

<b>Location</b> <b>Hours</b>	University of Craiova – <a href="#">Faculty of Mechanics (Str. Calea Bucuresti 107, Craiova)</a> and <a href="#">INCESA – Research hub in applied science (Decebal Blv. 107, Craiova)</a>			
<b>Thursday, October 24</b>				
9:00-10:00	<b>Registration of participants / location Aula Magna lobby – <a href="#">Faculty of Mechanics (Str. Calea Bucuresti 107, Craiova)</a></b>			
10:00-10:30	<b>Opening ceremony / location Aula Magna – <a href="#">Faculty of Mechanics (Str. Calea Bucuresti 107, Craiova)</a></b>			
10:30-11:00	<i>Coffee Break</i>			
11:00-13:00	<b>Plenary session / location Aula Magna – <a href="#">Faculty of Mechanics (Str. Calea Bucuresti 107, Craiova)</a></b> Plenary talks: P1, P2, P3, P4 Session chairs: <b>Maria Brojboiu</b> <b>Lucian Mandache</b>			
13:00-14:30	<b>Lunch /location <a href="#">Emma Est Hotel (Str. Calea Bucuresti 82A, Craiova)</a></b>			
<b>Regular sessions</b>				
	<b>Room A (<a href="#">Room 110 INCESA</a>)</b>	<b>Room B (<a href="#">Room 301 INCESA</a>)</b>	<b>Room C (<a href="#">Room 321 INCESA</a>)</b>	<b>Room D (<a href="#">Room 113 INCESA</a>)</b>
15:00-17:00	<b>PES (1)</b> Paper ID: 37; 113; 114; 116; 61 Chairs: <b>Leonardo-Geo Manescu</b> <b>Désiré D. Rasolomampionona</b>	<b>IAPP (1)</b> Paper ID: 34; 74; 72; 73; 78 Chairs: <b>Elena Helerea</b> <b>Ioan Popa</b>	<b>CS (1); ECEMB; MG</b> Paper ID: 36; 85; 93; 50; 98 Chairs: <b>Jolanta Karpowicz</b> <b>Tiberiu Tudorache</b>	<b>Conference Desk</b>
17:00-17:15	<i>Coffee Break</i>			
17:15-19:15	<b>PES (2)</b> Paper ID: 46; 57; 64; 94; 99 Chairs: <b>Denisa Rusinaru</b> <b>Paul-Mihai Mircea</b>	<b>IAPP (2)</b> Paper ID: 92; 88; 89; 109 Chairs: <b>Dorin Lucache</b> <b>Maria Brojboiu</b>	<b>CSYS</b> Paper ID: 43; 81; 82; 47; 70 Chairs: <b>Svilen Rachev</b> <b>Ioana-Gabriela Sirbu</b>	<b>Poster session (1)</b> Paper ID: 35; 105; 110; 76; 87; 104 Chairs: <b>Gheorghe-Eugen Subțirelu</b> <b>Radu-Cristian Dinu</b>
20:00	<i>Gala Dinner – The taste of local tradition. <a href="#">Restaurant Casa Ghincea (Madona Dudu Str. 31, Craiova)</a></i>			
<b>Friday, October 25</b>				
09:00-11:00	<b>EMD</b> Paper ID: 59; 60; 106; 40; 83; 79; 103 Chairs: <b>Remus Pusca</b> <b>Mircea Rădulescu</b>	<b>CS (2)</b> Paper ID: 75; 53; 41; 115 Chairs: <b>Mihai Iordache</b> <b>Dragos Niculae</b>	<b>Hybrid session (1)</b> Paper ID: 42; 48; 49; 69; 71 Chairs: <b>Alin-Iulian Dolan</b> <b>Petre Negrea</b>	<b>Conference Desk</b>
11:00-11:15	<i>Coffee Break</i>			
11:15-13:15	<b>PES (3)</b> Paper ID: 67; 80; 101; 112 Chairs: <b>Mihaela Popescu</b> <b>Mihăiță Lincă</b>	<b>EETS</b> Paper ID: 90; 91; 95; 96; 65; 66; 108 Chairs: <b>Alexandru-Nicolae Tudosie</b> <b>Jenica-Ileana Corcau</b>	<b>Hybrid session (2)</b> Paper ID: 56; 63; 107; 102; 68 Chairs: <b>Ionel-Laurentiu Alboteanu</b> <b>Cosmin Buzatu</b>	<b>Poster session (2)</b> Paper ID: 31; 86; 97; 100; 111 Chairs: <b>Dan-Gabriel Stănescu</b> <b>Felicia-Elena Stan Ivan</b>
13:15-14:45	<b>Lunch /location <a href="#">Emma Est Hotel (Str. Calea Bucuresti 82A, Craiova)</a></b>			
15:00	Departure to Dragasani – Vila Dobrusa AVINCIS vineyard. <i>Meeting point:</i> <a href="#">Emma Est Hotel (Str. Calea Bucuresti 82A, Craiova)</a>			
<b>Saturday, October 26</b>				
10:00-12:00	Research facilities in Electrical Engineering – Guided tour			
12:00-12:30	Closing Ceremony			

## Plenary session

- P1 Désiré Dauphin RASOLOMAMPIONONA – Warsaw University of Technology, Poland: *EVOLUTION OF ELECTRICAL POWER PROTECTION AND CONTROL*
- P2 Remus PUSCA<sup>1</sup>, Mouad TALBAOUI<sup>1</sup>, Younes AZZOUG<sup>1</sup>, Sebastien RAMEL<sup>2</sup>, Eric LEFEVRE<sup>2</sup>, Raphael ROMARY<sup>1</sup> – <sup>1</sup>Univ. Artois, UR 4025, Laboratoire Systèmes Electrotechniques et Environnement (LSEE); <sup>2</sup>Univ. Artois, UR 3926, Laboratoire de Génie Informatique et d'Automatique de l'Artois (LGI2A), Béthune, France: *DIAGNOSIS OF ROTATING ELECTRICAL MACHINES BY MAGNETIC FIELD ANALYSIS: PRINCIPLES AND CHALLENGES*
- P3 Nicolae GROSS – Continental Automotive Systems, Sibiu, Romania: *ELECTRONIC COMPONENT QUALIFICATION FOR THE AUTOMOTIVE INDUSTRY*
- P4 Dorin D. LUCACHE, Elena SEREA – Gheorghe Asachi Technical University of Iasi, Romania: *MODERN APPROACHES IN LIGHTING: THE LED ERA*

## Regular sessions

### Paper ID PES – Power and Energy Systems (1)

- 37 Laurențiu-Alex Mustață\*, Gheorghe-Dan Sorea, Elena Helerea – *Energy Management Strategy with a Hybrid Renewable Energy System for a Standalone House*
- 113 Leonardo-Geo Mănescu\*, Claudiu Coman, Gabriela Motoi, Elena Maria Calotă, Alexandrina Mihaela Popescu, Valeri Viorel Sitnikov – *Challenges Related to Renewable Production and Electric mobility. Part I - Analysis, Solutions and Techno-Sociological Perspectives*
- 114 Leonardo-Geo Mănescu\*, Claudiu Coman, Gabriela Motoi, Elena Maria Calotă, Alexandrina Mihaela Popescu, Valeri Viorel Sitnikov – *Challenges Related to Renewable Production and Electric Mobility. Part II - Practical Recommendations for Capitalizing the Findings of a Sociological Research on Electric Vehicles and Photovoltaic Panels Integration*
- 116 Jerzy Majcher, Marek Pronobis, Józef Sołtys, Andrzej Strupczewski, Désiré D. Rasolomampionona\* – *The Unobvious Meanders of the Green Energy Transformation and its (Un)predictable Consequences, or the Utopia of the "Net Zero" Policy*
- 61 Osmel Pérez Baluja\*, Bernardo Yaser León Ávila, Carlos A. García Vázquez, Daniel Tudor Cotfas, Petru Adrian Cotfas, Orly E. Torres Breffe – *SPD Miscoordination in PV Systems Due to Lightning Strikes*

### PES – Power and Energy Systems (2)

- 46 Silvia-Maria Digă\*, Nicolae Digă, Paul-Mihai Mircea, Ion Pătru, Cristian Bratu, Livia Andreea Dina – *Some Considerations on the Dimensioning of Ancillary Service Transformers of Power Plants*
- 57 Anca Petruța Brîncoveanu, Ana-Maria Dumitrescu\* – *Embedded Application for Power Flow Variability Assessment*
- 64 Andreea-Mihaela Călin (Comșit)\*, Daniel Tudor Cotfas, Petru Adrian Cotfas – *Design and Implementation of a Remote Controlled Emulator for Standalone PV Systems*
- 94 Ionut Ciobanu\*, George Cristian Lazaroiu, Michele Quercio, Mariacristina Roscia – *Energy Community for Condominium Members*
- 99 Denisa Rușinaru\*, Gabriel Cosmin Buzatu, Paul Mihai Mircea, Leonardo Geo Manescu, Cristian Bratu, Miron Alba – *Application of Power Quality Monitoring for Disturbance and Fault Diagnosis in a Ski Lift Power Supply Installation*

### PES – Power and Energy Systems (3)

- 67 Nesrine Merabti\*, Daniel Tudor Cotfas, Petru Adrian Cotfas – *Enhancing Photovoltaic Efficiency: Optimal Tilt Angle Estimation Using Advanced Machine Learning Techniques*
- 80 Claudiu Solea, Corina Hera\*, Adrian Florea, Daniel Morariu, Dorel Stanescu, Maria Vintan – *A Comparative Study on Prosumers Load Demand and Production Forecasting using Machine Learning and Time Series Techniques*
- 101 Cristian-Eugeniu Sălceanu\*, Daniela Iovan, Mihai Ionescu, Daniel-Constantin Ocoleanu, Ștefan Șeitan – *Analysis on the Behaviour of 36 kV, 10 kA Pre-failed Polymer Surge Arrester at Short-Circuit Current*
- 112 Ileana-Diana Nicolae, Denis Andrei Firulescu, Petre-Marian Nicolae, Marian-Ștefan Nicolae\*, Cristina-Diana Marinescu – *Multi-parameter Analysis of Active Energy Consumptions in a Municipal Hospital*

**Paper ID IAPP – Industrial Applications (1)**

- 34 Alexandru Iacob\*, Cristina Stancu, Petru Notingher – *Calculation of the Lifetime of Car Alternators*
- 74 Bogdan Hnatiuc\*, Sorin Sinteza, Mihaela Hnatiuc – *Electric Diagram for the Study of Series Electric Arcs Fault*
- 72 Sorin Sinteza, Bogdan Hnatiuc\*, Mihaela Hnatiuc, Florin Nicolescu, Catalin Pomazan, Valentina Pomazan – *Analyzing Analog Signal Transmission over Optical Fibers using Pulse Width Modulation*
- 73 Sorin Sinteza\*, Cornel Panait, Bogdan Hnatiuc, Mihaela Hnatiuc, Florin Nicolescu, Catalin Pomazan – *Proactive Monitoring and Protection of Battery*
- 78 Eliza Maria Olariu\*, Horia Hedesiu – *Artificial Intelligence and Machine Learning using NI AutoML in Industry - Case Study: Simulated Waveforms*

**IAPP – Industrial Applications (2)**

- 92 Ionel-Laurențiu Alboteanu\*, Mircea Adrian Drighiciu, Ecaterina Maria Drighiciu – *Automatic System for Compacting Metal Waste*
- 88 Hristache Isac\*, George Cristian Lazaroiu, Vlad Mocanu – *Optimizing Underwater Imaging through Wavelength Adjustment of Light Sources: A Case Study at the Black Sea using EPS Vision 1712*
- 89 Dan Ion Circiumarescu, Andrei Marinescu\* – *A History of the Romanian Transformer Designed, Manufactured and Tested at ELECTROPUTERE Craiova*
- 109 Dan-Gabriel Stănescu\*, Ioana-Gabriela Sîrbu, Alexandru Vanvu, Mircea-Emilian Ardeleanu, Lucian Mandache, Mihai Iacob – *Aspects Regarding the Testing of an ONAN Distribution Transformer with a Special Construction*

**Paper ID EMD – Electrical Machines and Drives**

- 59 Ahmed Belkhadir\*, Remus Pusca, Raphaël Romary, Driss Belkhat, Youssef Zidani, Youcef Ait-Amirat, Abdoul N'Diaye, Abdesslem Djerdir – *Enhanced Backstepping Approach for Diagnosis and Passive Fault Tolerant Control of External Rotor PMSM*
- 60 Riyad Jbayli\*, Younes Azzoug, Romain Cousseau, Remus Pusca, Raphael Romary – *Disturbance Observer and Adaptive Robust Control for PMSM Drive using MRAS-based Parameters Estimation*
- 106 Tudor Mătușa\*, Mihaela Popescu, Alexandru Bitoleanu, Constantin Vlad Suru – *Behavior of a Traction Induction Motor with Rotor Flux-Oriented Control*
- 40 Cristian-Eugeniu Sălceanu, Daniel-Constantin Ocoleanu\*, Daniela Iovan, Mihai Ionescu, Ștefan Șeitan, Cătălin Boltașu – *Experimental Study of the Behaviour of Distribution Transformers Under Short-Circuit Conditions*
- 83 Mircea M. Radulescu\* – *Electromechanical Transient Process in a Three-Phase Cage Induction Motor due to Sudden Step Change in Supply Voltage Frequency*
- 79 Madalin Costin\*, Ion Bivol – *From Model Predictive Control to Data Driven Control to Meet High Efficiency Objective of a PMSM Drive System*
- 103 Mihăiță Lincă, Constantin Vlad Suru\*, Mihaela Popescu, Alexandru Bitoleanu – *Rotor Field Quasi-Oriented Control Algorithm Implementation for Railway Traction Systems on dSPACE DS1103*

**Paper ID CS – Circuits and Systems (1)  
ECEMB – Electromagnetic Compatibility and Engineering in Medicine and Biology  
MG - Magnetics**

- 36 Ana-Maria Moldovan\*, Mircea Ion Buzdugan – *Development of a Time Domain Reflectometer Application Using Matlab/Simulink for Detecting Faults in Electrical Cables*
- 85 Tiberiu Tudorache\*, Andrei Marinescu, Adrian Vintilă – *Electromagnetic Locking/Releasing System for UAVs Wireless Charging Stations*
- 93 Jolanta Karpowicz\*, Simona Miclaus – *Parameterisation of the Impact Caused by a 'Salt Tower' on the Electromagnetic Landscape*
- 50 Svilen Rachev\*, Yanko Takavidov – *Specificity of the Behavior of a Newly Designed Traction Electric Motor for Driving Electric Vehicle*
- 98 Ioana-Gabriela Sîrbu\*, Lucian Mandache – *Mathematical Aspects on the Phase Shift Network of RC Oscillators*

## CS – Circuits and Systems (2)

- 75 Mihaela Popescu, Marilena Stănculescu, Mihai Iordache, Lavinia Bobaru\*, Dragoș Niculae, Mihaela Grib – *Computing the Parameters of the Impedance Circuit Matching*
- 53 Dragoș Niculae\*, Mihai Iordache, Marilena Stănculescu, Lavinia Bobaru, Adrian Georgescu, Victor Bucata – *Computer Aided Design of Two-Element Matching Network Using the ZY Smith Chart*
- 41 Ovidiu Lăudatu, Marilena Stănculescu, Mihai Iordache, Lavinia Bobaru\*, Dragoș Niculae, Mihai Rotaru – *Design Considerations for Switched-Mode Power Supplies with Capacitive Coupling*
- 115 Ioana-Gabriela Sirbu\*, Lucian Mandache, Dan-Gabriel Stănescu, Mircea-Emilian Ardeleanu – *Mathematical Considerations Regarding the Maximum Power Transfer in Inductive Power Transfer Circuits*

Paper  
ID

## EETS – Electrical Engineering in Transportation Systems

- 90 Andra-Adelina Cucu, Jenica-Ileana Corcău\*, Liviu Dincă – *Towards Sustainable Aviation: Utilizing Range Equations to Optimize Hybrid-Electric Aircraft Propulsion System*
- 91 Liviu Dincă\*, Jenica-Ileana Corcău – *Simplified Scheme for Longitudinal Control of an Airplane UAV*
- 95 Alexandru-Nicolae Tudosie\* – *Study of an Aircraft Twin-Spool Single-Jet Turbo-Engine as Controlled Object*
- 96 Alexandru-Nicolae Tudosie\* – *Mechanically Driven Pump versus Electrically Driven Pump for Fuel Systems of Jet Engines*
- 65 Romulus Lungu, Constantin Adrian Mihai\* – *Dynamic and Adaptive Control of Monoaxial GS with GAR. Part 1: Obtaining the Nonlinear Dynamic Model*
- 66 Romulus Lungu, Constantin Adrian Mihai\* – *Dynamic and Adaptive Control of Monoaxial GS with GAR. Part 2: Control Architecture Design and Validation*
- 108 Mircea Stefan Mustata, Petre Negrea\*, Daniel Tiganiuc, Alin Niculescu – *A Low-Cost Baro-Altitude Model with Piezoresistive Sensor and Commercial Off-the-shelf Components*

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## CSYS – Control Systems

- 43 Bernardo Yaser León Ávila\*, Carlos Alberto García Vázquez, Osmel Pérez Baluja, Marian Alexandru, Daniel Tudor Cotfas, Petru Adrian Cotfas, Luis Alberto Quintero Domínguez – *Protothread and Cooperative Multitasking Scheduler on the Arduino Framework*
- 81 Radu-Andrei Vaduva, Florina-Luminita Petcu\*, Stefan-Irinel Cismaru, Ionut-Cristian Resceanu, Florin-Alexandru Dita, Nicu-George Bizdoaca – *Control System using Shape Memory Alloy for a 3D Printed Robotic Arm*
- 82 Stefan-Irinel Cismaru, Florina-Luminita Petcu\*, Ionut-Cristian Resceanu, Horatiu Roibu, Andrei-Costin Trasculescu, Cristina-Floriana Pana, Nicu-George Bizdoaca – *Mixed Reality Application in Robot Navigation and Control*
- 47 Ștefan Nicolescu\*, Aurelian Sarca – *A Simple Method to Increase Resolution of Trajectory Parameters for 2-DOF Systems Operating in Cyclic Synchronous Position Mode*
- 70 Carlos Alberto García Vázquez\*, Daniel Tudor Cotfas, Petru Adrian Cotfas, Ana Isabel González Santos, Bernardo Yaser León Ávila, Osmel Pérez Baluja – *Simulation Algorithms for Dynamic Models. Case Study: AHU Control*

**Paper ID** **Poster session (1)**

- 35 Radu Cristian Dinu\*, Felicia Elena Stan Ivan, Adelaida Mihaela Duinea, Florin Ravigan – *Modeling and Simulation of the Variation of the Thermal Flux Yielded by a Medium Temperature Radiant Panel Using Matlab - Simulink*
- 105 Gheorghe-Eugen Subțirelu\*, Petre Pistol, Adrian Vintilă, Cosmin Ionuț Toma – *Digital System for High Power Synchronous Motor Excitation Control*
- 110 Alin-Iulian Dolan\* – *Optimization by Zooms without and with Second-Order Polynomial Models Applied to a 2-D Simulation*
- 76 Vladimir Zinoviev\*, Silviya Nikolova, Dimitrina Koeva – *The economic potencial of the vehicle to the grid*
- 87 Silviu-Marian Antohi\*, Dorin-Dumitru Lucache, Maricel Adam, Alin Dragomir, Stefan-Andrei Nadabaica, Alexandra Bodoga – *Digital Settings of Low Voltage Circuit Breakers*
- 104 Cosmin-Ionut Toma\*, Mihaela Popescu, Mihăiță-Daniel Constantinescu, Gheorghe-Eugen Subțirelu – *Wireless Communication for SCADA System of a Railway Electrical Substation*

**Poster session (2)**

- 31 Daniel Lale, Claudia Săvescu\*, Mihai Borzea, Mihaela Roman, Teodor Stănescu, Daniel Ușeriu, Adrian Săvescu, Remus Stoica, Cristian Nechifor – *Automation System for Testing Air Turbine Starters for Naval Gas Turbines*
- 86 Maria-Cristina Nițu\*, Ancuța-Mihaela Aciu, Aurelia Iuliana Scorenea – *Regeneration of Waste Oils in Electrical Equipment in Accordance with EU Regulations*
- 97 Maria-Cristina Nițu\*, Ancuța-Mihaela Aciu, Marcel Nicola, Claudiu-Ionel Nicola – *Transformer Fault Detection Using DGA Based on Three Ratio Technique and Random Forest Algorithm*
- 100 Felicia Elena Stan Ivan\*, Radu Cristian Dinu, Adelaida Mihaela Duinea – *Modeling and Simulation of Unit Heat Flux and Temperatures for a Multilayer Wall using Ansys*
- 111 Marian-Cosmin Bușe, Petre-Marian Nicolae\* – *Study of Biconical Antenna Behavior Using CST Software*

**Paper ID** **Hybrid session (1)**

- 42 Umut Kose\*, Mesut Kartal – *A Low-Cost Microwave Hybrid Biosensor for Glucose Concentration Sensing*
- 48 Georgi Pashkulski, Marin Zhilevski\*, Mikho Mikhov – *Device for Passive Rehabilitation of Knee and Hip Joints with an Arduino Microcontroller*
- 49 Nikolay Yordanov, Marin Zhilevski\*, Mikho Mikhov – *Fault Detection in Electric Motors using Acoustic Signals and Image Classification*
- 69 Andrei-Daniel Olteanu, Ștefan Gheorghe, Paula Angheliță\* – *Exploring the Impact of Shading on the Efficiency of Photovoltaic Panels - Part I*
- 71 Andrei-Daniel Olteanu, Ștefan Gheorghe, Paula Angheliță\* – *Exploring the Impact of Shading on the Efficiency of Photovoltaic Panels - Part II*

**Hybrid session (2)**

- 56 Ion Voncilă\*, Nicolae Badea, Ion Paraschiv, Elena Selim – *A New Approach to Energy Efficiency Evaluation of Induction Motor*
- 63 Andrei Buzdugan, Jenica-Ileana Corcău\*, Liviu Dincă – *Powering a UAV System Using Photovoltaic Technology*
- 107 Elena-Denisa Burada\*, Mihaela Popescu, Tania Nicoară, Viorica Voicu, Ionel Dumbravă – *Evaluation of Corona in Partial Discharge and Radio Interference Measurement Circuits*
- 102 Oleg Stiopca\*, Victor Popescu – *Development of Electrochemical Method and Unit for the Final Treatment of Carpet Dyeing Production Wastewater*
- 68 Denys I. Zaikin\* – *Extracting Small-Signal Models of Power Converters Using Time-Domain Step Response Simulation in SPICE*