



Programme in detail

Wednesday, October 22

15:00 – 15:25 **Opening ceremony SIITME 2025, Welcome words**
EEST | GMT +3h

Wednesday, October 22

15:30 – 17:30 **Plenary Oral Session 1**
EEST | GMT +3h

Keynote presentation:

Tracking Voiding of SMT Solder Joints by automated X-Ray Inspection – Result of a Round Robin Study

Dr.Ing. Heinz Wohlrabe

Retired

former Dresden University of Technology

ID8 Development and Characterization of a Gold-Bump Flip-Chip Bonding Process for RF IC Applications

D. Tyukov, M. Fattori¹⁾, T. Matray¹⁾ and G. Radulov¹⁾

Integrated Circuits, Electrical Engineering, TU/e, Eindhoven, The Netherlands

ID86 Effect of Electromigration in Tin-Bismuth and SAC Lead-Free Solder Joints of 0402 and 0201 Chip Resistors

Z. Tafferner, A. Géczy, G. Havellant, O. Krammer, B. Illés

Department of Electronics Technology, Budapest University of Technology and Economics, Budapest, Hungary

ID45 Electrochemical Migration: A Short State-of-the-Art Overview

A. Gharaibeh, and B. Medgyes

Department of Electronics Technology, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics, Budapest, Hungary

Thursday, October 23

09:40 - 12:00 **Plenary Oral Session 2**
EEST | GMT +3h

Keynote presentation:



Enabling Advanced Chiplet and SiP Architectures: Materials, Interconnects, and Thermal Solutions

Martin METZLER

Senior Manager Technical Business Development

MacDermid Alpha Electronic Solution

ID20 Sustainable Mechatronic Integrated Devices via Laser Direct Structuring: A Roadmap for Next-Generation Solutions

L. Rietter, C. Rebelo, A. Rocha, and F. Carneiro

PIEP – Innovation in Polymer Engineering, Guimarães/Portugal

ID108 Metamaterials for Supercapacitors – Optimal Design for Conductive Polymer Metamaterials

D. Ionescu¹⁾, and M. Kovaci²⁾

1) Department of Telecommunications and Information Technologies, “Gh. Asachi” Technical University of Iasi, Romania

2) Department of Communications, “Politehnica” University of Timisoara, Romania,

Thursday, October 23

12:20 - 13:40 Poster Session 1 (Starts with a pitching session)

EEST | GMT +3h

P1.1 ID61 Analog audio signal equalizer circuit for hearing aids

G.Csipkes¹⁾, D.Csipkes¹⁾, A.Ilies²⁾ and R. Groza¹⁾, A.Grama²⁾, and E.M.Stetco²⁾

1) Bases of Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

2) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.2 ID69 Low-power analog front end for ECG signal acquisition

D. Csipkes¹⁾, R. Groza¹⁾, G. Csipkes¹⁾, E.M. Stetco²⁾, A. Fodor²⁾ and O.A. Pop²⁾

1) Bases of Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

2) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.3 ID107 Ionic Conductivity Enhancing for Some Eco-Friendly Supercapacitors with Polymeric Gels

D. Ionescu¹⁾, and Dan Butnicu²⁾

1) Department of Telecommunications and Information Technologies, “Gh. Asachi” Technical University of Iasi, Romania

2) Department of Basics of Electronics, “Gh. Asachi” Technical University of Iasi, Romania

P1.4 ID9 Development of a Wheeled Robotic System with Articulated Arm and Sensor Feedback

T.-E. Petre, R.-C. Constantinescu¹⁾, B. Alexandrescu¹⁾, C.-I. Dinu¹⁾

Doctoral School of Electronics, Telecommunications & Information Technology



1) Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

P1.5 ID10 Development of a Smart Headband for Non-Invasive Monitoring of Vital Signs

T.-E. Petre, R.-C. Constantinescu¹, B. Alexandrescu¹, C.-I. Dinu¹

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P1.6 ID11 Development of a Low-Power Person Detection and 7-Segment Display System using CIPs

T.-E. Petre¹, R.-C. Constantinescu², B. Alexandrescu², C.-I. Dinu²

1) Doctoral School of Electronics, Telecommunications & Information Technology,

2) Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

P1.7 ID17 Integration of a Sink Node and Django Platform for Solar-Powered Battery-Free WSNs: Enabling IP Connectivity and Cloud Data Management

B. Y. León Ávila^{1,2}, C. A. García Vázquez^{1,3}, O. Pérez Baluja^{1,3}, P. A. Cotfas¹, L. A. Quintero Domínguez², D. T. Cotfas¹

1) Transilvania University of Braşov, Department of Electronics and Computers, Faculty of Electrical Engineering and Computer Science, Brasov, Romania,

2) University of Sancti Spiritus “José Martí Pérez”, Department of Computer Engineering, Faculty of Business and Technical Sciences, Sancti Spíritus, Cuba

3) Technological University of Havana, Department of Automation and Computing, Faculty of Automation and Biomedical Engineering, Havana, Cuba

P1.8 ID25 Guided Filter ARM and RISC-V Acceleration

A. Visoiu¹, C. Istudor¹, C.B. Ciobanu^{1, 2)} and C.Z. Kertész¹

1) Transilvania University of Braşov, Romania

2) National Institute of Research and Development in Microtechnologies, Bucharest, Romania

P1.9 ID29 Secure Testing and Simulation System Based on Raspberry Pi

I. F. Radu, P. A. Cotfas, E. Tuyishime, D.T. Cotfas, A. Constantin, M. Alexandru and V. Popescu
Electronics and Computing Department, Transilvania University of Brasov, Brasov, Romania

P1.10 ID32 IoT-Enabled Driver Health Monitoring System Using Sensors and Real-Time Cloud Integration

O. AlHousrya¹, A. Bennagi¹, D. T. Cotfas¹, and P. A. Cotfas¹

1) Department of Electronics and Computers, Faculty of Electrical Engineering and Computer Science, Transilvania University of Brasov, Brasov, Romania

P1.11 ID33 A Hybrid Deep Learning Framework for Intra-Hour Photovoltaic Power Forecasting Using CNN–TCN–GRU–XGBoost Architecture

A. Bennagi¹, O. AlHousrya¹, D. T. Cotfas¹, P. A. Cotfas¹ and M. Paulescu²



1) Department of Electronics and Computers, Faculty of Electrical Engineering and Computer Science, Transilvania University of Brasov, Brasov, Romania

2) Faculty of Physics, West University of Timisoara, Timisoara, Romania

P1.12 ID36 Autonomous Robot Car for Cleaning Photovoltaic Panels: A Low-Cost Maintenance Solution

P. Butnaru¹⁾, I. Betea¹⁾, M. Szego¹⁾, and R. Rotar²⁾

1) Department of Automation and Applied Informatics, Aurel Vlaicu University, Arad, Romania

2) Department of Computer Science, Politehnica University, Timisoara, Romania

P1.13 ID39 Automotive specific AI based tools for Technical Risk Analysis and Risk Assessment Analysis

M. Tolontan, C. Orhei, and R. Vasiiu

Department of Communication, Politehnica University of Timișoara

P1.14 ID40 Secure IoT: Behavioral Analysis on a Smart Energy Meter System

R. A. Manea, T. C. Bălan, A. Chis, I. V. Dinu

Department of Electronics and Computers, Faculty of Electrical Engineering and Computer Science Transylvania University of Brasov, Brasov, Romania

P1.15 ID41 Minutiae Extraction Optimization for ARM and RISC-V

A. V. Păscociu¹⁾, A. E. Solomon¹⁾, C.B. Ciobanu^{1), 2)} and C.Z. Kertész¹⁾

1) Transilvania University of Braşov, Romania

2) National Institute of Research and Development in Microtechnologies, Bucharest, Romania

P1.16 ID44 Embedded ECG Analytics for Remote Health Monitoring

V. Veliciu, S. Pop, L. Viman

Applied Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.17 ID51 Design and Implementation of a Mobile Notification System

S. L. Zaharieva¹⁾, A. V. Manukova¹⁾ and A. N. Borodzhieva²⁾

1) Department of Automation and Electronics, University of Ruse, Ruse, Bulgaria

2) Department of Telecommunications, University of Ruse, Ruse, Bulgaria

P1.18 ID55 Management and Orchestration of Over The Air Software Updates in AUTOSAR Classic

M.-R. Radu, and D. Petreuş

Applied Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.19 ID57 Scalable 16-N point FFT Accelerator

R. Stancu¹⁾, M. Gologanu¹⁾, A. Puşcaşu^{1), 2)}, C.B. Ciobanu^{1), 2)}, O. Buiu¹⁾

1) National Institute of Research and Development in Microtechnologies, Bucharest, Romania

2) Transilvania University of Braşov, Romania



P1.20 ID59 Security Algorithms and Systems for Vehicle Communication and Diagnostics Using Artificial Intelligence

R. Radu, and D. Petreuş

Applied Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.21 ID60 Design and Implementation of a Remote-Variable Aperture for Enhanced Camera Performance

M. L. Ştefan, M. Olteanu, D. Petreuş

Department of Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.22 ID63 Simulating Battery Testing Infrastructure

E. M. Olariu¹⁾, M. Ruba²⁾, A. I. Ilies³⁾, H. Hedesiu¹⁾, and G. Chindris³⁾

1)Electrical Engineering Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania,

2) Electrical Machines and Drives Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

3) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.23 ID64 Adversarial Attacks Detection for Self-Driving Cars using AMD GPUs

Ş.C. Jarcău¹⁾, I.A. Oprea¹⁾, M.A. Andrei¹⁾, R.I. Duca¹⁾, B.V. Floricescu¹⁾, C.B. Ciobanu^{1), 2)}, L. M. Sasu¹⁾, S. M. Grigorescu¹⁾

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P1.24 ID68 Real-Time In-Cabin Monitoring of Driver Fatigue Levels

R. Balint, and A. E. Marcu¹⁾

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1) Electronic Technology and Reliability Department, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

P1.25 ID72 Security Posture Evaluation of Model Context Protocol Servers Against Prompt Injection

G. Tod- Răileanu, S. Axinte, A.-M. Dincă and I. Bacivarov

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P1.26 ID73 AI-Enhanced Directional Antenna Positioning System for GSM/LTE Signal Optimization

D. M. Matei, D. Selişteanu, and M. C. Constantinescu

Department of Automatic Control and Electronics, University of Craiova, Craiova, Romania

P1.27 ID74 On Designing a Modular RISC-V Processor

A. Varona¹⁾, C.Z. Kertész¹⁾ and C.B. Ciobanu^{1), 2)}

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2) National Institute of Research and Development in Microtechnologies, Bucharest, Romania



P1.28 ID79 Low-Cost Agricultural Robotics: An AI-Enabled Autonomous Rover

D. A. Circumariu, D. Sendrescu¹⁾

Department of Automatics and Electronics, University of Craiova, Craiova, Romania

1) Department of Automatics and Electronics, University of Craiova, Craiova, Romania

P1.29 ID81 FPGA Augmented RISC-V LLVM Backend

M.L. Mitu¹⁾, V.-M. Popescu¹⁾, C.B. Ciobanu^{1), 2)}, I. Antochi³⁾ and S. Costinescu³⁾

1) Transilvania University of Braşov, Romania

2) National Institute of Research and Development in Microtechnologies, Bucharest, Romania

3) NXP Semiconductors, Bucharest, Romania

P1.30 ID85 An embedded fuzzy controller for autonomous precision irrigation systems

I.-E. Mihai, M.-Alex. Dobrea¹⁾, G.-V. Olteanu²⁾

1) Faculty of Hidrotechnics, Technical University of Civil Engineering of Bucharest, Romania

2) Faculty of Automatic Control and Computer Science, National University of Science and Technology Politehnica of Bucharest, Romania

P1.31 ID87 Impact of Driving Pattern Classification on Battery Optimization Strategies for 12V Lead-Acid Batteries

G. Flutur, G. Chindriş¹⁾, O.-P. Stan²⁾

Dept. of Automation, Technical University of Cluj-Napoca, Cluj-Napoca, Romania 1) Dept. of Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

2) Dept. of Automation, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P1.32 ID93 On Accelerating Sobel Edge Detection

L. Csenger¹⁾, and A.A. Dumitrică¹⁾, C.Z. Kertész¹⁾, C.B. Ciobanu^{1), 2)}

1) Transilvania University of Braşov, Romania

2) National Institute of Research and Development in Microtechnologies, Bucharest, Romania

P1.33 ID98 ESP32 and RFID Access Control System with Real-Time Web Management and Full Offline Logging Supported by RTC and microSD Card

E. Ábel, and M. Cîrlugea

Bases of Electronics Department, Technical University of Cluj-Napoca, Romania

Thursday, October 23

14:40 - 16:40

Plenary Oral Session 3

EEST | GMT +3h

Keynote presentation:

A PCB DFM Checklist Helps You Pass a Design Review

Paul CARPINE

Account Technology Manager

Siemens EDA



ID62 Adaptive Q-Learning Based Anomaly Detection for Intrusion Detection Systems on Resource-Constrained Microcontrollers

Ana-Maria Nica¹⁾, and Dorin Petreus²⁾

Technical University of Cluj Napoca, Cluj Napoca, Romania

ID52 Thermal time constant used to determine MOSFET's maximum junction temperature

C.R. Mitulescu (Sandulescu), M.C. Mares¹⁾, C.Ionescu¹⁾, M.Bercu²⁾, and P.M. Svasta¹⁾

Center for Surface Science and Nanotechnology-CSSNT, National University of Science and Technology POLITEHNICA Bucharest/ Bucharest/Romania

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2) Center for Surface Science and Nanotechnology-CSSNT, National University of Science and Technology POLITEHNICA Bucharest/ Bucharest/Romania

Friday, October 24

9:00 - 10:20

Poster Session 2 (Starts with a pitching session)

EEST | GMT +3h

P2.1 ID5 Tire Monitoring with Advanced Infrared Sensors – An In-Depth Technical Study

F. Corciova, P. A. Cotfas, D. Cotfas

IESC, Universitatea Transilvania, Brasov, Romania

P2.2 ID6 Tire Monitoring for Performance with STM32, LabVIEW, Matrix temp sensor

F. Corciova, P. A. Cotfas, D. Cotfas

IESC, Universitatea Transilvania, Brasov, Romania

P2.3 ID12 Integrated IoT Monitoring and Decision Support System for Smart Agriculture Applications

A.B. Danila, R.A. Streche, O. Orza, T. Pintilie, C.M. Dobre, A.Tudor, D.Vasile and G. Suci
R&D Department, BEIA Consult International, Bucharest, Romania

P2.4 ID18 Development of an External Testing Tool for Automotive Actuators

D. L. Prázsmári

Department of Electronics and Computers, Universitatea Transilvania of Braşov, Braşov,

P2.5 ID21 Design and Implementation of a Measurement System for Piezoelectric Ceramic Discs

A. Popovici, C. Farcas

Department of Applied Electronics, Technical University of Cluj-Napoca, Romania

P2.6 ID28 Robust Recursive Least-Squares Algorithm with the Conjugate Gradient and the Data Reuse Approach



R.A. Otopoleanu^{1,2)}, C. L. Stanciu^{1,2)}, C. Paleologu¹⁾, J. Benesty²⁾, L.M. Dogariu^{1,2)}, and C. Anghel¹⁾

1) Department of Telecommunications, National University of Science and Technology POLITEHNICA, Bucharest, Romania

2) Academy of Romanian Scientists, Ilfov 3, 050044, Bucharest, Romania

3) INRS-EMT, University of Quebec, Montreal, Canada

P2.7 ID47 Accelerometer Real-Time Data Filtering and Capture System 1st Vlad Baciú Automation and Applied

V. Baciú¹⁾, C. D. Căleanu²⁾

1) Informatics Department Politehnica University Timisoara Timisoara, Romania

2) Applied Electronics Department Politehnica University Timisoara Timisoara, Romania

P2.8 ID53 Comparative analysis of DC and AC power supply for resistive soil moisture sensors

I. H. Baciú and Al. Fodor

Applied Electronics Department Technical University of Cluj Napoca, Cluj Napoca, Romania

P2.9 ID54 Vehicle security and safety systems

D. Ioana, I. B. Baciú, R.C. Negroiu and Al. Vasile

Department Electronic Technology and Reliability, University of Science and Technology Politehnica Bucharest, Bucharest, Romania

P2.10 ID66 Implementation of a Software-Defined Radio Communication System with QPSK Modulation Scheme that Eliminates the Phase Ambiguity

R. G. Bozomitu, Ș. C. Stoica, M. A. Corban

Faculty of Electronics, Telecommunications and Information Technology, "Gheorghe Asachi" Technical University of Iași, Romania

P2.11 ID75 CMOS voltage-averaging feedback relaxation oscillator

A. Ciobanașu, A. Cracan

Faculty of Electronics, Telecommunications and Information Technology, "Gheorghe Asachi" Technical University of Iași, Romania

P2.12 ID78 Automated Irrigation System Powered from Renewable Energy Sources with Integrated Monitoring

A. Simionov¹⁾, A. Fodor¹⁾, R. Jánó¹⁾, I. H. Baciú¹⁾ and D. Csipkes²⁾

1) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

2) Bases of Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P2.13 ID83 Comparison of Multiple Feedback and Second-Order Bandpass Filters for Vibrating Wire Sensor Signals

A.F. Flutur, S.S. Pop, and V. Bande

Applied Electronics, Electronics, Telecommunications and Information Technology Faculty, Technical University of Cluj-Napoca, Cluj, Romania



P2.14 ID84 A comparative study of some soil fertility sensors based on electrical conductivity measurements

G. Varzaru, R. Tulea, R. Ungurelu, V. Fatu¹⁾, and P. Svasta²⁾

Syswin Solutions, Bucharest, Romania

1) Research and Development Institute for Plant Protection, Bucharest, Romania

2) Electronic Technology and Reliability Department, National University for Science and Technology Politehnica, Bucharest, Romania

P2.15 ID89 SWOT Analysis of Self-Powering Wearable Sensors for Biomedical Applications

C. Pislaru, D. Ursutiu¹⁾ and C. Samoila²⁾

Electronics and Computers Department, Transilvania University, Brasov, Romania

1) Electronics and Computers Department, Transilvania University, Brasov, Romania Academy of Romanian Scientists – AOSR Romania

2) Materials Science Department, Transilvania University, Brasov, Romania Academy of Technical Sciences ASTR - Romania

P2.16 ID101 A Prototype IoT-based Modular Electronic System for Home Automation

V. Tsankov¹⁾, B. Evstatiev¹⁾, I. Valova²⁾ and Ts. Kaneva²⁾

1) Department of Automatics and Electronics, University of Ruse, Ruse, Bulgaria

2) Department of Computer Systems and Technologies, University of Ruse, Ruse, Bulgaria

P2.17 ID106 Design and Development of an IoT-Based System for Monitoring the Operation Parameters of Vehicles

S. V. Okishelov¹⁾, S. Y. Kadirova¹⁾, and B. I. Evstatiev¹⁾

1) Department of Electronics, University of Ruse Angel Kanchev, Ruse, Bulgaria

P2.18 ID109 Enhancing Automotive Safety and User Experience: Advanced Integration of Opto-Electronics Sensors and Actuators

T. Csutak¹⁾²⁾, C. Moisa¹⁾³⁾, A. Botau¹⁾, P. Svasta²⁾

1) Continental Automotive Romania, Timișoara, Romania

2) National University of Science and Technology Politehnica Bucharest, Romania

3) Politehnica University Timișoara, Romania, Romania

P2.19 ID110 Research on Automated Insect Pest Monitoring Solutions

C. Abramov¹⁾, P. Svasta¹⁾, D.-C. Geambasu²⁾

1) ETTI - UPB, Bucharest, Romania

2) INCDFM, Magurele, Romania

P2.20 ID113 Design and Implementation of a Plastic Optical Fiber-Based Displacement Sensor System

L. A. Szolga¹⁾, S. Majumdar²⁾ and A. I. Potarchiche¹⁾

1) Basis of Electronics Department, Technical University of Cluj-Napoca, Romania

2) Concordia Institute of Information Systems and Engineering, Concordia University, Montreal, QC H3G 1M8, Canada

P2.21 ID7 Second-Order Passive High-Pass Filter Application in PV System Output Power Transformers

Osmel Pérez Baluja^{1) 2)}, Carlos A. García Vázquez^{1) 3)}, Bernardo Yaser León Avila^{1) 4)}, Daniel Tudor Cotfas⁴⁾, Petru Adrian Cotfas¹⁾ and Orlys E. Torres Breffe²⁾

1) Department of Electronics and Computers, Transilvania University of Brașov, Brasov/Romania

2) Department of Electric Power Systems, Technological University of Havana, Havana/Cuba

3) Department of Automation and Computing, Technological University of Havana, Havana/Cuba

4) Department of Computer Engineering, University of Sancti Spiritus, Sancti Spiritus/Cuba

P2.22 ID13 Adaptive Power-Thermal Management for Embedded SoCs using Reinforcement Learning

Cosmin-Ionuț DINUȚ *1, Rodica-Claudia CONSTANTINESCU*1, Bogdan ALEXANDRESCU*1, Teodor-Emilian PETRE *2

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National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania,

*1Doctoral School of Electronics, Telecommunications & Information Technology

P2.23 ID21 EMI Simulation of an Electronic Package for the Automotive Industry

R. Oliveira, L. Rietter, C. Rebelo, A. Marques, and F. Carneiro

PIEP – Innovation in Polymer Engineering, Guimarães/Portugal

P2.24 ID24 Thermal Management of Batteries in Electric Vehicles

A. Tanțău, C. Fărcaș and M. Olteanu

Department of Applied Electronics, Technical University of Cluj-Napoca, Romania

P2.25 ID31 Infrared thermography for beamforming antenna measurement

A. Sârbu¹⁾, C. Neghină²⁾, M. Neghină²⁾, R. Papa³⁾

1) Department of Telecommunications, IT and Cyber Security, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania

2) Faculty of Engineering, “Lucian Blaga” University, Sibiu, Romania

3) Faculty of Electronics, Telecommunications and IT, Technical University Cluj Napoca, Romania

P2.26 ID34 Thermal Analysis of TO-220 Passive Cooling Configurations

C. A. Marincas, C. M. Farcas¹⁾

Technical University of Cluj-Napoca, Faculty of Electronics, Telecommunications and Information Technology, 26-28 G. Barițiu Street, Cluj-Napoca, Romania.

P2.27 ID38 A Comparative Study on Cooling Techniques for Integrated Circuits in SOIC-8 Packages

D. A. Bulugheană, and C. M. Fărcaș¹⁾

Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

1) Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P2.28 ID90 Modelling Thermal Impedance of Electronic Circuit Board using a Thermal Network Model

L. Dobre, Alex. Buburuzan, A. Bojita and M. Purcars



Department of Electrotechnics and Measurements, Technical University of Cluj-Napoca, Cluj-Napoca, Cluj, Romania

P2.29 ID112 Interactive Heatsink Design Toolkit: A React Powered Thermal Simulation Dashboard

Balea Georgiana-Maria, Rajmond Jánó¹⁾

Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P2.30 ID114 Optimizing Li-ion Battery Pack Preconditioning for Small Urban Mobility Vehicles Using Thermo-Electric Heaters

Rajmond Jánó^{1), 2)}, Adelina Ioana Ilieș^{1), 2)} and Alexandra Fodor^{1), 2)}

1) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

2) European University of Technology, European Union

Friday, October 24

11:45 - 14:10 **Plenary Oral Session 4**
EEST | GMT +3h

Keynote presentation:

News about RFID Antennas

Dr. Dan PUPEZA

Manager

REP Radio Engineering Pupeza

ID82 SIMD & AI Accelerators – A Historical Perspective

D. Vuță-Popescu¹⁾, S. Paul¹⁾, C.B. Ciobanu^{1), 2)} and C.Z. Kertész¹⁾

1) Transilvania University of Brașov, Romania

2) National Institute of Research and Development in Microtechnologies, Bucharest, Romania

ID58 A Futuring Training in TRIREME: Quality, Reliability and Testing of Electronics in the E-Transportation

B. Medgyes¹⁾, Cs. Farkas¹⁾, S. Danieli²⁾, E. Cantiani²⁾ M. Spanyik³⁾ and J. Stolfi³⁾

1) Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Department of Electronics Technology, Budapest/Hungary

2) Mylia – Adecco Formazione, Milan/Italy

3) VSB – Technical University of Ostrava, Faculty of Electrical Engineering and Computer Science, Department of Computer Science, Ostrava/Czech Republic

Friday, October 24

15:10 - 16:30 **Poster Session 3 (Starts with a pitching session)**

P3.1 ID105 Robust Sleep Bruxism Detection via Multimodal Physiological Signal Classification and Cross-Dataset Machine Learning

D.-A.-I. Pîrîțu¹⁾ and D.-D. Țarălungă²⁾

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2) Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

P3.2 ID19 Real-Time Estimation of Photovoltaic Power Output for Microgrid Applications

V. Voicu, D. Petreuş, N. Alex. Sârbu

Department of Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

P3.3 ID22 Time-Series Forecasting of PV Charging Power Using a Hybrid Model

A.-M. Comșîț¹⁾, N. Merabti¹⁾ and D. T. Cotfas¹⁾

1) Transylvania University of Brasov, Romania

P3.4 ID26 Deep Learning for PV Power Forecasting: An LSTM Approach for Residential Systems

Ts. Kaneva¹⁾, N. Valov²⁾, and I. Valova¹⁾

1) Department of Computer Systems and Technologies, University of Ruse, Bulgaria

2) Department of Automation and Electronics, University of Ruse, Bulgaria

P3.5 ID27 Hybrid Baseline and Bi-GRU Model for Multi-Horizon Solar Irradiance Forecasting

N. Merabti, A.M. Calin, P.A. Cotfas, D.T. Cotfas

Transylvania University of Brasov, Romania

P3.6 ID37 A novel RF Energy Harvesting design for Low Power Sensors

V.M. Maftai¹⁾, L.D. Gavrilă²⁾, E.L. Miron³⁾, M. Alexandru²⁾, P.A. Cotfas²⁾ D.T.Cotfas²⁾

1) Nicolae Balcescu Land Forces Academy, Sibiu, Romania

2) Transilvania University, Brașov, Romania

3) Henri Coandă” Air Force Academy, Brașov, Romania

P3.7 ID91 Investigation of a Façade PV Installations’ Performance under Snowy Conditions

B. Evstatiev¹⁾, N. Valov¹⁾, V. Kessev²⁾, D. Trifonov¹⁾ and N. Mihailov³⁾

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P3.8 ID100 Self-Powered Radio Node for Environmental Monitoring and On-Demand Event Reporting

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P3.9 ID99 Study of Power-Aware Hardware Design through Schematic and Layout Strategies

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P3.10 ID102 Comparative Analysis of Supercapacitors and Batteries Based on Electrical Performance

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P3.11 ID104 Use of solar panels to reduce the energy consumption for heating of an AHU

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P3.12 ID111 Modern Technologies to Revive Electricity Storage Systems in Isolated Areas

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P3.13 ID14 Validation of a multisource eMMC Interface through SI Simulations

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P3.14 ID16 Automotive Experimental Investigations Using Bulk Current Injection Testing Method

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P3.15 ID95 Simulation-Based Comparative Analysis of Signal Integrity in an RGMIIv2.0 Interface Using CST Studio and Keysight ADS

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P3.16 ID70 Evaluating the Impact of Capacitor Degradation on Precision Analog-to-Digital Converter Performance

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P3.17 ID80 Buck Converter MIL-HDBK-217F Reliability's Calculation Revision using ANSI-VITA 51.1

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P3.18 ID103 In-circuit Reliability Metrics and ESR-Performance Hands-on evaluation for PoL Output Filter Capacitor

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P3.19 ID115 Effects of EMI Noise Suppression Materials on High Speed Microstrip Interconnects

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P3.20 ID116 Comparative Analysis of ASK, FSK, GFSK, and MSK Modulations in LPWAN Scenarios

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P3.21 ID117 Enhancing Emergency Communication with SDR Based PMR Capture and Speech Recognition

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P3.22 ID35 Applying Kirchhoff's Laws using an Educational and Interactive Car Analogy Model

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P3.23 ID42 Reimagining Requirements Engineering for Automotive Systems: Boosting Efficiency with Generative AI Assistant

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P3.24 ID43 Remote Laboratory Setup using Raspberry Pi for a Digital Signal Processors Course

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P3.25 ID49 Innovative Youth Competition Electroniada – an Environment for Building Engineering Knowledge in Electronics

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P3.26 ID56 Teaching Reversible Logic through Interactive Fredkin Gate Modules with MS Excel and Logisim

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P3.27 ID65 Hands-On Teaching of CNF Conversion with Tseytin Transformation: From Boolean Expressions to Combinational Logic Circuits

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P3.28 ID88 An Integrative Approach to a Web Platform Development for the Management of a Sports Association

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P3.29 ID92 Innovative Web Application for Managing Personal Finances

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P3.30 ID94 Online Platform for Readers: Virtual Library Management

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P3.31 ID96 Interactive Excel-Based Visualization of the Blum-Goldwasser Cryptosystem for Telecommunication Security Education

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P3.32 ID97 Transferable Educational Electronics Skills Obtained from Video Games

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