"DUNAREA DE JOS" UNIVERSITY OF GALATI
Faculty of Automation, Computers Science, Electrical and Electronics Engineering

ISEEE-2017

The 5th International Symposium on Electrical and Electronics Engineering

October 20-22, 2017
Galaţi, Romania

PROGRAM

Galati, Romania

Organizers

ORGANIZED BY	Faculty of Automation, Computer Science, Electrical and Electronics Engineering "*Dunărea de Jos*" University of Galaţi, Romania
In cooperation with:	Ministry of Research and Innovation (Romania)
Technical Co-Sponsors:	IEEE Romania Section CAS/CS Joint Chapter IEEE Power Electronics Romania Chapter

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Foreword

*On behalf of the **ISEEE 2017** Committees and from Faculty of Automation, Computers Science, Electrical and Electronics Engineering we invite you to participate at the 2017 5th International Symposium on Electrical and Electronics Engineering (ISEEE), which will be held in October 2017 at "Dunarea de Jos" University of Galati, Romania. The Symposium is traditional meeting of researchers, managers, professionals, master and PhD students in order to exchange the experience and opinions with other experts from all over the world.*

***Galati** is an old and beautiful town located in the Eastern part of Romania, at the mouth of the Danube, the Siret and the Prut rivers. Galati - is the country's 5th largest town and the biggest port situated on the maritime Danube; it is 80 miles off the Black Sea shore and about 250 km far from Bucharest. It can be reached easily by train or by car from Bucharest, the capital of Romania.*

***The symposium** is **intended** as an international forum where an effective exchange of knowledge and experience amongst researchers active in various theoretical and applied areas of electrical and electronics engineering, power electronics and telecommunications can take place.*

***The objective** of the fifth symposium is oriented but not limited to the paradigm of interdependency between electrical and electronic systems.*

The symposium will provide presentations on the latest trends, in-depth knowledge about achieving the highest level of technology in the field. The event will also provide a variety of workshops, discussions, and exhibitions to fully immerse the attendees in the Symposium pleasant atmosphere. The symposium hotels are located in the heart of the city, near to the Danube. The social activities will also be included, like banquet, and trip on Danube.

We sincerely give you our invitation to come in Galati to admire its gorgeous views, wealth of nature and activities, while you will enjoy our meeting information to change ideas through international event ISEEE 2017.

Sincerely Yours,

Marian GAICEANU

General Chairman

ISEEE-2017 – AT A GLANCE						
Friday, 20 October						
8.00 - 10.30	Registration	*Aula Magna*, Domneasca 111				
10.30-19.00	Registration	in front of Faculty's Secretariat, *Y Building, 1ˢᵗ floor*				
9.00-9.30	Opening Ceremony	*Aula Magna*, Domneasca - 111				
9.30-10.30	Plenary Session	*Aula Magna*, Domneasca - 111				
10.30-11.00	Coffee break	Stiintei street -2, Y Building, 1ˢᵗ floor, room Y 105				
Y Building, 1ˢᵗ floor						
11.00-13.00	**TS I**	**Room Y-106**	**Room Y-606**	**Room Y-101**	**Room Y-405**	**Room Y-102**	**Room Y-605**
		TS 1	TS 2	-	TS 3	TS 4	TS 5
13.00 - 14.30		*Lunch break*	*Room Y 105*				
14.30-16.30		Plenary Session, **1ˢᵗ floor**, *Room Y 106*				
16.30 - 17.00		Coffee break	Stiintei street -2, Y Building, 1ˢᵗ floor, room Y 105				
17.00 - 19.00	**TS II**	**Room Y-106**	**Room Y-606**	**Room Y-101**	**Room Y-405**	**Room Y-102**	**Room Y-605**
		SS 1	SS 2	Special Session (SS) 4	SS 3	TS 6	TS 7
20.00 - 23.00		*Gala Dinner*	*Vega Restaurant*				

Saturday, 21 October 2017						
8.30 - 13.00		Registration	in front of Faculty's Secretariat, *Y Building, 1ˢᵗ floor*				
09:00 – 10:30		Plenary Session, **1ˢᵗ floor**, *Room Y 106*				
10.30-11.00		Coffee break	Stiintei street -2, Y Building, 1ˢᵗ floor, room				
11.00-13.00	**TSIII**	**Room Y-106**	**Room Y-606**	**Room Y-101**	**Room Y-405**	**Room Y-102**	**Room Y-605**
		TS 8	TS 9	-	-	TS 10	-
14:00 – 17:00		Boat trip on Danube river				

PLENARY SESSIONS

20 October 2017 | **PS2 9.30 - 10.00** | **Aula Magna** | Chair: Viorel Mînzu

Prof. Cristian Nichita, PhD.Eng., Université du Havre, Le Havre, France

Power Loss Reduction in Electrical Network using Optimized Location and Size for Multi Distributed Generators

Cristian Nichita and Ahmed Al Ameri
Groupe de Recherche en Electrotechnique et Automatique (GREAH), University of Le Havre Normandy, France

Abstract: The location of distributed generators (DG) with different size on the power distribution systems could modify the voltage profile and impacts the level of real power losses. Faster optimization technique as well as a high computational speed of load flow are therefore required. This paper presents a linear model and an algorithm that allow to calculate the real power losses of the system. This methodology is based on the graph theory for representing the electrical network and generate the incident matrix. The Interior Point (IP) method is chosen as a local optimization method to solve problems of large-scale nonlinearity of power grid flows. The proposed approach obtains the optimal location and size of the DG units for each bus system with an important saving computational time and it has been tested with three standard IEEE bus. The results demonstrate the capability of the proposed method to reduce the active power losses with an advantageous time saving comparing to nonlinear approach based on Newton Raphson method.

Keywords – Power System Analysis, Distributed Generation, Modelling.

20 October 2017 | **PS2 10.00 - 10.30** | **Aula Magna** | Chair: Marian Găiceanu

Prof. Claudia Popescu and Prof. Mihai Octavian Popescu, "Politehnica" University of Bucharest, Romania

Trends in evolution of electrical engineering curriculum

Abstract: Society evolution toward the information and knowledge-based economy made necessary a new and more specific definition of electrical engineering. The paper discuss about new approach of electrical energy systems as power systems microprocessor controlled. From this point of view computer use was integrated in electrical engineering. Some tendency in electrical engineering curricula reform are presented and commented.

20 October 2017 | **PS3 14.30-15.00** | **Y106** | Chair: Dorel Aiordăchioaie

Prof. Paul Svasta, "Politehnica" University of Bucharest, Romania

Supercapacitors - an Alternative Electrical Energy Storage device
Fostering Academia–Industry collaboration through OPEN INNOVATION - DA-SPACE LAB

P. Svasta, R. Negroiu, Al. Vasile
University "Politehnica", Centre of Technological Electronics and Interconnection Techniques,
UPB-CETTI, Bucharest, Romania

Abstract: In the last time, the power supplies issues of electronic circuits had become an important issues, especially for mobile devices. The use of classical or Li-ion batteries in the industry, mainly utilized in storage systems, is not a viable solution because these devices, after 2-3 years, lose their ability to store electricity and the materials employed are polluting, even banned in some countries. The European Union regulation like RoHS 1 and RoHS represent sometimes a real bottleneck. Fortunately in the last time on the market more and more are present electronic passive components like supercapacitors. The Supercapacitors (Electrochemical Double Layer Capacitors - EDLCs) are the promising solution for the future. They do not contain lead or other polluting materials on a side and on another side they are able to storage large quantity of electrical charge. EDLCs have a very long lifespan (> 106 unloading cycles) and very small internal resistance, which allows charging and discharging at very high currents (hundreds of A). Also, another advantage of using EDLCs battery systems in power structures is a decrease of the weight of the entire system. We have simulated and analyzed the behavior of a 100F/12V EDLC system by connecting 6 supercapacitors (600F/2.5V) in series. In this context, using an EDLC system, we have obtained interesting results after the primary power source has been disconnected. The proposed model is in the R&D phase, but the test results are promising. EDLC is a very viable solution for use in a hybrid electric system such as a UPS or electric car.

Keywords: EDLC, Supercapacitor, automotive, Electrical Energy Storage

20 October 2017 | **PS4 15.00-15.30** | **Y106** | Chair: Marian Găiceanu

Prof. Alexandru Bitoleanu, University of Craiova, Romania

Bidirectional Static System for Active D.C. Traction Substations. Theoretical and Experimental Evaluation

Alexandru Bitoleanu, Mihaela Popescu and Constantin Vlad Suru
Electromechanical, Environmental and Applied Informatics Department

Faculty for Electrical Engineering, University of Craiova
Craiova, Romania

Abstract: This paper is focused on the presentation of a active filtering and regeneration system (SISFREG) developed for converting the DC traction substations in active substations. SISFREG will be connected between the catenary-line and the primary of the traction transformer, via a dedicated transformer. The main component of SISFREG is a shunt active power filter based on voltage source inverter structure, whose control guarantees the keeping of the prescribed voltage on the DC-side and the proper current at the inverter output by the indirect control of the supply current. The DC voltage controller is tuned in accordance with the Modulus Optimum criterion and the grid current controller is of hysteresis type. In order to verify the operation of the system and assess its performance, detailed computer simulation studies were conducted using the Matlab/Simulink package. Finally, a laboratory model was designed and build. In order to testing the system and showing its performances, an experimental setup was configured. The experimental results confirmed the good performance of the system during both traction/filtering and regeneration regimes.

Keywords— Active filtering; Recovery braking energy; Active substation

20 October 2017 | **PS5 15.30-16.00 | Y106 |** Chair: Marian Găiceanu

  Prof. Aurel Campeanu, PhD.Eng., University of Craiova, Romania

Specifical Problems into Dynamical Processes of the Permanent Magnet Synchronous Motors

20 October 2017 | **PS6 16.00-16.30 | Y106 |** Chair: Marian Găiceanu

  Prof. Florin Constantinescu, PhD.Eng., "Politehnica" University of Bucharest, Romania

Behavioral models of AlN power BAW resonators and filters

21 October 2017 | **PS7 9.00-9.30 | Y106 |** Chair: Dorel Aiordăchioaie

  Prof. Corneliu Rusu, PhD.Eng., Technical University of Cluj-Napoca, Romania

Recent Developments in Acoustical Signal Classification for Monitoring

Corneliu Rusu, Lacrimioara Grama
Signal Processing Group
Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca
Cluj-Napoca, Romania

 Abstract: In this paper we shall present recent results of two applications for monitoring using acoustical signal classification. The first case study is the problem of context awareness based on acoustic analysis for a service robot. Then we discussed the acoustic classification for wildlife intruder detection. Previous results are briefly recalled and new experimental results are also provided.

Keywords—sound, feature extraction, classifiers, intruder detection

21 October 2017 | **PS8 9.30-10.00 | Y106 |** Chair: Marian Găiceanu

Prof. Andrei Marinescu, PhD.Eng., Development and Testing National Institute for Electrical Engineering - ICMET Craiova, Romania

Wireless Power Transfer - State of the Art

Keywords: Power Electronics, EMC, EV & HEV

21 October 2017 | **PS9 10.00-10.30 | Y106 |** Chair: Marian Găiceanu

Prof. Mihaela Albu, PhD.Eng., "Politehnica" University of Bucharest, Romania

High Reporting Rate Measurements for Smart[er] Grids

Abstract: Emerging power systems require significant changes on all layers - planning, operation, markets. Modern control algorithms need to process information acquired from distributed, synchronized measurement systems, and embedded in data streams with high degree of correlation.

Smart grids operation, including control of the energy flow in active distribution grids (and microgrids) adds more challenges to the control layer. Moreover, multiple measurement approaches are used: on one side, the inherited time aggregation based measurements offered by currently deployed IEDs (SCADA framework), smart meters and other emerging units; while on the other side, large data streams reported by the high-resolution waveform-based monitoring devices like PMUs with fault-recorder functionality.

For example, presently the state estimator constitutes the cornerstone of SCADA since it provides the power system operating situation in consecutive time intervals. The sources of errors that deteriorate the accuracy of a state estimator, beyond the inherent measurement uncertainty, are the limited knowledge of the network model and the energy transfer simplified paradigm in a.c. grids. To cope with these errors is a difficult task: one has firstly to recognize the limits of the approximations, in use for decades and strongly embedded in the standards and regulations, and then to adopt technology already available in the presently ICT-immersed societies.

There are several applications where synchronized data received with high reporting rate must be used together with aggregated data from measurement equipment having a lower reporting rate (complying with power quality data aggregation standards) and the accompanying question is how adequate are the energy transfer models in such cases.

Presently there is a gap between (i) the level of approximation used for modelling the current and voltage waveforms which is implicitly assumed by most of the measurement devices deployed in power systems and (ii) the capabilities and functionalities exhibited by the high fidelity, high accuracy and high number of potential reporting rates of the newly deployed synchronized measurement units.

The talk will address the measurement paradigm in power systems:
• Power system state estimation; system inertia; WAMCS
• Measurement channel quality and models for energy transfer
• Measurement data aggregation; filtering properties;
• Voltage and frequency variability; rate of change of frequency
• IEDs, PMUs, microPMUs,
• Smart metering with high reporting rate (1s);

The presentation provides an overview of these techniques, with examples from worldwide measurement solutions for smart grids deployment

SCIENTIFIC AND TECHNICAL SECTIONS

SS1   *Low complexity methods in recognition technology*
Chair Radu Dogaru
Secretary Bogdan Dumitrascu

1. **Mihai Bucurica, Radu Dogaru, Ioana Dogaru -** *A Low Complexity Method Based on Reaction-Diffusion Transform for Ultrasound Echo-Based Shape Object Classification*
2. **Radu Dogaru, Ioana Dogaru** *- A Low Complexity Solution for Epilepsy Detection using an Improved Version of the Reaction-Diffusion Transform*
3. **Ioana Dogaru, Radu Dogaru -** *Designing Low Complexity Computational Intelligence Modules in FPGA Using High Level Synthesis Tools*
4. **Radu Dogaru, Ioana Dogaru -** *Optimization of GPU and CPU Acceleration for Neural Networks Layers Implemented in Python*
5. **Alin-Gabriel Cococi, Daniel-Mihai Armanda, Radu Dogaru, Ioana Dogaru -** *A Low Complexity Classifier Solution for Mobile Applications Using SFSVC Algorithm*
6. **Daniel-Mihai Armanda, Alin-Gabriel Cococi, Radu Dogaru -** *Complexity Evaluation of Implementing The SVM Algorithm on Mobile Computing Platforms*

SS2   *Change detection in vibrational processes*
Chair Dorel Aiordăchioaie
Secretary Silviu Epure

1. **Dorel Aiordachioaie** *- Aspects of Change Detection in Vibrational Processes Based on Time-Frequency Transforms*
2. **Theodor Dan Popescu, Dorel Aiordachioaie, Mariane Manolescu** *- Change Detection in Vibration Analysis - A Review of Problems and Solutions*
3. **Anisia Culea-Florescu, Mihai Culea, Dorel Aiordachioaie** *- Sparse Paradigm for Change Detection Applications*
4. **Daniela Cioboata, Aurel Abalaru, Dănuț Stanciu, Cristian Logofătu,   Dorel Aiordachioaie** *- Advanced Measurement Systems for Vibration Signals*
5. **Bogdan Theodor , Anamaria Tiron , George Marinescu, Iulian Nacu, Laurentiu Luca, Nicu Roman, Dorel Aiordachioaie** *- A Multi-level Software Solution for Process Monitoring and Diagnossis*

SS3   *Power Electronics and Renewable Energy*
Chair Remus Teodorescu
Co-Chair Ciprian Vlad

1. **Ciprian Vlad, Romeo Paduraru , Silviu Epure, Marian Barbu, Cristinel Dache Victor Cristian Lungu -** *PV Emulation under Commercially Available Programmable DC Voltage Source*
2. **Cristinel Radu Dache, Emil Rosu, Marian Gaiceanu, Romeo Paduraru, Traian Munteanu, Gabriel Frangopol -** *Practical Results on Asynchronous Motor Optimal Control in Field Weakening Regime*
3. **Marian Gaiceanu, Razvan Buhosu, Iulian Ghenea, Cristian Vidan -** *Complete Regenerative Distributed Drive System*

4. **Marian Gaiceanu, Silviu Epure, Cristinel-Radu Dache, Razvan Buhosu, Iulian Ghenea, Cristian Vidan** - *Laboratory Power Inverter Platform for Variable Speed Drive*
5. **Silviu Epure, Ciprian Vlad, Romeo Paduraru** - *Hardware Configuration of DC-DC Converter for Renewable Energies Maximum Conversion*

SS4   Quality and Efficiency for Intelligent Power Systems
Chair Mariana Dumitrescu
Co-Chair Toader Munteanu

1. **Pavel Atănăsoae, Radu Pentiuc -** *The Modeling and Simulation of the Synchronous Generators Connection to the Power System*
2. **Catalin Mihai, Marian Pearsica, Rares Popescu -** *Study Regarding Diagnosis of Electro-Energetics Installations Using Thermo-Vision Cameras*
3. **Ioan Marinescu, Bogdan Botea, Horia Leonard Andrei -** *Critical Infrastructure Risk Assessment of Romanian Power Systems*
4. **Constantin Beiu, Nicolae Golovanov, Radu Porumb, Toader Cornel, Georgeta Buica** - *Power Quality in Relation to the Requirements of Electromagnetic Compatibility*
5. **Mariana Dumitrescu, Gelu Gurguiatu , Toader Munteanu, Daniel Balanuta -** *Trends for Intelligent Power System Technical Evolution*
6. **Mariana Dumitrescu -** *Micro-Networks Technical Approaches - AC versus DC Supply - Consumers Testing*

TS1 - Power Electronics and Electrical Drives
Chair Mihai Octavian Popescu
Co-Chair: Mihaela Popescu
Secretary: Ion Paraschiv

1. **Mihaela Popescu, Alexandru Bitoleanu, Mihaita Linca, Oana Puncea -** *Performance and Limits of Boost Rectifiers with Unity Power Factor*
2. **Ciprian Constantin, Vlad Suru, Mircea Dobriceanu, Gheorghe Eugen Subtirelu -** *Direct Current Control by Constant Frequency Hysteresis Controller in Active Filtering Systems*
3. **Iulian Birou, Calin Rusu, Sorin Pavel, Virgil Maier -** *Comparative Evaluation of Vector Control versus Direct Torque Control for PM-SM drives*
4. **Vladimir Berzan, Iurie Ermurachi -** *High Efficiency AC/DC Power Supply With Single Step Conversion for the Data Centers Powered from the Three-Phase Network*
5. **Valentin Oleschuk, Vladimir Ermuratskii -** *Multi-Inverter Drive with Symmetrical Multilevel Winding Voltage of Transformer during Overmodulation*
6. **Valentin Oleschuk, Vladimir Ermuratskii -** *Modified Schemes of Control and Modulation of Neutral-Point-Clamped Inverters of PV Installation*

TS2 - Data & Signal Processing I
Chair Laurentiu Frangu
Secretary Bogdan Dumitrascu

1. **Marilena Ianculescu, Adriana Alexandru, Maria Gheorghe-Moisii -** *Harnessing the Potential of Big Data in Romanian Healthcare*
2. **Loretta Ichim, Dan Popescu, Silvia Tudorache -** *Combining Efficient Textural Features with CNN – based Classifiers to Segment Regions of Interest in Aerial Images*
3. **Mohamed El-Amine Ouesse, Abdou Ciss Wade, Gora Dieye, Mamoudou Sall, Djibril Diop -** *Mineralogical Characterization of Soil Samples using X-Ray Techniques*
4. **Marilena Ianculescu, Adriana Alexandru , Eleonora Tudora -** *A RFID-Based Tracking Approach for Building Up Smart Solutions for Consumer's Safety*
5. **Abdurrahim Toktas, Mustafa Tekbaş, Ahmet Kayabasi, Enes Yİgİt, Kadir Sabanci, Mehmet Yerlikaya -** *A Generalized Formula in Calculation of the Resonant Frequency of Notch Antenna*
6. **Enes Yİgİt, Ahmet Kayabaşi, Abdurrahim Toktaş, Mustafa Tekbaş and Hüseyin Duysak -** *Millimetre Wave Isar Imaging Technique Based on Sparse Aperture Data Collection*

TS3 - *Control Engineering I*
   Chair Viorel Mînzu
   Secretary Cristinel Dache

1. **Ahmet Dumlu, Kagan Koray Ayten -** *Sensorless Model Reference Adaptive System Control for Mobile Robot*
2. **Kagan Koray Ayten, Ahmet Dumlu, Alirıza Kaleli -** *Real-Time Trajectory Tracking Control for Electric-Powered Wheelchairs Using Model-Based Multivariable Sliding Mode Control*
3. **Krisztián Horváth, Márton Kuslits -** *Optimization-Based Parameter Tuning of Unscented Kalman Filter for Speed Sensorless State Estimation of Induction Machines*
4. **Rafał Parol, Mirosław Parol, Łukasz Rokicki -** *Implementation Issues Concerning Optimal Operation Control Algorithms in Low Voltage Microgrids*
5. **Roushan Rezvani Arany, Antoneta Iuliana Bratcu -** *Robust Control of a Single-Ended Primary-Inductor Converter (SEPIC)*

TS4 - *Control Engineering II*
   Chair Nicolau Viorel
   Secretary Andrei Mihaela

1. **George-Cristian Calugaru, Ionut Cristian Resceanu, Elena-Andreea Dănişor -** *Reachability and Controlability Analysis in Aircraft Control*
2. **Laurentiu Baicu, Laurentiu Frangu, Sergiu Caraman, Mihaela Miron -** *Measurement of the biomass concentration from a bioprocess by image processing techniques*
3. **Viorel Minzu - Optimal Control Using Particle Swarm Optimization**
4. **Laurentiu Luca, George Ifrim, Sergiu Caraman, Emil Ceanga, Ignacio Santin, Ramon Vilanova, Marian Barbu -** *Optimization of the Wastewater Treatment Processes Based on the Relaxation Method*
5. **Viorel Nicolau, Mihaela Andrei, George Petrea -** *Aspects of Image Compression using Neural Networks for Visual Servoing in Robot Control*

TS5 - Circuits and System
    Chair   Horia-Nicolai L. Teodorescu
    Co-Chair Viorel Nicolau
    Secretary Andrei Mihaela

1. **Horia-Nicolai L. Teodorescu, Victor Cojocaru -** *Building Inexpensive Chaotic Sensors with Good Resolution and Precision*
2. **Gabriel Bonteanu -** *A current controlled CMOS current amplifier*
3. **Gabriel Bonteanu, Arcadie Cracan -** *A high-gain programmable current mirror for large bias currents generation*
4. **Cezar-Gabriel Dumitrache, Gabriel Predusca, Liana Denisa Circiumarescu, Nicoleta Angelescu, Dan Constantin Puchianu -** *Comparative study of RIP, OSPF and EIGRP protocols using Cisco Packet Tracer*
5. **Carmen Grigoras, Victor Grigoras -** *Discrete-Time Chaotic Communication System*
6. **Abdullah Balci, Radosveta Sokullu, Mustafa Alper Akkaş -** *Enhancing Performance of M2M Random Access in 3GPP LTE Networks*

TS6 - Electrical Machines and Software Engineering
    Chair Aurel Campeanu
    Co-Chair Ion Voncila
    Secretary Romeo Paduraru

1. **Spunei Elisabeta, Piroi Ion, Anghel Dorian, Piroi Florina -** *The Square Root Method for Terminal Voltage Adjustment in a Self-excited Synchronous Generator*
2. **Ioan Susnea, Goran Hudec, Emilia Pecheanu, Adina Cocu -** *Improved Occupancy-Based Solutions for Energy Saving in Buildings*
3. **Constanta Zoie Radulescu, Delia Mihaela Radulescu, Alexandru Sipica -** *An analysis of the Power Usage Effectiveness metric in Data Centers*
4. **Ion Vlad, Aurel Campeanu, Sorin Enache,Monica-Adela Enache -** *Establishing Electromagnetic Torque in Brushless Direct Current Motors by Numerical Methods*
5. **Aurel Campeanu, Sorin Enache, Ion Vlad and Monica-Adela Enache -** *Operation in asynchronous overload of synchronous motor. Effect of damping windings*

TS7 - Electrical Engineering and Tools
    Chair Gelu Gurguiatu
    Secretary Madalin Costin

1. **Ileana Baran, Marian Costea, Tudor Leonida -** *Power Losses on Overhead Lines under Various Loading Regimes and Weather Conditions*
2. **Iulia Radulescu, Dan Stefanoiu -** *Energy efficiency in buildings using MPC and LQI with Kalman Filtering*
3. **Sergiu Ivas, Madalin Costin -** *Analytic Modeling of Electrothemal Interaction of Surface Progressive Heating by Electromagnetic Induction*

4. **Marius Daniel Calin, Elena Helerea, Gheorghe Anghel** - *Temperature Influence and Measurement Uncertainty on NdFeB Magnetic Characteristics*
5. **Ion Voncila, Ion Paraschiv, Madalin Costin and Mihai Lucian Voncila** - *Behavior of SRM with saturated cores during load operation. Fractal analysis*
6. **Horia Balan, Mircea I. Buzdugan and Radu A. Munteanu** - *Modeling and Simulation of DC Resonant Circuit Breakers*

TS8 - Industrial Applications
   Chair Ciprian Vlad
   Secretary Cristinel Dache

1. **Susana Arad, Adrian Bogdan Simon, Liliana Samoila -** *Dedicated Software Used in Monitoring the Potentially Explosive Gases within the Underground Hydrotechnical Works*
2. **Susana Arad, Adrian Bogdan Simon, Liliana Samoila -** *Monitoring Systems in Explosive and Potentially Toxic Environments for Reducing Risk Factors*
3. **Spunei Elisabeta, Piroi Ion, Piroi Florina -** *Computer-Based Diagnosis for Electric Power Supply in Train Traffic Installations*
4. **Ionel Lepadat, Elena Helerea, Sorin Abagiu, Catalin Mihai -** *Losses in Power Supply System of Industrial Consumers – A Technical and Economic Issue*
5. **Mihai Cenusa, Mihaela Poienar, Sergiu Pata -** *System for Stress Level Monitoring*
6. **Ana Ruxandra Toma, Cristina Mihaela Gheorghe, Floriana Larisa Neacsu, Ana-Maria Dumitrescu -** *Conversion of smart meter data in user-intuitive carbon footprint information*

TS9 - Electronic Components, Devices and Intelligent Systems
   Chair: Laurentiu Frangu, Rusu Corneliu
   Secretary: Nicusor Nistor

1. **Cristian Ravariu, Florin Babarada, Dan Mihaiescu, Elena Manea, Mihai Idu, Laurentiu Vladoianu -** *Vertical Variants of PIN and NOI Tunnel Electronic Devices and Potential Applications*
2. **Teodor-Catalin Bibirica, Cristian Sandu, Lucian Ene, Mihai Iordache -** *Improving the Performance of PCB Inductors for WPT Systems using Magnetic Shields*
3. **Ioana-Cornelia Gros, Daniel Fodorean, Ignat Calin Marginean -** *FPGA Real-Time Implementation of a Vector Control Scheme for a PMSM used to propel an Electric Scooter*
4. **Valeriu Bostan, Ana-Maria Dumitrescu, Ana Ruxandra Toma, Tiberiu Tudorache, Sanda Victorinne Paturca, Ionel Bostan -** *Performance Analysis of Polycrystalline and CIS Thin-Film PV Panels in Real Operation Conditions*
5. **Cristina Nichiforov, Iulia Stamatescu, Ioana Făgărăşan, Grigore Stamatescu -** *Energy Consumption Forecasting Using ARIMA and Neural Network Models*
6. **Runze Ma, Peng Yu State, Minxiang Huang -** *Spatial Load Forecasting Based on Unstructured Information Processing and Multi - attribute Deep Learning*

TS10 - Data & Signal Processing II
   Chair Radu Dogaru
   Co-Chair: Viorel Nicolau
   Secretary: Andrei Mihaela

1. **Angela Digulescu-Popescu, Ion Candel, Cornel Ioana -** *Time of flight estimation in multi-path dispersive configuration using compressive sensing reconstruction in the warped domain*
2. **Stefanut Ciochina, Mirela Praisler, Marian Coman -** *Hierarchical Cluster Analysis Applied for the Automated Recognition of Psychoactive Substances and of Their Main Precursors*
3. **Fırat Bilgin, Mehmet Kuntalp -** *Paroxysmal Atrial Fibrillation Screening by Ensemble Learning*
4. **Mihaela Miron, Laurentiu Frangu, Sergiu Caraman -** *Fault Detection Method for a Wastewater Treatment Process based on a Neural Model*
5. **Mirela Praisler, Stefanut Ciochina, Marian Coman -** *Screening for Illicit Psychoactive Drugs Based on Pattern Recognition Methods*

CONFERENCE ROOM MAP

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