

## Thursday, November 07<sup>th</sup>

8<sup>00</sup>-9<sup>00</sup> Registration – Main Lobby of the Congress Centre – B-dul V. Pârvan No.2b

09<sup>00</sup> -09<sup>30</sup> Opening Plenary Session – Auditorium Conference Room of the Congress Centre - B-dul V. Pârvan No.2b

- Welcome speech – Conf. PhD. Eng. Florin DRAGAN, Rector Politehnica University Timisoara
- Welcome speech - Prof. PhD. Eng. Catalin-Daniel CALEANU, Chair of ISETC24

09<sup>30</sup> -11<sup>30</sup> **Plenary Speakers** – Auditorium Conference Room of the Congress Centre, - B-dul V. Pârvan No.2b

11<sup>30</sup> -14<sup>00</sup> Lunch Break

14<sup>00</sup> -16<sup>00</sup> **Parallel Sessions** – Multifunctionala Conference Room – Central Library, Conference Room K1 of the Congress Centre, Conference Room K2 of the Congress Centre, DeL room C401, A116 Room Faculty of Electronics, Telecommunications and Information Technologies - B-dul V. Pârvan No.2

13<sup>00</sup> -18<sup>30</sup> **Workshop IPCEI**, UPT + Continental + NXP, Auditorium Conference Room of the Congress Centre, - B-dul V. Pârvan No.2b

16<sup>30</sup> -18<sup>30</sup> **Parallel Sessions** – Multifunctionala Conference Room – Central Library, Conference Room K1 of the Congress Centre, Conference Room K2 of the Congress Centre, A116 Room Faculty of Electronics, Telecommunications and Information Technologies - B-dul V. Pârvan No.2

19<sup>00</sup>-23<sup>00</sup> Gala Diner - Restaurant-Casa Politehnicii 2, B-dul Eminescu No.11

## Friday, November 08<sup>th</sup>

09<sup>00</sup> -11<sup>00</sup> **Parallel Sessions** - Auditorium Conference Room of the Congress Centre, Conference Room K1 of the Congress Centre, Conference Room K2 of the Congress Centre, DeL room C401, A116 Room Faculty of Electronics, Telecommunications and Information Technologies - B-dul V. Pârvan No.2

11<sup>00</sup> -11<sup>30</sup> Coffee Break

11<sup>30</sup> -13<sup>30</sup> **Parallel Sessions** - Conference Room K1 of the Congress Centre, Conference Room K2 of the Congress Centre, DeL room C401, - B-dul V. Pârvan No.2b

13<sup>30</sup> -14<sup>00</sup> **Award and closing ceremony**, Auditorium Conference Room of the Congress Centre, - B-dul V. Pârvan No.2b

### Thursday, November 07<sup>th</sup>

08<sup>00</sup>-09<sup>00</sup> Registration – Main Lobby of the Library – B-dul V. Pârvan No.2b

09<sup>00</sup> -09<sup>30</sup> **Opening Session** – Auditorium Conference Room of the Congress Centre

- Welcome speech - Conf. PhD. Eng. Florin DRAGAN, Rector of the Politehnica University Timișoara
- Welcome speech - Prof. PhD. Eng. Catalin-Daniel CALEANU, Chair of ISETC24, Politehnica University Timișoara

09<sup>30</sup> -11<sup>30</sup> **Plenary Speakers** – Auditorium Conference Room of the Congress Centre, - B-dul V. Pârvan No.2b

Chairmen:

Assoc.Prof.PhD.Eng. Raul IONEL & Prof. PhD. Eng. Catalin-Daniel CALEANU & Assoc.Prof.PhD.Eng. Vlad MIHAESCU – Politehnica University Timișoara

1. 09<sup>30</sup> - **Sabin TOTOREAN** - NOKIA Country Senior Officer, **Digital acceleration toward the quantum era.**
2. 10<sup>10</sup> - **Jeremy McCLAIN**, Global VP and Head of Systems & Software Business - Business Area Autonomous Mobility at CONTINENTAL, Frankfurt, Germany, **From ADAS to Full Autonomy.**

3. **10<sup>50</sup> - Pavol BAUER** - Department of Electrical Sustainable Energy of Delft University of Technology, Delft, the Netherlands, **Energy Hubs – Basic Building Block for Energy Transition.**

**11<sup>30</sup> -14<sup>00</sup> Lunch Break**

**14<sup>00</sup>-16<sup>00</sup> Parallel Afternoon Sessions – Multifunctionala Conference Room – Central Library**

### **Artificial Intelligence and Computer Vision (AICV)**

Chairmen:

Prof. PhD. Eng. Cătălin-Daniel CALEANU

Prof. PhD. Eng. Cosmin ANCUTI

**1. Technical presentations from MAGNA**

Alexandru ARION, Principal Engineer, Thermal dept., **Thermal Vision in Automotive**

**2. Technical presentations from EVIDEN**

Dragos IONESCU, Vision AI Operations Quality Inspector, **End-to-end Quality Control with AI**

**3. TMBuD-v2: A Multi-Purpose Urban Landmark Detection Dataset**

Ciprian Orhei; Muguraş Mcofan; Silviu Vert and Radu A. Vasiu

**4. Early Identification of Potato Fields Using Data Fusion and Artificial Neural Network**

Kamal Marandskiy; Mihai Ivanovici

**5. Identifying Developer Positions in AGILE Projects Using BERT Architecture**

Traian R Plosca; Bianca V Rus; Alexandru M Pescaru; Daniel Curiac

**6. Quantitative Analysis of Vegetation Indices as Discriminators Between Different Crop Categories**

Andreea Nitu; Corneliu Florea; Mihai Ivanovici

**14<sup>00</sup>-16<sup>00</sup> Parallel Afternoon Sessions – Conference Room K1 of the Congress Centre**

### **Instrumentation and Measurement (IM)**

Chairmen:

Prof. PhD. Eng. Aldo De SABATA,

Assoc. Prof. PhD. Eng. Andrei SILAGHI

Prof. PhD. Eng. Ladislau MATEKOVITS

**1. Technical presentations from FLEX**

Marin MIHAI, Industrial Engineering Manager, **Intelligent SMT Line: Automation and AV Integration**

**2. Technical presentations from HAMILTON**

Dragos MUNTEANU, R&D Team Leader, **Advanced Stirring and Pipetting Techniques in Bioplastics Research**

**3. Assessment of LPDDR4 Interface Performance in an Automotive Product Through High-Speed Simulation**

Catalin Pescari; Andrei Silaghi; Andrei Neiconi; Aldo De Sabata

**4. Innovative HV Measurement: Noninvasive Digital Tester (NDT) for Enhanced EV Diagnostics**

Dumitru- Daniel Bonciog; Ionica Nicolae; Bogdan Cirstinoiu; Valentin-Ioan Maranescu

**5. Enhancing Audio Performance: Noise Reduction and Efficiency in Class AB Amplifier Design**

Dumitru- Daniel Bonciog; Bogdan-Flavius Komlosi; Valentin-Ioan Maranescu

**6. Real-Time GPS Mapping and Tracking Tool for Enhanced Radio Network Topology**

Irinel Cracan; Emil Sorecau; Mirela Sorecau; Paul Bechet

**14<sup>00</sup>-16<sup>00</sup> Parallel Afternoon Sessions** – Conference Room K2 of the Congress Centre

**Telecommunications (TC) - Antennas and Satellites**

Chairmen:

Prof. PhD. Eng. Florin ALEXA

S.L. PhD. Eng. Cornel BALINT

**1. Technical presentations from DELTATEL**

Mihai NOHAI, Training Manager, **Telecom specialist - from 0 to performance**

**2. Technical presentations from LASTING**

Ionel PETRUT, CTO Lasting Software, **5G Non-Terrestrial Networks: Opportunities and Challenges for the Future of Connectivity**

3. **The Comparative Study Between I and L Dipole Antenna Topologies for Space Application**  
Saïah Bekkar-Djelloul-Saïah; Belgacem Wahiba; Boualem Nasri; Amine Bab; Djamel Eddine Baba Hamed; ALI Kaddouri
4. **Ultra-Compact Implantable MIMO Antenna with Radiation Pattern Diversity for Scalp-Based Implants**  
Amine Essa and Eqab Almajali; Rony E. Amaya; Muhammad Ikram; Soliman Mahmoud
5. **A Quality-Improving Method for APT-Type NOAA Meteorological Satellite Signal**  
Mate Marton Mezei; Zsolt Alfred Polgar
6. **Sensitivity to Measurement Errors of an L-Shaped Phase Array for 3D Localization in Inter-Satellite Links**  
Botond Sandor Kirei; Ovidiu Ratiu
7. **NTN Agent for System Information Block SIB19**  
Ionel Petrut; Raul Iacoban; Ciprian Badescu; Roberto Rosca; Cornel Balint

**14<sup>00</sup>-16<sup>00</sup> Parallel Afternoon Sessions – DeL room C401**

### **Open Education, Open Science and Emerging Technologies**

Chairmen:

Prof. PhD. Eng. Radu VASIU

Assoc Prof. PhD. Eng. Silviu VERT

1. **A Learning Experience Platform for a Technical University**  
Vlad Mihaescu; Gabriela Gheta
2. **Learning Strategies: Experimental Modeling of Laplacian Electric Fields and Their Correlation to Kirchhoff's Laws in Physics**  
Beatrice Arvinti
3. **Teach to Reach Younger Students by "Electronics"**  
Marllene Daneti

**4. A Python-Based Real Estate Rental Application for Students: Leveraging Open Data and Visualization to Enhance Housing Decisions**

Andrei Sebastian Nicula

**5. Improving the Elective Courses Selection Process by Extending an Educational Platform**

Dumitru Danică; Andrei Ternauciuc

**14<sup>00</sup>-16<sup>00</sup> Parallel Afternoon Sessions – Room A116, Faculty of Electronics, Telecommunications and Information Technologies**

**Signal Processing (SP)**

Chairmen:

Prof. PhD. Eng. Corina NAFORNITA

Prof. PhD. Eng. Constantin PALEOLOGU

**1. An Ultrareliable Low Computational Method for Detecting the Direction of Emergency Vehicle Sirens Based on an Array of Microphones**

Valentin Adrian Nita; Vasilica Daniela Nita

**2. A Data-Reuse Regularized Recursive Least-Squares Adaptive Filtering Algorithm**

Radu Otopeleanu; Laura-Maria Dogariu, Cristian Stanciu; Constantin Paleologu; Jacob Benesty; Silviu Ciochina

**3. Reduce Computational Complexity for Continuous Wavelet Transform in Acoustic Recognition Using Hop Size**

Dang Thoai Phan

**4. Statistical Analysis of Optimal Features for CLAHE Algorithm on Post-COVID19 CT Scans**

Beatrice Arvinti; Marius Costache

**5. Using YOLOv9 Deep Learning Model for Automatic Detection and Classification of VHF Signals**

Andreea Buda; Delia-Bianca Deaconescu; David Vatamanu; Simona Miclaus

**6. Performance Analysis of DoA Estimation Using Multiple Choice OMP Algorithm in Conditions of Mutual Coupling Between Antennas**

Ionela Cristina Voicu; Andrei Anghel; Silviu Ciochina

## 16<sup>00</sup> -16<sup>30</sup> Coffee Break

13<sup>00</sup> -18<sup>30</sup> **Workshop IPCEI, UPT + Continental + NXP, Auditorium Conference Room of the Congress Centre, - B-dul V. Pârvan No.2b**

13<sup>00</sup> – 14<sup>00</sup>

Round table: Microelectronics Romanian Ecosystem: present and future.

14<sup>00</sup> – 14<sup>30</sup>

**Prof. Aurel GONTEAN** – *IPCEI Overview from UPT perspective;*

**Dr. Petru Demian**, Head of SCT EU Projects RO – IPCEI Overview from Continental perspective;

**Mr. Bogdan Costinescu**, Director Software Engineering, Security and Operating Systems – IPCEI Overview from NXP perspective.

14<sup>30</sup> – 16<sup>00</sup>

**Continental** – Technical presentations Cosmin Moisa, Marcel Manofu, Ionut Ailinei;

**NXP** – Technical presentation on Radar Application Development;

**Dr. Dan Nicula**, **FotoNation** - Technical presentation on FotoNation contributions to the IPCEI project;

**TAU, Prof. Mircea Guina** - Technical presentation: "Chips JU" financed #SiPFAB Pilot line at Tampere University, Finland;

16<sup>00</sup> – 18<sup>30</sup>

Parallel round tables **Continental & NXP** – Work packages analysis, technical discussions, Intelligent specialization, Equipment procurement, Sustainability 2028+ & **Closing of IPCEI Workshop.**

16<sup>30</sup> -18<sup>30</sup> **Parallel Afternoon Sessions** – Multifunctionala Conference Room – Central Library

### Artificial Intelligence and Computer Vision (AICV)

Chairmen:

Assoc. Prof. PhD. Eng. Georgiana SIMION,

Prof. PhD. Eng. Cătălin CALEANU

1. **Are Vegetation Indices Really So Different: An Unsupervised Perspective**  
Andreea Nitu; Corneliu Florea; Mihai Ivanovici
2. **ALPHA-EDU: An Educational Platform for Alphabet Learning with AI**  
Irina Morel; Alexandru Dinu; Cătaron Angel

3. **Simulating Human Psyhical Behavior Using Unreal Engine Full Body Inverse Kinematics**  
Alexandru M; Razvan A Bertici; Traian R Plosca; Mihai V. Micea
  4. **Particle Filter Based Correction of On-Board Camera Driver Gaze Estimation**  
Deiana Natalia Patrut; Alexandru M Pescaru; Traian R Plosca; Dan Pescaru
  5. **Automated Detection of AI-Generated Text Using LLM Embedding-Driven ML Models**  
Andrei-Nicolae Vacariu; Marian Bucos; Marius Ottesteanu; Bogdan Drăgulescu
  6. **Textual Authenticity in the AI Era: Evaluating BERT and RoBERTa with Logistic Regression and Neural Networks for Text Classification**  
Layth Hazim; Oguz Ata
- 16<sup>30</sup> - 18<sup>30</sup> **Parallel Afternoon Sessions** – Conference Room K1 of the Congress Centre

### **Instrumentation and Measurement (IM)**

Chairmen:

Prof. PhD. Eng. Aldo De SABATA,

Lecturer. PhD. Eng. Andrei SILAGHI

Prof. PhD. Eng. Ladislau MATEKOVITS

1. **Wireless Sensors and Their Data Transmission**  
Septimiu Mischie; Cora Ionică
2. **Data Acquisition Measurement Experiments Using the ADALM2000**  
Robert Pazsitka; Septimiu Mischie
3. **Sensor Data Analysis in a Real-Time IoT and Blockchain-Based System for Monitoring Driver Alcohol Levels**  
Mihaela Gavrila; Marin Fotache; Delia-Elena Barbuta, Adrian Alexandrescu,  
Madalina-Giorgiana Murariu; Daniela Tarniceriu; Roxana Emanuela Ambrozie
4. **Neural Network-Based Wearable Devices for Limb Rehabilitation by Inertial Signal Classification**  
Roberto de Fazio; Lorenzo Spongano; Ramiro Velázquez; Carolina Del-Valle-Soto;  
Paolo Visconti



**16<sup>00</sup> -18<sup>30</sup> Parallel Afternoon sessions** – Conference Room K2 of the Congress Centre

**Telecommunications (TC) - Security and communication devices**

Chairmen:

Assoc. Prof. PhD. Eng. Cristina STOLOJESCU-CRISAN

Assoc. Prof. PhD. Eng. Horia BALTA

- 1. Enhancing Security in Data Exchange: Mitigating Risks Solutions in Base64 Encoding and JSON Web Tokens**  
Roxana Emanuela Ambrozie; Daniela Tarniceriu; Mihaela Gavrila
- 2. Integrated and Automated Intrusion Detection System: A Comprehensive Review of Current Challenges and Methods, Future Trends and Prospects for Emerging Electronics Engineering with AI Integration**  
Nicolae Costin Pistol; Bogdan Alexandrescu; Rodica Claudia Constantinescu
- 3. Comparative Study of Phishing URL Detection Using Artificial Intelligence Algorithms**  
Daniel Zinca; Anamaria Negrea
- 4. Increasing of Specific Energy of the Supercapacitors Based on Cellulose-Derived Nanostructures and Conductive Polymers**  
Daniela Ionescu; Maria Kovaci

**16<sup>30</sup> -18<sup>30</sup> Parallel Afternoon Sessions** – Room A116, Faculty of Electronics, Telecommunications and Information Technologies

**Signal Processing (TC)**

Chairmen:

Prof. PhD. Eng. Corina NAFORNITA

Prof. PhD. Eng. Constantin PALEOLOGU

1. **Radar Object Classification Using Neural Networks in Urban Automotive Scenarios**  
Atila Gabriel Ham; Corina Nafornta; Vladimir Cristian Vesa
2. **Characterizing Coastal Wave Energy Dynamics Using Enhanced FMCW Radar Signal Processing Techniques**  
Assil Chawraba; Andrea Randazzo; Daniele D. Caviglia
3. **Hydrological Sensing via FMCW Radar Technology of Sea Waves** Assil Chawraba; Andrea Randazzo; Alaa A. Ghaith; Daniele D. Caviglia
4. **Revisiting Mixing Transformations and Chaotic Systems with a View to Cryptographic Applications**  
Adina Elena Lupu (Blaj)
5. **Synthetic Radar Data Generation from RGB Images for Robotics and Autonomous Driving Applications**  
Sabyasachi Ghosh; Nikhil Akalwadi; Uma Mudenagudi
6. **GLCM-Enhanced Dynamic Texture Analysis for Ocean Waves Behavior**  
Muguraş Mocofan; Ciprian Orhei; Florin Alexa; Silviu Vert

**19<sup>00</sup>-23<sup>00</sup> Gala Diner - Restaurant-Casa Politehnicii 2, B-dul Eminescu No.11**

**Friday, November 08<sup>th</sup>**

**09<sup>00</sup> - 11<sup>00</sup> Morning sessions** – Conference Room K1 of the Congress Centre

### **Power Electronics (PE)**

Chairmen:

Prof. PhD. Eng. Peter van DUIJSEN

Prof. PhD. Eng. Dan LASCU

#### **1. Technical presentations from SCHAEFFLER-VITESCO**

Radu Bunea, Head of App Electrical Eng Battery, **Electrified Future: New Vehicle Electric Networks**

#### **2. A Buck-Boost Converter with Asymmetric Static Conversion Ratio**

Gabriela M Pop; Alexandru-Adrian Cau; Ioana M Pop-Calimanu; Dan Lascu

#### **3. Analysis and Simulation of a Control Method for a ZCS-QRC Buck Topology with Constant Switching Frequency**

Daniel Trip; Adrian Schiop; Adriana Grava; Cristian Grava

#### **4. Challenges and Solutions in Modern DC Grids Part 1: Architecture and Definitions.**

Peter van Duijsen; Diego Zuidervliet

#### **5. Challenges and Solutions in Modern DC Grids Part 2: Control and Converters**

Peter van Duijsen; Diego Zuidervliet

#### **6. Challenges and Solutions in Modern DC Grids Part 3: Protection and Safety**

Peter van Duijsen; Diego Zuidervliet

**09<sup>00</sup> - 11<sup>00</sup> Morning sessions** – Conference Room K2 of the Congress Centre

### **Microelectronics (MicroE)**

Chairman:

Prof. PhD. Eng. Aurel GONTEAN

Opening presentation from **Prof. Mircea Guina** - III-V semiconductor technology: uniting the microelectronics and photonics worlds.

Opening presentation from **Prof. Virgil Duma** - A Decade of Laser Galvoscaning Optimization for Optical Coherence Tomography.

1. **The Automation of the Verification Process of Hardware IP Registers**  
Cristiana M Vrabie; Alexandru Dinu
2. **Laser Scanning Modalities Revisited**  
Attila Csillag; Virgil-Florin Duma
3. **Architecture and Design Choices for an AI-Enabled FPGA-Based Cosmic Radiation Sensor**  
Stefan Popa; Artur Kazak; Alexandru Dinu; Mihai Ivanovici; Nicolae Gheorghe Secieru; Viorel Carbune; Vladimir Melnic
4. **Distance Estimation Using Verilog FPGA Implementation**  
Cristian-Valentin Ionici; Silviu-Dorin Meltis; Petru Papazian
5. **An Overview of GaN Technology for Power Conversion Applications**  
Paul-Catalin Medinceanu; Marius Enachescu
6. **A High-Speed, Area-Optimized, ROM-Less (Co)Sine Wave Synthesis Accelerator**  
Florentina-Giulia Stoica; Alex Calinescu; Marius Enachescu

09<sup>00</sup> - 11<sup>00</sup> **Morning sessions** – Auditorium Conference Room of the Congress Centre

### **Instrumentation and Measurement (IM)**

Chairmen:

Prof. PhD. Eng. Aldo De SABATA,

Assoc. Prof. PhD. Eng. Andrei SILAGHI

Prof. PhD. Eng. Ladislau MATEKOVITS

1. **Overview of the Technical Risk Analysis and Risk Assessment Analysis in Automotive Industry**  
Madalina Despina Tolontan; Ciprian Orhei; Radu A. Vasiu
2. **Enhancing Urban Cooperative Transportation Systems Using the V2X-Based MOSAIC Platform**  
Sebastian Ioan Alupoaei; Constantin Florin Caruntu
3. **An Innovative Solution with Wearable and Aboard-The-Vehicle Sensors Integrated with Machine Learning Algorithms for Monitoring the Driver's Psycho-Physical Condition for Safety Purposes**

Roberto de Fazio; Ilaria Cascella; Ramiro Velázquez; Carolina Del-Valle-Soto; Paolo Visconti

**4. Intelligent Plant Monitoring and Care System**

Andreea-Alexandra Brezuaica; Ferencz Cârnu; George Banucu; Alexandru Bularca; Stefan-Gabriel Chivoiu; Alexandru Dinu

**5. Rotor Flux Estimation for Induction Motors Based on Modified Sliding Mode Observer**

Yuheng Wang; Raul Ionel; Fanwei Meng; Chunling Li; Zhenzhong Luo

**6. An Integration Methodology of a Third-Party In-System Programming Solution into a Flying Probe Equipmen**

Raul Ionel; Ivan Rinaldi; Caius Tănăsie

09<sup>00</sup> -11<sup>00</sup> **Morning sessions** – DeL room 401

**Artificial Intelligence and Computer Vision (AICV)**

Chairmen:

Prof. PhD. Eng. Mihai IVANOVICI,

Prof. PhD. Eng. Cosmin ANCUTI

**1. AI-Driven Triage: A Graph Neural Network Approach for Prehospital Emergency Triage Patients in IoMT-Based Telemedicine Systems**

Abulrahman Ahmed Jasim

**2. Kolmogorov-Arnold Networks in Transformer Attention for Low-Light Image Enhancement**

Alexandru Brateanu; Raul Balmez

**3. Dehazing CNNs Loss Functions Analysis**

Rares Dobre-Baron; Cosmin Ancuti

**4. An Architecture of a Web Application for Deploying Machine Learning Models in Healthcare Domain**

Mihai-Eronim-Octavian Urgan; Catalin Daniel Căleanu; Marian Bucos

**5. Educational Matlab Tool for Evaluating Liver Tumors Using Ultrasound**

Denisa A Vereş; Dumitru- Daniel Bonciog; Damian E Olei; Liliana Matiu-Iovan; Mihaela Lascu; Valentin Laurențiu Ordodi

## 6. **DepthLux: Depthwise Separable Convolution Transformer**

Raul Balmez; Alexandru Brateanu

09<sup>00</sup> -11<sup>00</sup> **Morning sessions** – Room A116, Faculty of Electronics, Telecommunications and Information Technologies

### **Telecommunications (TC) – Communication networks**

Chairmen:

Prof. PhD. Eng. Virgil DOBROTA

S.L. PhD. Eng. Cornel BALINT

#### 1. **Data Prediction Algorithms in Real-Time Using Internet of Things and Named-Data Networks**

Dan-Andrei Margin; Virgil Dobrota

#### 2. **An Overview and Classification on Beamforming Techniques for 5G Systems**

Cristina Andras; Teodora-Florentina Ricoiu; Daniel-Alexandru Drugea; Gordana Raluca Barb; Marius Ottesteanu

#### 3. **6G: An Overview of Key Technologies and Challenge**

Flavius Danuti; Marius Ottesteanu

#### 4. **Validation of Real-World Measurements Through Ray Tracing Simulation for 5G Urban Scenarios**

Andreea V Militaru; Razvan G. Lazar; Carlos Pascal; Ciprian Romeo Comsa; Ion Bogdan; Constantin Florin Caruntu

#### 5. **3D Urban Wireless Network Planning and Analysis Using Ray-Tracing and Machine Learning**

Emanuel Trinc; Andy Vesa; Calin Simu

#### 6. **Permissioned Blockchain-As-a-Service: Architecting Secure and Efficient Private Blockchain Networks**

Alex Bulzan, Robert Botez; Virgil Dobrota

11<sup>00</sup> -11<sup>30</sup> **Coffee Break**

**11<sup>30</sup> -13<sup>30</sup> Morning sessions** – Conference Room K1 of the Congress Centre**Power Electronics (PE)**

Chairmen:

Prof. PhD. Eng. Peter van DUJISEN

Prof. PhD. Eng. Dan LASCU

- 1. Effect of Multilayer Windings in Axial Motion Inductive Power Transfer**  
Erhan Tuncel; Emin Yıldırım
- 2. High Voltage DC-DC Converter for Safety Beacons**  
Alexandru D. Drăgoi; Septimiu Lica; Ioan Lie
- 3. Audiosusceptibility Calculation in One-Cycle Controlled DC-DC Converters Based on the Describing Function**  
Cristian-Valentin Ionici; Dan
- 4. Smoke Detection Using an Optical Sensor**  
Mihai C. Coita; Septimiu Lica; Ioan Lie
- 5. A New Step-Up/Down DC-DC Converter**  
Georgiana G Perneac; Ioana M Pop-Calimanu; Dan Lascu
- 6. A Buck-Boost Converter with Coupled Inductors for High Voltage Boosting Performance**  
Delia A Botila; Georgiana-Carmen Zaharia; Ioana M Pop-Calimanu
- 7. Programmable Active Load for Testing DC-DC Converters**  
Sergiu A. Bordeanu; Septimiu Lica; Ioan Lie

**11<sup>30</sup> -13<sup>30</sup> Morning sessions** – Conference Room K2 of the Congress Centre**Microelectronics (MicroE)**

Chairman:

Prof. PhD. Eng. Aurel GONTEAN

- 1. Hybrid Implementation of a Doppler Shift Compensation Solution for LEO Satellite Communication Systems**

Amine Bab; Boualem Nasri; Djamel Eddine Baba Hamed; El Habib Bensikaddour; Saïah Bekkar-Djelloul-Saïah; Abdelmadjid Lassakeur; Youcef Ali

**2. CIC Filter Implementations for FPGA-Based PDM Microphone Systems Analysis**

Elisei Ilies; Aurel Gontean; Magdalena Marinca

**3. FuzzWiz - Fuzzing Framework for Efficient Hardware Coverage**

Deepak Narayan Gadde; Aman Kumar; Djones Lettnin; Sebastian Simon

**4. Experimental Analysis Combining Radio-Over-Fiber and Power-Over-Fiber with Distributed Amplification for Different Link Lengths**

Laura Ghisa; Veronique Quintard; Mikael Guegan; Paulo Kiohara; Romildo De Souza; Olympio Coutinho; André Pérennou

**5. XTEA Brute-Force Cracker for FPGA in HLS and HDL**

Costin-Emanuel Vasile; Calin Bira; George-Vlăduț Popescu

**6. A Method for Comparing Dry Etch Equipment**

Andrei Marius Avram; Henk-Willem Veltkamp; Marek Elias; Sabina Ronchin; Charles De Boer; Jens Hovik; Meint De Boer

11<sup>30</sup> -13<sup>30</sup> **Morning sessions** – DeL room 401

**Artificial Intelligence and Computer Vision (AICV)**

Chairmen:

Assoc. Prof. PhD. Eng. Dan PESCARU,

Prof. PhD. Eng. Cătălin CALEANU

**1. Unsupervised Deep Learning with Stacked Autoencoders for Cell Line Classification in Microscopic Images**

Damian E Olei; Mihaela Lascu; Liliana Matiu-Iovan; Dumitru- Daniel Bonciog; Valentin Laurențiu Ordodi

**2. Computer Aided Diagnosis for Contrast-Enhanced Ultrasound Using a Small Hybrid Transformer Neural Network**

Marina-Adriana Mercioni; Catalin Daniel Căleanu

**3. Artificial Intelligence Techniques for Steganography Detection in Media Files**

Ana-Maria Cîrnat; Octaviana Datcu



4. **Innovative Pixel Art: Generation and Augmentation with Pixray**  
Marina-Adriana Mercioni; Robert Bogdan Cazacu; Stefan Holban
5. **Deep Learning for Sleep Staging Using EEG Signals**  
Gabriel A Vrabie; Mihaela Lascu
6. **Fostering Trust in AI-Driven Healthcare: A Brief Review of Ethical and Practical Considerations**  
Cristina Laura Sirbu; Marina Adriana Mercioni

13<sup>30</sup> -14<sup>00</sup> **Award and closing ceremony**, Auditorium Conference Room of the Congress Centre, - B-dul V. Pârvan No.2b

