

PROGRAMME

OF THE 11-TH INTERNATIONAL CONFERENCE ON ELECTROMECHANICAL AND POWER SYSTEMS

Organizers

FACULTY OF ELECTRICAL ENGINEERING OF IAȘI - ROMANIA,

FACULTY OF ELECTRICAL ENGINEERING OF CRAIOVA - ROMANIA

FACULTY OF POWER AND ELECTRICAL ENGINEERING CHIȘINĂU - REP.MOLDOVA

Partners

IEEE ROMANIA

WORLD ENERGY COUNCIL – ROMANIAN NATIONAL COMMITTEE SETIS IASI

PROGRAM OUTLINE

IASI, 11 October 2017

Faculty of Electrical Engineering, 21-23 Prof.Mangeron str., lasi - 700050

16.00-17.00	Oral session 0.1 ("Dragomir Hurmuzescu" Conference Room)	
17.00-18.00	Workshop "The Internet of Things and its impact over the electromechanical	
	and power systems", ("Dragomir Hurmuzescu" Conference Room)	
18.00-18.15	Coffee break	
18.15-18.30	Oral session 0.2 ("Dragomir Hurmuzescu" Conference Room)	
18.30-19.00	Seminar "150 years from the Siemens' great breakthrough"	
19.00-20.00	Common dinner	

CHISINAU, 12 October 2017

Technical University of Moldova, Rectorate (block 1), 168 tefan cel Mare Blvd., Chisinau

11.30-13.45	Registration
12.30-13.30	Welcome lunch (Room 1-101)
14.00-15.00	Opening Ceremony (Festive Hall)
15.00-16.30	Plenary Session
16.30-17.00	Coffee break (Room 1-101)
12.00-18.00	Workshop "Advances in Electrical and Power Engineering" (Rectorate
	courtyard)
17.00-18.00	Poster Session (Rectorate courtyard)
18.00-19.00	Shuttle bus
19.00-23.00	Gala Dinner

CHISINAU, 13 October 2017

Faculty of Power and Electrical Engineering, Block 2, 31 August 1989 str., No. 68

9.00-11.00	Oral Session 1
11.00-11.30	Coffee break
11.30-13.30	Oral Session 2
11.30-13.30	WorkShop "E-learning methods (Moodle) utilization in the Moldovan
	universities" (Room 2-137)
14.00-15.00	Lunch
15.00-15.30	Closing ceremony
17.00-17.45	Trip to Cricova by bus
18.00-20.00	Visit of Cricova wine cellars

CHISINAU, 14 October 2017 (Optional)

Social Program

9.00-11.00	Program 1 – Monasteries tour	
11.00-11.30	Program 1 – Chisinau' days of celebration	

Plenary session

519	Elevator Drives Present Trends and Perspectives	BRANKO BLANUŠA
636	The electrical power quality in isolated micro-networks	NICOLAE GOLOVANOV, GEORGE CRISTIAN LĂZĂROIU
21 & 44	"Republic of Latvia: trends in development of the national power system and the training of young professionals"	INGA ZICMANE, KRISTINA BERZINA

Automation, Robots and Mechatronics

124	Hybrid Petri Nets; a Framework for Hybrid Systems Modeling	MIRCEA ADRIAN DRIGHICIU
136	Camera Calibration and Tracking for Gimballed Like Eye Structure in Robots with Hardware Implementation	ABDUL REHMAN YASIN, MUHAMAMD ASHRAF, ADRIAN PLESCA, SHAHZAD AHMAD, RUDANIA NASIRULLAH, HUMA NASEER, MUHAMMAD ADAM
321	Automatic Temperature Control in 3D Printing of the Polymer Details	IRINA COJUHARI, ION FIODOROV, BARTOLOMEU IZVOREANU, DUMITRU MORARU, SORIN BOTNARU
405	Novel Method for Control of Nonlinear System Based on Negative Acceleration	TAREK BENMILOUD
421	Analysis of the Control Action of the Epitaxial Layers Growing in the Automatic System with PID Controller	SIMION BARANOV, ION FIODOROV, IRINA COJUHARI, MAXIM GLINCA
453	Robust control of MPPT of a PV cell	COSMIN DARAB, ANTONIU TURCU, S. STEFANESCU, A. BOTEZAN, CONSTANTIN PICA, SORIN PAVEL
477	Simultaneous Estimation of Speed and Rotor Resistance in the Sensorless Vector Control Systems with Induction Motors	OLIMPIU STOICUTA, TEODOR PANA, ROBIN MOLNAR, DANIEL DEACONU
569	Design of a Sliding Mode Controller to Eliminate the Limit Cycle in Chaotic Van der Pol System in Comparison with State Feedback Controllers	SHAHZAD AHMAD, ABDUL REHMAN YASIN, ADRIAN PLESCA, USMAN YOUNIS
592	Time Delay Evaluation in Printed Circuit Boards based on Timed Hard Petri Nets	SUDACEVSCHI VIORICA, ABABII VICTOR, CALUGARI DMITRI, BORDIAN DIMITRIE
593	Wavelet Transform and Neural Network Based Control Strategy for Hybrid Energy System	ALINA-GEORGIANA BACIU, GHEORGHE LIVINT
601	Manufacturing and Clinically Testing Embedded Electrodes in Knitted Textiles for Neurorehabilitation	MARIAN-SILVIU POBORONIUC, DANUT IRIMIA, IOANA POBORONIUC, BOGDAN IGNAT, ANTONELA CURTEZA, LAURA MACOVEI, VIORICA CRETU, MARIA BUZDUGAN

Electrical Apparatus

24	18-pulse Transformer Device for Flexible Connection of Asynchronous Power Systems	VALERIU BOSNEAGA, VICTOR SUSLOV
88	Numerical Model for a Plunger-Type AC Electromagnet	IOAN POPA, ALIN IULIAN DOLAN
150	Aspects Regarding Controlled Switching of the Vacuum Circuit Breaker	ELVIS BOGHIU, ADAM MARICEL, MIHAI ANDRUSCA, ALIN DRAGOMIR, ADRIAN MUNTEANU
178	About Monitoring of Joint Coils from Electric Traction Railway	ADRIAN MUNTEANU, MARICEL ADAM, MIHAI ANDRUŞCĂ, ALIN DRAGOMIR, ELVIS BOGHIU

266	Heating System for Industrial Applications	COSMIN-GEORGIAN PINTILIE, ADRIAN PLESCA
503	Comparative Study of the Vibrating Armature and Rotary Vane Pumps	ADRIAN TURCANU
595	Considerations Regarding Infrared Thermal Stresses Monitoring of Electrical Equipment	A. DRAGOMIR, M. ADAM, M. ANDRUŞCĂ, A. MUNTEANU, E. BOGHIU
620	About a Matlab Graphical User Interface to Analyze Stresses During the Transient Regimes in the High Voltage Substations	MARIA BROJBOIU, VIRGINIA IVANOV

Electrical Machines

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LUCIAN
MARCEL
NAKOGLU, MUSTAFA
J, ADRIAN CSANDRU
J, ADRIAN CSANDRU
AMPEANU,
AMPEANU,
LEONID, RIA
MARCEL, RU
LEONARD
LEONARD
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Electromagnetic Field and Electrical Circuits

ļ	56	Three-phase voltage generator for stands in the research	V.M. POSTOLATY, A.S. SUVOROV, V.K. ANISIMOV
		concerning devices models for energy systems interconnection	

60	Low Frequency Electromagnetic Shielding Solutions	CONSTANTIN BEIU, NICOLAE GOLOVANOV, CORNEL TOADER, GEORGETA BUICA
327	SYSEG – Symbolic State Equation Generation	MIHAI IORDACHE, SORIN DELEANU, CIPRIAN CURTEANU, NECULAI GALAN, ATANASIE MOSCU
423	Study of Conducted Electromagnetic Emissions of a Wireless Power System	SERGIU ANDREICA, MARIAN GLIGA, ADINA RACASAN, CALIN MUNTEANU, CLAUDIA PACURAR, CLAUDIA CONSTANTINESCU
457	Using Differential Evolution Algorithms for the Analysis of Nonlinear Circuits	CAMELIA PETRESCU, OLGA PLOPA
483	The influence of long transmission lines on the overvoltage distribution across power transformer windings	CIPRIAN CURTEANU, SORIN DELEANU, MIHAI IORDACHE, GLORIA CIUMBULEA, NECULAI GALAN
583	Considerations On Radiated Emission Measurements for a Laptop in a Semi-Anechoic Chamber	LIVIA-ANDREEA DINA, PETRE-MARIAN NICOLAE, IONUţ DANIEL SMĂRĂNDESCU, VIORICA VOICU
599	Shielding Effectiveness Evaluation Using a Non-Standardized Method	VIORICA VOICU, ION PĂTRU, LIVIA-ANDREEA DINA, PETRE-MARIAN NICOLAE, IONUȚ DANIEL SMĂRĂNDESCU
604	Computer simulation of the complex damage types of multiphase higher voltage electrical transmission lines by using the method of six symmetrical components	KIORSAK MICHAIL, TURCUMAN LILIA, TURTURIKA NATALYA

Engineering Education and Evocations

204	The Educational Responsibility in Rapid Implementation of European Policy Concerning Energy Market	BOGDAN ALEXANDRU RADULESCU, VICTORITA RADULESCU
443	The quality of online courses in the students perception	TODOS PETRU, CRISTINA GHENCEA, VIRLAN PETRU
447	Three-dimensional models' using in courses placed on Moodle platform	SHULETEA ANGELA, DINTU SERGIU, VIRLAN PETRU
451	Study, design and simulation of a laboratory module related to filters	BENTA MARIUS DAN, LAURA MIHAELA LELUTIU
491	Trajectories in the Competence Field	GALATANU CATALIN DANIEL
591	Direct and reverse start of the servomotor with LabView	PETRU VÎRLAN
596	Quality assurance in online education - in the TUM experience	PETRU TODOS, PETRU VÎRLAN, CRISTINA GHENCEA
605	New Opportunities for Internship for the Technical University of Moldova' Students	ILIE NUCA, MARCEL BURDUNIUC, IURIE NUCA, ANA GRIGORITA, VALERIA MIRCO
628	Inventics and the lasi School of Invention. Contribution of the Faculty of Electrical Engineering	LORIN CANTEMIR, GABRIEL CHIRIAC, DORIN LUCACHE

Energy Efficiency and Renewable Resources

70	Integration of Thermal Energy Storage Systems for Improved Efficiency and Flexibility of the Combined Heat and Power Plants of Medium and Small Power	PAVEL ATĂNĂSOAE, RADU PENTIUC, CRENGUȚA BOBRIC, ELENA OLARIU, VALENTIN MARTIN
82	The potential of micro grids concept implementation in the Republic of Moldova	SVEATOSLAV POSTORONCA, MIHAI TIRSU

84	Analysis concerning replication of PV projects in the Republic of Moldova	MIHAI LUPU, MIHAI TIRSU
162	Estimation of the wind power plants capacity to be integrated in actual power system of Moldova	MIHAI TÎRŞU, DMITRII ZAIŢEV, IRINA GOLUB, LEV CALININ, GEORGE CRISTIAN LAZAROIU
194	Mobile Prototype with Solar Panels for Rehabilitation of Natural Reservations Lakes	VICTORITA RADULESCU
198	Environmental Solution with Renewable to restore the Capacity of the Hydropower Lakes	BOGDAN ALEXANDRU RADULESCU, VICTORITA RADULESCU
262	Analysis of Hot-spots Effects on the Performances of a Photovoltaic System Used in Romania	GABRIEL CHIRIAC, COSTICA NITUCA, DUMITRU CUCIUREANU, ION MURGESCU
281	Influence of energy characteristics of biogas obtained by anaerobic fermentation of animal proteins on combustion performance	LĂZĂROIU GHEORGHE, MIHĂESCU LUCIAN, MAVRODIN MĂDĂLINA, BONDREA ANDREYA
293	The Wind Energy Resources Atlas of the Republic of Moldova and its use	ION SOBOR, VASILE RACHIER, ANDREI CHICIUC
313	Coordinated Reactive Power Control of DFIG to Improve LVRT Characteristics of FSIG in Wind Turbine Generation	MINH QUAN DUONG, GABRIELA NICOLETA SAVA
331	Experimental Results of Photovoltaic Emulator Systems	MOHAMED AMINE ABDOURRAZIQ, SARAH ABDOURRAZIQ, MOHAMED MAAROUFI, MOUHAYEDINE TLEMCANI
333	An Improved Fuzzy Slide Mode Control Applied to PV Systems	MOHAMED AMINE ABDOURRAZIQ, SARAH ABDOURRAZIQ, MOHAMED MAAROUFI
347	Renewable Energy in Morocco: Photovoltaic Water Pumping System	SARAH ABDOURRAZIQ, MED. AMINE ABDOURRAZIQ
389	A Hybrid System Implementation for Residential Cluster	CATALINA ALEXANDRA SIMA, GEORGE CRISTIAN LAZAROIU, VIRGIL DUMBRAVA, MIHAI TIRSU
393	Carbon Dioxide Emissions Reduction by Renewable Energy Employment in Romania	DANA-ALEXANDRA CIUPĂGEANU, GHEORGHE LĂZĂROIU, MIHAI TÎRȘU
395	Improved Maximum power point tracking for PV systems under partial shading conditions using single current sensor	SARAH ABDOURRAZIQ, MOHAMED AMINE ABDOURRAZIQ, MOHAMED MAAROUFI
409	Contributions to the development of the Romanian anti-hail system	GHEORGHE MANOLEA, LAURENTIU ALBOTEANU, SORIN STEPAN
413	The Principles of Determining Energy Efficiency in the Production of Agricultural Products	ERHAN F., BANTAS R.
439	The Impacts of Distributed Generation Penetration into the Power System	MINH QUAN DUONG, NGOC THIEN NAM TRAN, GABRIELA NICOLETA SAVA, MIRCEA SCRIPCARIU
537	Mathematical Modeling of Hydrodinamic Processes in the Rotors of Flow Micro-Hydropower Plants	VIOREL BOSTAN, ION BOSTAN, VALERIU DULGHERU, MAXIM VACULENCO, OLEG CIOBANU
539	Study of the Aerodynamics of Wind Rotors with Horisontal Axis: Design, Manufacture, Testing	VIOREL BOSTAN, ION BOSTAN, VALERIU DULGHERU, ION SOBOR, MAXIM VACULENCO, VITALIE GLADÎS
575	Photovoltaic Pump System Design for Small Irrigation	ION SOBOR
612	Monitoring Photovoltaic Parks for Damage Prevention and Optimal Operation	CRISTIAN GYOZO HABA

Industry Applications

17	The model of places for recreation and relaxation of the people taking into account the urboecological aspects of evolution of the modern city	INGA ZICMANE, KRISTINA BERZINA, JEVGENIJS KUCKOVSKIS, NATALIJA BERZINA-NOVIKOVA, ILGA ZICMANE
38	Consolidated mettering on the client side for industrial and home utilities	ADRIAN DANILA
122	Electromagnetic actuator with ferromagnetic disk and magnetic spring suspension	NICU-BOGDAN GÎRTAN, RADU OLARU
144	Analysis of a Cable Connection Failure Causing Arcflash on 10.7 MW Recycle Compressor Motor	ADRIAN APARASCHIVEI, GABRIEL CHIRIAC, COSTICA NITUCA, ADRIAN PLESCA
190	Failures Analysis in the 25 kV/50 Hz Railway Substations	GABRIEL CHIRIAC, COSTICA NITUCA, MARICEL CARDASIM
273	Synthesis and Analysis of PWM Inverter Output Voltages	CONSTANTIN S. PICA, VIRGIL MAIER, SORIN G. PAVEL, HORIA G. BELEIU
427	A LoRaWAN: Long Range Wide Area Networks Study	ALEXANDRU LAVRIC, VALENTIN POPA
533	Methodologies Regarding the Application of Optimum Criteria to the Vertical Earth Grounding Design, with Rectangular Outline	VIRGIL MAIER, SORIN G. PAVEL, IULIAN BIROU, HORIA G. BELEIU AND CLAUDIU CIORCA
618	Simple Control Strategy of the Series Filter within a Unified Power Quality Conditioner (UPQC)	SERGIU IVANOV, MARIAN CIONTU, DUMITRU SACERDOTIANU
632	Comparative Study of the Level of Awareness of E-Waste Management in Romania and Republic of Moldova	GEORGIANA LUCACHE, ADRIAN TURCANU, DORIN LUCACHE, ILIE NUCA
638	Risks in the management of solar power plant projects	IOSEF ELIA, DORIN LUCACHE, MARCEL ISTRATE, VALENTIN NITA

Metrology and Measurement Systems

48	Virtual Monitoring of Electrical Circuitry	COSTEL DONOSE, CRISTINA-MIHAELA SCHREINER, ALEXANDRU-CONSTANTIN PODARU, IONEL PAVEL
96	Actuating and Controlling Electrical Circuits by means of Virtual Instruments	COSTEL DONOSE, CRISTINA-MIHAELA SCHREINER, ALEXANDRU-CONSTANTIN PODARU, IONEL PAVEL
108	Cloud system for diabetic data analysis	LUCIAN NIȚĂ
164	Analysis of the performance of the mark-space method for determining the power in single-phase circuits	CONSTANTIN DANIEL OANCEA
289	Unbundled Smart meters in the new smart grid era - Assessment on compatibility with European standardization efforts	MIHAI SANDULEAC, LUCIAN TOMA
317	The image analysis of Moldavian oak chips	IGOR CHICIUC, DANIEL URSU, ANDREI CHICIUC
515	Luminance Measurement For Light Pollution Reduction	GĂLĂȚANU CATALIN DANIEL
553	Limits and Usability of Fast Fourier, Discrete Wavelet and Wavelet Packet Transforms Applied at Signals from a Primary Winding of a Locomotive Transformer	ILEANA-DIANA NICOLAE, RADU-FLORIN MARINESCU, PETRE-MARIAN NICOLAE, MARIA DIANA CRISTINA
600	Study of a Tiredness Identification System	DAN LAURENȚIU MILICI, ADRIAN GRAUR, MIHAELA POIENAR, MIHAI CENUȘĂ, ANDREI BARASCU

Power Electronics and Drives

10	Comparison of Reference Current Generation Techniques for Shunt Active Power Filter	IKRAM ULLAH, MUHAMMAD ASHRAF AND ABDUR REHMAN
92	Development of induction motor torque control algorithm for electric vehicles on inclined roads	YAVUZ USER, NILAY TABANLI
128	Synchronous Undermodulation Control Modes of System with Three PWM Converters	VALENTIN OLESCHUK, GIOVANNI GRIVA, ADEL DERISZADEH, VICTORIA BURCENCO
325	Interdependence between the harmonics of the output and input currents to a three phase rectifier bridge	MITICA IUSTINIAN NEACA
337	Increasing Power Quality in a 6-pulse DC-Traction Substation	MIHAELA POPESCU, ALEXANDRU BITOLEANU, VLAD SURU, AND MIRCEA DOBRICEANU
435	Set-up and Implementation of a Recuperative Stand for Testing a Filtering and Regeneration System	ALEXANDRU BITOLEANU, MIHAELA POPESCU, VLAD CONSTANTIN SURU, OANA PUNCEA
473	Control algorithm design and implementation for a bidirectional PWM boost rectifier	CONSTANTIN VLAD SURU, MIHAITA LINCA, CRISTINA ALEXANDRA PREDA
487	The drive system optimization of single screw extruder to control thickness of insulation	VADIM CAZAC
624	Laboratory Board for Study the Half-Bridge Power Electronic Converters	DANIEL STICEA, MIHAI ALBU, GABRIEL CHIRIAC

Power Generation, Transport and Distribution

42	Chisinau CHP-1 Retrofitting by the Process of Installing Gas Turbines	CORINA GUŢU-CHETRUŞCA, AUREL GUŢU
46	High-Efficiency Electronic Transformer for Powering Individual Consumers from the Medium Voltage Grid	VLADIMIR BERZAN, ERMURACHI IURIE
64	Short-term forecasts of fuels consumption in the analysis of energy security	ELENA BICOVA, VLADIMIR BERZAN, MIHAIL GRODETSKY
72	Analysis of the state and methods for increasing the efficiency of operation of district heating system in the Chisinau municipality	GENNADY OCLANSCHI, VLADIMIR BABICH, VLADIMIR BERZAN,VITALY POSTOLATY
74	Analysis of the Impact of Tariff Levels on Energy and Other Services on Macroeconomic Indicators	TATIANA GUTIUM, VITALY POSTOLATY, ELENA BYKOVA, MIHAIL GRODETSKIY
78	The Estimation of the Technical And Financial Indicators of Exploitation of the Thermoelectric and Thermal Power Plants with Variable Load	BERZAN VLADIMIR, BABICI VLADIMIR, POSTOLATI VITALY, BYCOVA ELENA
132	Fuzzy Control of cooling water pumps related to a Power Plant	DANIELA POPESCU, CRISTIAN BRATU, RADU CRISTIAN DINU
202	Permanent Energetic Management a Solution in Rehabilitation of Small Hydropower Plants	VICTORITA RADULESCU
341	Evaluation of the minimum operating duration of cogeneration units that could ensure economic viability	ARION VALENTIN, CHELMENCIUC CORINA, NEGURA CĂLIN
461	Voltage Profile Improvement in Electricity Distribution Networks – A Genetic Algorithm Benchmark Study	OVIDIU IVANOV, BOGDAN NEAGU, MIHAI GAVRILAŞ
465	A Comprehensive Solution for Optimal Capacitor Allocation Problem in	BOGDAN NEAGU, OVIDIU IVANOV,

	Real Distribution Networks	MIHAI GAVRILAŞ
511	Centralised District Heating Systems: Reality and Perspectives	VASILE LEU, CERNEI MIHAIL
523	Three parameters optimization of acting force of DC electromagnet	ALIN-IULIAN DOLAN
527	Aspects on Choosing and Exploiting in Economic Conditions the MV Electrical Power Transformers	MIRCEA-EMILIAN ARDELEANU, DAN GABRIEL STĂNESCU, CRISTIAN MINCULESCU, ŞTEFAN POPA
543	Analysis of the actual situation regarding the methods of processing the neutral in the 6-35 kV networks	INA DOBREA, CORNOVAN IRINA
571	Methodical approach to weak buses and ties detection in a power system	ION STRATAN, TUDOR RADILOV, MARIN PRIPA, VICTOR GROPA

Reliability and Diagnosis

52	Reduction of power consumption for cathodic protection of reinforced concrete pillars	IGOR COLESNIC, VLADIMIR ANISIMOV, SVEATOSLAV POSTORONCA, VICTOR ANISIMOV
148	Computer Assisted Diagnosis of Automatic Signaling Installations with Blinking Red Lights	SPUNEI ELISABETA, PIROI ION, MUSCAI CRISTIAN, PIROI FLORINA
602	A Theoretical Result on Stabilizability of Oxygen Excess Ratio for PEM Fuel Cell	MOUSTAPHA NIANE, MOHAMED ZERROUGUI, RACHID OUTBIB
608	A Note on Leakage Diagnosis for an Irrigation Network	T. MARZOUGUI, S. BENELGHALI, R. OUTBIB, F. DOUMENC
616	Faults Diagnosis in Transport and Distribution Lines Based on the Analytic Model	VIRGINIA IVANOV, MARIA BROJBOIU AND SERGIU IVANOV