control	(IAP)	Barz Cristian (RO), Olivian Chiver (RO), Erdei Zoltan (RO), Horgos Mircea (RO), Dragana Preradović (BS)

2053	Photovoltaic Luz Flat Tracker Power Plants	(IAP)	Yosef Elia (IL), Marcel Dumitru Istrate (RO), Dorin Dumitru Lucache (RO)
1720	High Frequency Miniature Planar Transformer for Energy Harvesting Applications	(IAP)	Jean B. Dumitru (RO), Alexandru Morega (RO), Mihaela Morega (RO), Lucian Pislaru-Danescu (RO)

## Power Systems 3

09:30-11:00, EN109 Room, Building EN

Chairmen: Gianfranco Chicco (IT), Parimal Acharjee (IN)

1157	A hybrid GA-PSO Algorithm for Static VAR Compensation	(POS)	Ovidiu Ivanov (RO), Mihai Gavrilas (RO)
1319	Reactive Power Compensation in Distribution Networks using the Bat Algorithm	(POS)	Bogdan Constantin Neagu (RO), Ovidiu Ivanov (RO), Gheorghe Georgescu (RO)
1325	Phase Swapping of Lateral Branches from Low-Voltage Distribution Networks for Load Balancing	(POS)	Gheorghe Grigoras (RO), Mihai Gavrilas (RO)
1831	Voltage Stability Assessment for Wind Farms Integration in Electricity Grids with and without Consideration of Voltage Dependent Loads	(POS)	Radu Toma (RO), Mihai Gavrilas (RO)
1427	A Fuzzy Approach in Optimal DG Planning	(POS)	Florina Scarlatache (RO), Gheorghe Grigoras (RO)
1244	Assessment of Influence of Grid Disturbances on Wind Turbine DFIG Converters	(POS)	Oana Beniugă (RO), Mihai Leca (RO), Răzvan Beniugă (RO)

09.30 -11.00

## Workshop EMC&EMB Keynote and IEEE Distinguished Lectures

“Dragomir Hurmuzescu” Conference Hall, Building E

Chairman: Valeriu David (RO)

<b>Prof. Alexandru Morega (RO)</b> Politehnica University of Bucharest, Romania	Convection Heat Transfer in Thermographic Modeling Techniques
<b>Prof. Octavian Postolache (PT)</b> Instituto de Telecomunicações/Instituto Universitario de Lisboa ISCTE-IUL, Lisbon, Portugal	Smart Sensors and Tailored Environments for Physiotherapy

## Workshop on Internet of Things

09:30-11:00, E312 Room, Building E

Chairman: Cristian-Gyozo Haba (RO)

Webinar on Internet of Things

Round Table on Internet of Things Technologies

## Poster Session 2

10:30-11:30, Faculty Hall, Building E

Chairmen: Voinea Radu Cociu (RO) , Dorin Lucache (RO)

992	Relative to the Increase of Electricity Transmission Efficiency	(EFEC)	Alexandru Sotir (RO), Vasile Dobref (RO), Petrică Popov
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	by Cables		(RO)
1023	Bio-Stimulation of Camelina Seed by Magnetic Field	(EFEC)	Mikolaj Skowron (PL), Przemyslaw Syrek (PL), Antoni Ciesla (PL)
1094	Vibration Mini Actuator with Magnetically Suspended Inertial Mass	(EFEC)	Marius Mugurel Mihai (RO), Alexandru Arcire (RO), Radu Olaru (RO)
2006	Numerical Simulations of the Electromagnetic Field Shielding Performances for Reducing the Induced Faults in the Coils of a Three-Phase Miniature Circuit Breaker	(EFEC)	Conecici-Lucian Madalin (RO), Munteanu Calin (RO), Purcar Marius (RO)
1505	Optimisation of Operating Mechanism and Drive System for Medium Voltage Circuit Breakers	(EAP)	Cezar Popa (RO), Radu Pentiu (RO), Valentin Vlad (RO), Alexandru Miron (RO)
1127	Simulation and PLC Control of an Electromechanical Actuator with Volatile Liquid	(IAP)	Constantin Ungureanu (RO), Mihai Rată (RO), Mariana Milici (RO), Ilie Nită (RO)
1232	Automatically Prevention of Accidentally Maintenance System	(IAP)	Sergiu Dan Pata (RO), Mihaela Poienar (RO), Dumitru Cernusca (RO), Dan Laurentiu Milici (RO)
1235	Automated System for Optimising the Production of Compressed Air with a Compressors Station	(IAP)	Sergiu Dan Pata (RO), Mihaela Poienar (RO), Mihai Cenusă (RO), Dan Laurentiu Milici (RO)
1743	Statistical Analysis of LED Light Flux Variations	(IAP)	Ion Piroi (RO), Elisabeta Spuneî (RO), Cristian Chioncel (RO), Florina Piroi (RO)
2024	Nomograms for Sizing the Vertical Earth Grounding	(IAP)	Virgil Maier (RO), Sorin G. Pavel (RO), Horia G. Beleiu (RO), Iulian Birou (RO), Vasile Fărcas (RO)
2035	The Control System Modeling of Winder with Hybrid Fuzzy-PID Controller	(IAP)	Vadim Cazac (MD), Ilie Nuca (MD)
2041	Short Circuits Faults Diagnosis for the Rectifier Based on the Analytic Model Method	(IAP)	Virginia Ivanov (RO), Maria Brojboiu (RO), Sergiu Ivanov (RO), Florin Ocoleanu (RO)
2044	Overview of the Protection Lightning Standards Suite EN / IEC 62305	(IAP)	Silviu Stefanescu (RO), Aurel Botezan (RO)

2047	On the Assessment of Optical Power Budget in an Optical System for Detecting of Partial Discharge in High Voltage Electrical Equipment	(IAP)	Maria Brojboiu (RO), Virginia Ivanov (RO)
1523	The Mathematical Model of a Stand Measuring the Torque of the Termobimetal Actuators	(MMS)	Mariana Rodica Milici (RO), Laurentiu Dan Milici (RO), Radu Dumitru Pentiuc (RO), Pavel Atanasoae (RO)
1539	Development of Special Actuators Using Smart Materials	(MMS)	Dumitru Cernușcă (RO), Dan Laurențiu Milici (RO), Mihaela Poienar (RO)
1714	Temperature Control Solution with PLC	(MMS)	Gabriela Rata (RO), Mihai Rata (RO)
1732	A New Strain Sensor Based on Electrospinning and Thin Film Technologies	(MMS)	Ionel Hogas (RO), Cristian Fosalau (RO), Cristian Zet (RO)
1211	Electrochemical Techniques Used to Characterize Electrochemical Cells	(MMS)	Macovei Stefan Cristian (RO), Ilas Tudor Alexandru (RO), Drobotă Mihai (RO), Darko Belavič (SI)
1934	Modern Water Flowmeters. Differential Pressure Flowmeters	(MMS)	Gabriel Constantin Sârbu (RO)
1749	Comparative Measurements on an Electronic Weighing Instrument	(MMS)	Adriana Vâlcu (RO), Sterică Baicu (RO), Alina Taină (RO), Roberta Todor (RO)
1785	Modern Water Flowmeters. Oscillating Flowmeters	(MMS)	Gabriel Constantin Sârbu (RO)
1679	Linearized Model of the Variable Flux Induction Motor Drive	(PED)	Cristinel Radu Dache (RO), Emil Rosu (RO), Marian Gaiceanu (RO), Teodor Dumitriu (RO), Romeo Paduraru (RO), Traian Munteanu (RO), Gabriel Frangopol (RO)
1304	Using the Photovoltaic Renewable Sources for High-Voltage Substation Utilities	(POS)	Bogdan Filip (RO), Marian Dragomir (RO)
1337	The Impact of Harmonic Current Flow on Additional Power Losses in Low Voltage Distribution Networks	(POS)	Bogdan Constantin Neagu (RO), Gheorghe Georgescu (RO), Ovidiu Ivanov (RO)
1397	Voltage Regulation in Distribution Networks with Distributed Generation – A Review	(POS)	Gheorghe Ghiocel Matei (RO), Mihai Gavrilăș (RO)



1834	Study on Voltage Dynamics in Power Grids with Renewable Energy Sources Integration	(POS)	Radu Toma (RO), Mihai Gavrilaş (RO)
2086	The Influence of the Tariff Charged by Electricity Suppliers on the Optimal Running of a Trigenation Plant	(POS)	Eugen Hopulele (RO), Pavel Atănăsoae (RO), Mihai Gavrilaş (RO)
938	Availability Assessment for Grid-connected Photovoltaic Systems with Energy Storage	(REN)	Ciprian Nemes (RO), Florin Munteanu (RO), Mugurel Rotariu (RO), Dragos Astanei (RO)
1070	Limits of Mathematical Model Used in Wind Turbine Descriptions	(REN)	Cristian P. Chioncel (RO), Elisabeta Spunei (RO), Marius Babescu (RO)
1073	Optimal Operation of an Wind Power System with Energy Storage in Electric Accumulators	(REN)	Cristian P. Chioncel (RO), Nicoleta Gillich (RO), Doru-Ionut Petrescu (RO), Gheza-Mihai Erdodi (RO)
1816	Analysis of the Photovoltaic Panels Currently in Use in Different Locations	(REN)	Dumitru Cuciureanu (RO), Costica Nituca (RO), Gabriel Chiriac (RO), Daniel Sticea (RO)
1881	Power Control and Energy Management of a Lebanese Smart Micro Grid	(REN)	Nizar Kfoury (LB), Nazih Moubayed (LB)
1884	Survey on the Efficiency and the Profitability of an Hybrid Wind/PV System: The Lebanese Case	(REN)	Ahmad Balleh (LB), Amer Faydallah (LB), Nazih Moubayed (LB)
1265	Post-Stroke Hand Rehabilitation Using A Hybrid Fes-Robotic Glove	(WAREA)	Danut C. Irimia (RO), Marian S. Poboroniuc (RO), Sergiu Hartopanu (RO), Daniel Sticea (RO), Georgel Paicu (RO), Bogdan E. Ignat (RO)

11.30 -13.00

## Keynote Lectures

“Dragomir Hurmuzescu” Conference Hall, Building E

Chairman: Prof. Cristian-Győző Haba (RO)

<b>Prof. Gianfranco Chicco (IT)</b> Politecnico di Torino	Customer behaviour and data analytics
<b>Hana Ursic (SI)</b> Jožef Stefan Institute, Ljubljana, Slovenia	Screen-printed thick films on alumina and low-temperature co-fired ceramic substrates for sensor applications
<b>Ionut Enculescu (RO)</b> National Institute of Materials Physics, Magurele, Ilfov, Romania	Functional Nanostructures

## International Workshop on Advances in Rehabilitation Engineering Applications

11:30-13:00, E303 Room, Building E

Chairmen: Mandru Dan (RO), Popescu Dorin (RO)

1184	Predefined Recovery Exercises System for After Stroke Hand Rehabilitation	(WAREA)	Nirvana Popescu (RO), Vlad Ciobanu (RO), Adrian Ghidel (RO), Flavius Dinu (RO), Decebal Popescu (RO)
1316	Post-Stroke Assistive Rehabilitation Robotic Gloves	(WAREA)	Dorin Popescu (RO), Mircea Ivanescu (RO), Razvan Popescu (RO), Livia-Carmen Popescu (RO), Anca Petrisor (RO), Ana-Maria Bumbea (RO)
1124	Improved Neuroprostheses By Means of Knitted Textiles Electrodes Used for Functional Electrical Stimulation	(WAREA)	Marian-Silviu Poboroniuc (RO), Danuț-Constantin Irimia (RO), Antonela Curteza (RO), Viorica Crețu (RO), Laura Macovei
1241	Controlling A FES-EXOSKELETON Rehabilitation System by Means of Brain-Computer Interface	(WAREA)	Danut C. Irimia (RO), Marian S. Poboroniuc (RO), Florin Serea (RO), Alina Baciuc (RO), Radu Olaru (RO)

1199	A Brain-Computer Interface for the Control of a Finger Rehabilitation Glove	(WAREA)	Alexandru Ianoși-Andreeva-Dimitrova (RO), Dan Silviu Mândru (RO), Simona Noveanu (RO), Mihai Olimpiu Tătar (RO)
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## 1st Workshop on Lighting: From Energy Efficiency to Light Pollution

11:30-13:00, EN012, Building EN

Chairmen: Gălățanu Cătălin (RO), Dorin Lucache (RO)

1121	Efficient Lighting System for Greenhouses	(WoL)	Elena Dănilă (RO), Dorin Dumitru Lucache (RO)
2032	Isolux Curves on the Diffuse Reflectance of Light on Concave Dihedral Angle	(WoL)	Cătălin Daniel Gălățanu (RO), Dorin Dumitru Lucache (RO)
2056	Radiometric Performances for Coolwhite and Warmwhite LED Luminaries	(WoL)	Lovaso Rakotomalala (FR), Zely Randriamanantany (FR), Sergiu Hartopanu (RO), Radu Hertanu (RO), Dorin Dumitru Lucache (RO)
2093	LED source, a comparative analysis on lighting efficiency	(WoL)	Anca Manolescu, Francisc Sisak

13:00-14:30

Lunch

14:30-15:30

## Closing Ceremony

14:30-15:30, "Dragomir Hurmuzescu" Conference Hall, Building E

**22 October 2016**

9.30 -11.30

**Free guided tour to Metropolitan Museum and to "Moldova"  
National Museum**

Meeting point in front of Culture Palace, near "Ștefan cel Mare" statue.

## Acronyms

AIA	Applied Informatics and Automation
BNM	Bio-, Nano- materials & technologies applied in electrical engineering
EDU	Education in Electrical and Power Engineering
EAP	Electrical apparatus
POS	Power Systems
IAP	Industry applications
ELM	Electrical Machines
EFEC	Electromagnetic Field and Electrical Circuits
MMS	Metrology and Measurement Systems
QRS	Quality, Reliability and Safety
PED	Power Electronics and Electrical Drives
REN	Renewable Energy
EMC & EMB	Fourth International Workshop on Electromagnetic Compatibility and Engineering in Medicine and Biology
WAREA	International Workshop on Advances in Rehabilitation Engineering Applications
WoL	2nd Workshop on Lighting: From Energy Efficiency to Light Pollution
WIoT	Workshop on Internet of Things
WTITT	Workshop on Trends in Innovation and Technological Transfer

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**SETIS – Societatea Absolvenților  
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**Continental Automotive**



## Conference Schedule

Culture Palace		D.Hurmuzescu Aula	Building E Conference Desk	Building E Hall/Front	Building E Hall	E003	E102	E106 (E2)	E108 (E4)	E303	E312	E316	EN009	EN012	EN109	EN114	Cotnari Restaurant	Motel Bucium Restaurant
Henry Coanda Hall	Museum of Science and Technology „Ștefan Procopiu”																	

20 October	8.00																	
	8.30	Greeting and reception of participants																
	9.00	Opening ceremony																
	9.30																	
	10.00	Plenary session																
	10.30																	
	11.00		Visit of Culture Palace															
	11.30																	
	12.00																	
	12.30																	Lunch
	13.00																	
	13.30			Greeting and reception of participants		Poster session 1												
	14.00																	
	14.30		EMC&EMB 1		Expo			ELM1	AIA			MMS1	EAP1	PED	POS1	REN		
	15.00																	
	15.30																	
	16.00	Coffee Break																
	16.30		EMC&EMB 2					ELM2				MMS2	EAP2	WTITT	POS2	QRS		
	17.00		IEEE EMC&EMB Meeting		Expo													
17.30																		
18.00																		
18.45	Departure to Gala Dinner																	
19.00																	Gala Dinner	
23.00																		

## Conference schedule

Culture Palace		D.Hurmuzescu Aula	Building E Conference Desk	Building E Hall/Front	Building E Hall	E003	E102	E106 (E2)	E108 (E4)	E303	E312	E316	EN009	EN012	EN109	EN114	Cotnari Restaurant	Motel Bucium Restaurant
Henry Coanda Hall	Museum of Science and Technology „Ștefan Procopiu”																	

21 October	8.00																		
	8.30																		
	9.00																		
	9.30																		
	10.00																		
	10.30																		
	11.00		Coffee Break				Poster session 2	Coffee Break											
	11.30																		
	12.00																		
	12.30																		
13.00																	Lunch		
13.30																			
14.00																			
14.30																			
15.00																			

22 October		Social Program	Visits to Metropolitan Museum and to "Moldova" National Museum														
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