Program in detail

Wednesday, October 16

16:00 – 16:25 **Opening ceremony SIITME 2024, Welcome words**
EEST | GMT +3h

Ovidiu Aurel POP, *Dean of Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Romania*
Maria VINŢAN, *Dean of the Faculty of Engineering, Lucian Blaga University of Sibiu, Romania*

16:30 – 18:30 **Plenary Oral Session 1**
EEST | GMT +3h

Session Chair: Dorin PETREUȘ, Technical University of Cluj-Napoca, Romania
Session Co-Chair*:* Constantin PALEOLOGU, POLITEHNICA of Bucharest, Romania

K1 Challenges and Solutions in Building AI Data Centers: A Component-Level Perspective
Philipp Weigell
Rohde & Schwarz

ID51 Low-Frequency Dielectric Tests of PLA/Flax Sustainable and Degradable PCB Substrates
G. Attila[1)], Cs. Farkas[1)], O. Krammer[1)], A. Csiszár[2)] and Z. Á. Tamus[3)]
1) Department of Electronics Technology, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics, Budapest, Hungary
2) Meshlin Composites Zrt., Győr, Hungary
3) Department of Electric Power Engineering, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics, Budapest, Hungary

ID68 New Evaluation for Thermal Diffusivity of High-Power Devices with Different Packages
C. R. Mitulescu, N. Codreanu, M. Mares, B. Mihailescu and P. Svasta
Department of Electronics Technology and Reliability, Center for Technological Electronics and Interconnection Techniques, Faculty of Electronics, Telecommunications, and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Romania

ID111 Influence of the Electrodes Porosity on the Supercapacitors Charging Performance
D. Ionescu[1)], and M. Kovaci[2)]
1) Department of Telecomm. and Information Technologies, “Gh. Asachi” Technical University of Iasi, Romania
2) Department of Communications, Politehnica University of Timisoara, Romania

ID86 Enclosure with Underground Passive Cooling System for High Power Vehicle Charging Station

M. Dubey and Prof. Dr.-Ing. O. Kreutzer
Research Centre Modern Mobility, Deggendorf Institute of Technology, Deggendorf, Germany

---

18:45 – 19:45 **Industrial Session 1**
EEST | GMT +3h

Session Chair: Aurelian KOTLAR, Eberspaecher, Romania
Session Co-Chair: Laszlo REDEY, Deery Brook SRL, Romania

Continental Automotive Systems Sibiu **ICCO EMT**

Rohde & Schwarz

Thursday, October 17

08:40 - 11:00 **Plenary Oral Session 2**
EEST | GMT +3h

Session Chair: Cătălin CIOBANU, Transilvania University of Brasov, Romania
Session Co-Chair: Bálint MEDGYES, Budapest University of Technology and Economics, Hungary

K2 Advanced Packaging market Outlook, technology trends and how Europe positions itself for this business

Ștefan CHITORAGA
YOLE Group

ID13 TIE M CAD Design Challenge

A.Falk, M. Demian
[1)] Continental Autonomous Mobility, Timisoara, Romania

ID16 TIE-Thermal Plus: Power Electronics and Thermal Management

M. Al.-Gabriel[1),3)], C. Dragan[1) 3)] and Const. Popescu[2)]
1) Continental Automotive Timisoara 2) Continental Autonomous Mobility Romania, Timisoara
3) Polytechnic University of Timisoara

ID107 Technologies of Interconnections in Electronics – Signal and Power Integrity Student Contest

M. Daraban[1)], M. Manofu[2)], R. Voina[3)]
1) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania
2) Up-Skill Engineering Education Association, Timisoara, Romania
3) Keytek, Alba-Iulia, Romania

ID5 A Reference Architecture for Deployment Strategies of Large Language Model Applications in an Industrial Environment

Felix Mahr[1], Giulia Angeli[2], Till Sindel[1], Konstantin Schmidt[2], Jörg Franke[1]
[1)] Friedrich-Alexander-University Erlangen-Nürnberg (FAU), Institute for Factory Automation and Production Systems (FAPS), Germany
[2)] Siemens AG, Amberg, Germany

11:20 - 12:40 Poster Session 1 (Starts with a pitching session)

EEST | GMT +3h

Session Chair: Attila GECZY, Budapest University of Technology and Economics, Hungary
Session Co-Chair: Laurențiu IONESCU, POLITEHNICA of Bucharest, University Center of Piteşti, Romania

ID1 P1.1 Evaluating the Knowledge in Test Engineering Education using a Solar-powered Remote-controlled Flying Probe-Inspired In-Circuit Tester

S. L. Jurj[1)], R. Rotar[1)], I. Brîncovan[2)], Flavius Opriţoiu[1)], and M. Vlăduţiu[1)]
1)Computers and Information Technology, Politehnica University, Timişoara, Romania
2) Automation and Applied Informatics, Aurel Vlaicu University, Arad, Romania

ID3 P1.2 Comparing large language model artificial intelligence tools in aid of electrical engineering

Z. Tafferner, A. Géczy
Department of Electronics Technology, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics, Budapest, Hungary

ID14 P1.3 The importance of using advanced modeling and simulation tools during the pre-production stage to accomplish the industry requirements

A. G. Mătuşa[1)], M.C. Mareş[1)], S. Nuţu[1)], P. Svasta[1)] and S.M. Porumbel[2)]
1) National University of Science and Technology Politehnica Bucharest, Romania
2) The Academy of Economic Studies Bucharest, Romania

ID15 P1.4 Signal Integrity analysis of a Molded Flip-Chip Scale Package

Ș. C. Nuțu, A. G. Mătușa and P. Svasta
National University of Science and Technology Politehnica Bucharest, Romania

ID25 P1.5 Thermoelectric Behavior Simulation in Electronic Systems

A. Grama, A. Fodor, C. Davidas, and E. M. Stetco
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID53 P1.6 Application of IoT Technologies as a University Project for Students: Challenges and Possibilities

Ts. Mladenova, I. Valova
Computer Systems and Technologies, University of Ruse, Ruse, Bulgaria

ID64 P1.7 Addressing the Skills Gap in Microelectronics –Development and Validation of Reactive Response in the Project European Chips Skills Academy

A. Gharaibeh[1)], O. Krammer[1)], and V. Cummings[2]
1) Department of Electronics Technology, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics, Budapest, Hungary
2) SEMI Europe, Brussels Office, Brussels, Belgium

ID83 P1.8 Development of Automotive-mobility Training in the TRIREME project

B. Medgyes[1)], C. Farkas[1)], M. Spanyik[2)], S. Danieli[3)], E. Cantiani[3)], J. Stolfa[2)]
1) Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Department of Electronics Technology, Budapest/Hungary
2) VSB – Technical University of Ostrava, Faculty of Electrical Engineering and Computer Science, Department of Computer Science, Ostrava/Czech Republic
3) Mylia – Adecco Formazione, Milan/Italy

ID19 P1.9 TIE-M Plus: Alignment of Higher Education with Labor Market Demands

D.A.Chiuariu, M.O.Babaliga, and V.Paleu
Faculty of Mechanical Engineering, Gheorghe Asachi Technical University of Iasi, Iasi, Romania

ID67 P1.10 Education 5.0: Transforming Engineering Education in the Age of Generative AI

M. I. Ciolacu[1)], C. Marghescu[2)], M. Sorecau[3)], B. Mihailescu[2)], E. Sorecau[4)], P. Becht[4)],
1) APTE, Bucharest, Romania
2) National University of Science and Technology Politehnica Bucharest, Bucharest, Romania
3) Technical University of Cluj Napoca, Cluj Napoca, Romania
4) Land Forces Academy “Nicolae Balcescu”, Sibiu, Romania

ID9 P1.11 Optimizations of the Packaging of Li-Ion Battery Packs for Increasing Preconditioning Efficiency

R. Jánó, A. I. Ilieș, Al. Fodor
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID10 P1.12 IoT Devices for Monitoring and Analysing Air Quality in Urban Environments

R. Jánó, A. I. Ilieș, E. M. Ștețco, Co. Corcheș[1)]
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID11 P1.13 Advancing Forest Conservation: IoT Devices for Monitoring the Wellbeing of Ecosystems

R. Jánó, A.I. Ilieș, E.M. Ștețco
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID55 P1.14 An interactive visualisation tool for circular economy and building materials recovery

I. Cosma, I. Petre, G. Suciu, C. Stalidi, C. Bolocan, O.-M. Guse
Research & Development, BEIA Consult International, Bucharest, Romania

ID98 P1.15 Signal Integrity Analysis on eMMC Interface

O.-Const. Axinte, and M. Daraban
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID99 P1.16 Power Integrity Analysis of a Power Line Between a DDR4 Memory and a Controller

Marina Alex-Ioan, and M. Daraban
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID122 P1.17 Electronic Device Price Prediction using Machine Learning

R. S. Streitferdt, A. Taut, G. Chindris
Applied Electronics Department Technical University of Cluj-Napoca

ID110 P1.18 DeFraudify4ALL: Prototyping and Validation of a System for Fraud Detection with Big Data and Cloud Technology

E. C. Popovici, C. Stalidi[1)], D. A. Teodoras[1)], G. Suciu Jr.[1)], I. Cosma[1)]
Telecom Department, Politehnica University Bucharest, ETTI Faculty, Bucharest, Romania
1) R&D Department, BEIA Consult International, Bucharest, Romania

ID2 P1.19 IOT Based Fuel Track System

R. Jegadeesh Kumar, M. Lohith, S. Navienvijayaraj, S. Vignesh, D.Akash
Department of EEE Karpagam College of Engineering, Coimbatore, India

ID6 P1.20 Hardware solution performance metrics for audio file compression testing

S. A. Arghirescu, I. C. Bacivarov
National University of Science and Technology Politehnica Bucharest, Bucharest, Romania

ID7 P1.21 Smart Solutions for Sustainable Urban and Food System Development

A.B. Danila, R.A. Streche, O. Orza, F.E. Osiac, C.M. Dobre and G. Suciu
R&D Department, BEIA Consult International, Bucharest, Romania

ID8 P1.22 AI Tools introduced in Software Development. Analysis of Code quality, Security and Productivity Implications

A.-M. Dincă, G. A. Tod-Răileanu, S.-D. Axinte and I. C. Bacivarov
Faculty of Electronics, Telecommunications and Information Technology, National University Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

ID22 P1.23 Signal Integrity Analysis and Channel Reach Extension for a PCIe 3.0 Digital Interface using CST Studio and Altium Designer

C. I. Oprita[1)], I. C. Voiculescu[1)], R. C. Niculesc[1)] and L. Viman[2)]
1) Engineering DX Central Compute, Robert Bosch, Cluj-Napoca, Romania
2) Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID92 P1.24 Remote controlled automatic test bench

A. G. Zimbru, S. Lica, and I. Lie
Applied Electronics Department, Politehnica University, Timisoara, Romania

ID95 P1.25 Stand for testing the lifetime of an automotive electronic module

T. A. Vîlceanu, I. Zimța, S. Lica, and I. Lie
Applied Electronics Department, Politehnica University, Timisoara, Romania

ID97 P1.26 A Cloud Computing Solution for Quality Management Systems in Multi-Site Enterprises

N. Ionescu[1)], L. Știrbu[2)], L.M. Ionescu[3)], C. Știrbu[3)] and A.G. Mazăre[3)]
[1)]Manufacturing and Industrial Management Department, University POLITEHNICA Bucharest, Pitești, ROMANIA
[2)] ELCOS LIGHT, Pitești, ROMANIA
[3)] Department of Electronics, Computers and Electrical Engineering, University POLITEHNICA Bucharest, Pitești, Romania

ID113 P1.27 A Blockchain Solution for Risk Management in Industry

L.M. Ionescu[1)], N. Ionescu[2)], M.D. Bondoc[3)], I. Grecu[4)], A.G. Mazăre[1)] and C. Știrbu[1)]
1) Department of Electronics, Computers and Electrical Engineering, University POLITEHNICA Bucharest, Pitești, Romania

2)Manufacturing and Industrial Management Department, University POLITEHNICA Bucharest, Pitești, Romania
3) Department of Finance, Accounting and Economics, University POLITEHNICA Bucharest, Pitești, Romania
4) Department of Management, University POLITEHNICA Bucharest, Romania

ID20 P1.28 EMI numerical simulations and measurements of spread spectrum frequency modulation by an automotive boost LED driver

L. Frate, A. Avram[1)], and I.M. Purcar[2)]
Department of Electrotechnics and Measurements, Technical University of Cluj-Napoca, Cluj Napoca/Romania
1) Department of Informatics, Mathematics and Electronics, "1st of December 1918" University of Alba Iulia, Alba Iulia/ Romania
2) Department of Electrotechnics and Measurements, Technical University of Cluj-Napoca, Cluj Napoca/ Romania

ID71 P1.29 Understanding Electrochemical Migration Behavior in Fe2O3-Enhanced SAC Lead-Free Alloys

A. Gharaibeh, A. Dayoub, and B. Medgyes Department of Electronics Technology, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics, Budapest, Hungary

ID87 P1.30 Considerations regarding environmental testing of a solderless assembly for electronics module

G. Varzaru, R. Tulea, B. Mihailescu[1)], M. Branzei[2)], and P. Svasta[1)]
Syswin Solutions, Bucharest, Romania
1) Electronic Technology and Reliability Department, Center for Electronic Technology and Interconnection Techniques (CETTI), National University for Science and Technology Politehnica, Bucharest, Romania
2) Research and Expertise Center for Special Materials (CEMS), National University for Science and Technology Politehnica Bucharest, Romania

ID90 P1.31 Reliability Challenges in Nanoelectronic Devices

T. A. Al Ali, and K. A. Alzarooni[1)]
Operation Technology, Dubai Electricity and Water Authority, Dubai, UAE
1) Operation Technology, Dubai Electricity and Water Authority, Dubai, UAE

ID114 P1.32 Increasing the Specific Energy of Environmental Friendly Pseudocapacitors

D. Ionescu[1)], and M. Kovaci[2)]
1) Department of Telecomm. and Information Technologies, “Gh. Asachi” Technical University of Iasi, Romania
2) Department of Communications, Politehnica University of Timisoara, Romania

ID28 P1.33 Comparative Workbench Study of MTBF for PoL Converters with discrete Transistors vs. integrated PoL

D. Butnicu, D. Ionescu
Electronics Faculty Technical University of Iasi, Romania

ID72 P1.34 Comparative Workbench Study about MTBF for PoL Buck-Converters: Asynchronous vs. Synchronous

D. Butnicu, R. Tristu[1)]
Electronics Faculty Technical University of Iasi, Romania
1) Technical College R. Radulet, Brasov, Romania

ID123 P1.35 Qualitative Inquiry into Student Competitions in Electronics in Romania

T. Ursutiu, G. Chindris, M. Taut, R. Fizesan, A. Taut
Department of Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Cluj

---

13:40 - 15:40 Plenary Oral Session 3

EEST | GMT +3h

Session Chair: Gabriel CHINDRIȘ, Technical University of Cluj-Napoca, Romania
Session Co-Chair:, Oliver KRAMMER Budapest University of Technology and Economics, Hungary

13:40 K3 Advanced IC packaging in the context of multi-chiplet based architectures

Syhem LARGUECH
Cadence Design Systems

ID32 TIE-M Plus: Creating Bridges Between Industry and Higher Education

T. Krausz[1, 4)], I. D. Verzeș[2)], I. I. Ailinei[1, 4)], E. Csukas[1, 4)], B. Ș. Coman[3)], P. Coandă[1)]
1) Continental Automotive, Timisoara, Romania
2) Continental Autonomous Mobility, Timisoara, Romania
3) Continental Automotive, Iasi, Romania
4) Faculty of Mechanical Engineering, Politehnica University Timisoara, Timisoara, Romania

ID115 Advanced Collaboration in the Romanian Electronics Field based on the TIE Professional Student Contest

M. Cenușă[1)], L. Viman[2)], P. Svasta[3)], N. Codreanu[3)], B. Popescu[4)], F. Duruș[5)], M. Pantazică[3)]
1) Continental Automotive, Iași, Romania
2) Technical University of Cluj-Napoca, Cluj-Napoca, Romania
3) National University of Science and Technology POLITEHNICA Bucharest, Romania
4) Microchip Technology, Bucharest Romania
5) Bosch Engineering Centre, Cluj-Napoca, Romania

ID121 TIE Micro – Chiplets and Next-gen Packaging

C.B. Ciobanu[1), 2)], D. Manolescu[7)], R. Vlăduță[3)], L. Chițu[3)], M. C. Moisa[4),5)], M. Manofu[5), 6)], P. Svasta[7)]
1) Transilvania University of Brașov, Romania
2) National Institute of Research and Development in Microtechnologies, Bucharest, Romania
3) Marvell Technology, Bucharest, Romania
4)Continental Automotive Romania, Timișoara, Romania
5)Politehnica University Timișoara, Romania
6)UP-Skill Engineering Education, Timișoara, Romania
7)National University of Science and Technology Politehnica Bucharest, Romani

Friday, October 18

9:00 - 10:20 **Poster Session 2 (Starts with a pitching session)**
EEST | GMT +3h

Session Chair: Liviu VIMAN, Technical University of Cluj-Napoca, Romania
Session Co-Chair: Ciprian IONESCU, POLITEHNICA of Bucharest, Romania

ID43 P2.1 Intelligent Emergency Braking System for Bicycle

C.C. Pena[2)], M. Pena[1)], A. Gomboș[1)], E. Ceuca[2)]
1) Technical University of Cluj Napoca, Cluj Napoca, Romania
2)"1 Decembrie 1918" University, Alba Iulia, Romania

ID41 P2.2 Non-Invasive Assessment of Hydration Status Using Bioelectrical Impedance Analysis

M. Pena[1)], A. Gomboș[1)], E. Ceuca[2)]
1) Technical University of Cluj Napoca, Cluj Napoca, Romania
2)"1 Decembrie 1918" University, Alba Iulia, Romania

ID104 P2.3 The Development and Electrical and Morphological Characterization of some Electrodes on the Sponge Structure used in the Realization of Supercapacitors

R. C. Negroiu, C. I. Marghescu, I. B. Bacis, L. Dinca[1)] and R. I. Radulescu[1)]
Centre of Technological Electronics and Interconnection Techniques, National University of Science and Technology POLITEHNICA Bucharest, Romania
1) National Research and Development Institute for Textiles and Leather, Bucharest, Romania

ID77 P2.4 Electromagnetic shielding fabrics with antimicrobial properties for healthcare

I. R. Rădulescu, L. C. Dincă, E. Perdum, C. M. A. Lupescu, O. Iordache, B. Cazan[1)], and R. M. Aileni[2]
1) Department of Materials Research and Investigation, INCDTP - Bucharest, Romania
2) Department of Research in Materials Engineering and Textile Processes, INCDTP - Bucharest, Romania

ID30 P2.5 Implementing of a New Software-Defined Radio Receiver Used for DSSS-CDMA Data Signals

R. G. Bozomitu, M. A. Corban and A. Popa
Faculty of Electronics, Telecommunications and Information Technology, "Gheorghe Asachi" Technical University of Iaşi, Romania

ID37 P2.6 Conceptual model of a parking system with automatic license plate recognition

I. M. Valova, Ts. P. Mladenova[1)], and N. P. Valov[2)]
Department of Computer Systems and Technologies, University of Ruse, Ruse, Bulgaria
1) Department of Computer Systems and Technologies, University of Ruse, Ruse, Bulgaria
2) Department of Automation and Electronics, University of Ruse, Ruse, Bulgaria

ID39 P2.7 Design and Implementation of a Low-cost Modular Electronic System for Home Automation based on IoT

V. Tsankov, B. Evstatiev, I. Valova[1)]
Department of Electronics, University of Ruse „Angel Kanchev", Ruse, Bulgaria
1)Department of Computer Systems and Technologies, University of Ruse „Angel Kanchev", Ruse, Bulgaria

ID42 P2.8 Intelligent System for Investigating the Effects of the Environment on the Human Brain

A. Gomboș[1)], M. Pena[1)], E. Ceuca[2)]
1) Technical University of Cluj Napoca , Cluj Napoca, Romania
2)"1 Decembrie 1918" University, Alba Iulia, Romania

40 P2.9 Measurement and Analysis of Electroencephalogram (EEG) Signals Using Pre-Amplification and Filtering Techniques

A. Gomboș[1)], M. Pena[1)], E. Ceuca[2)]
1) Technical University of Cluj Napoca, Cluj Napoca, Romania
2)"1 Decembrie 1918" University, Alba Iulia, Romania

ID48 P2.10 Algorithms for Processing Signals of Alcohol Consumption Detecting Sensors and Engine Control Interface in Traffic

D. Ioana, I. B. Bacis, Al. Vasile
The National University of Science and Technology Politehnica Bucharest, Bucharest, Romania

ID52 P2.11 Numerical Measurement System of Fluid Flows in Pipelines Without Affecting the Integrity of the Pipeline

I. B. Bacis, C. Ionescu, R. C. Negroiu
The National University of Science and Technology Politehnica Bucharest, Romania

ID75 P2.12 Research for the Realization and Testing of an Adaptive, Programmable Dosing System for Hydro Electrolytic Balancing (SDAEH)

I. B. Bacis, C. Serboiu[1)], Al. Vasile, D. Ioana
The National University of Science and Technology Politehnica Bucharest, Bucharest, Romania
1) Bucharest University Emergency Hospital, Bucharest, Romania

ID81 P2.13 Bearing Fault Identification with the Application of Kalman Filter

I. Szabo[1)] and A. Tulbure[2)]
1) Politehnica Bucharest, Romania
2)Department of Informatics, Mathematics & Electronics, "1 Decembrie 1918" University of Alba Iulia, Romania

ID82 P2.14 Web platform for designing a hydropower system

A. Neacșu, B. Alexandrescu, R.-C. Constantinescu, and L.-A. Perișoară
Department of Applied Electronics and Information Engineering, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

ID88 P2.15 Advanced optical subsystem integration in dashboard electronics

T. Csutak, C. Moisa
Continental Automotive Romania, Timișoara, Romania

ID93 P2.16 Integration of UHF RFID sensors in railway maintenance systems

I.N. Stăncel and C.M. Surugiu
Department of Telematics and Electronics for Transports, National University of Science and Technology Politehnica of Bucharest, Bucharest, Romania

ID100 P2.17 Industrial Greenhouse Monitoring and Forecasting System

O. M. M. Tudor, R.-C. Constantinescu, and B. Alexandrescu
Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

ID36 P2.18 Characterizing Thermal Properties of 18650 Lithium-Ion Battery Cells: Experimental Approaches to Thermal Conductivity and Specific Heat Capacity Measurements

A. I. Ilies, R. Jano
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID47 P2.19 A methodology for simulation non-linear thermal system using Foster networks

A. Bojita, R. Pitu and M. Purcar
Department of Electrotechnics and Measurements, Technical University of Cluj-Napoca, Cluj/ Romania

ID50 P2.20 Master-Slave BMS Architecture with CAN-bus for Inter-Cell Communication

L.-A. Perișoară[1)], I.-B. Bacîș[2)], D.-I. Săcăleanu[1)]
1) Department of Applied Electronics and Information Engineering,
2) Centre of Technological Electronics and Interconnection Techniques, National University of Science and Technology Politehnica Bucharest, Romania

73 P2.21 Thermal Simulations and Characterization of High-Power LED Boards

A. Fodor, A.C. Davidaș, A. Grama, E.M. Ștețco, A. Ilieș and R. Jánó
Applied Electronics Department, Technical University of Cluj-Napoca, Romania

ID76 P2.22 Optimal energy management for an islanded microgrid with battery degradation cost considerations

E. Szilagyi, D. Petreus, and T. Patarau
Department of Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID80 P2.23 Comparative Analysis of Active Balancing Types for Lithium-Ion Cells

M. Olteanu and D. Petreuș
Applied Electronics Department, Tehnical University of Cluj-Napoca, România

ID38 P2.24 Innovations in Electric Vehicle Supply Equipment: Towards Smart Agriculture

M. Călin, P. Svasta
Center for Technological Electronics and Interconnection Techniques, University Politehnica Bucharest, Romania

ID61 P2.25 Automated control system for photovoltaic panel

S.-Al. Vlad, R.-C. Constantinescu and Șt.-G. Roșu
Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest

ID66 P2.26 Assessment on measuring and estimation of Ragone plots

C. Ionescu
The National University of Science and Technology Politehnica Bucharest, Center for Technological Electronics and Interconnection Techniques, Bucharest, Romania

ID94 P2.27 Sun Position Simulator for Solar Cell Testing and Characterization

C. Fărcaş, I. Ciocan and A. Tulbure[1)]
Department of Applied Electronics, Technical University of Cluj-Napoca, Romania
1) Department of Precise and Engineering Sciences, ”1 Decembrie 1918” University of Alba Iulia, Romania

ID27 P2.28 Integrating photovoltaic systems into HVAC control using fuzzy algorithms for optimizing thermal comfort

M.-G. Boicu [1)], M. – Al. Dobrea [1)], M. Vasluianu[2)], G.-V. Olteanu[1)], G. Neculoiu[2]
[1)] Faculty of Automatic Control and Computer Science, University POLITEHNICA of Bucharest, Romania
[2)] Faculty of Hidrotechnics, Technical University of Civil Engineering of Bucharest, Romania

ID69 P2.29 Decentralized Renewable Microgrids Consumers Adaptability to DC Electric Network

M. Dumitrescu
Automation and Electrical Engineering Department, Dunarea de Jos University, Galati, Romania

ID70 P2.30 Renewable Microgrids Power Supply - Consumers Electric Quality Comparative Study

M. Dumitrescu
Automation and Electrical Engineering Department, Dunarea de Jos University, Galati, Romania

ID44 P2.31 Investigating Optimal Feedback Functions of Degree 2 for Nonlinear Feedback Shift Registers Using Computer-Based Tools

A. N. Borodzhieva
Department of Telecommunications, University of Ruse “Angel Kanchev”, Ruse, Bulgaria

ID45 P2.32 Implementing Boolean Four-Input Functions with Multiplexers when Applying Project-Based Learning in the Digital Electronics Course

A. N. Borodzhieva
Department of Telecommunications, University of Ruse “Angel Kanchev”, Ruse, Bulgaria

ID46 P2.33 A Methodology for Designing Phase-Correction Sections Using an Active Implementation with an Operational Amplifier

A. N. Borodzhieva
Department of Telecommunications, University of Ruse “Angel Kanchev”, Ruse, Bulgaria

ID24 P2.34 SIMD Extensions – A Historical Perspective

D. Vuță-Popescu, I.C. Antofi , C.B. Ciobanu and C.Z. Kertész
Department of Electronics and Computers, University Transilvania of Brasov, Romania

ID101 P2.35 Prediction of the Magnetic Interaction between Atoms using a Neural Network

Al. Haidarlî, R.-C. Constantinescu, and B. Alexandrescu
Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

10:25 – 11:25 Industrial Session 2

EEST | GMT +3h

Session Chair: Bogdan MIHĂILESCU, POLITEHNICA of Bucharest, Romania

Session Co-Chair: Rajmond JANO, Technical University of Cluj-Napoca, Romania

BOSCH Group **ROMTEK Electronics**

Eberspaecher Controls RO

11:45 - 14:10 Plenary Oral Session 4

EEST | GMT +3h

Session Chair: Maria VINŢAN, Lucian Blaga University of Sibiu, Romania

Session Co-Chair: Boris EVSTATIEV, University of Ruse Angel Kanchev, Bulgary

K4 Emerging microelectronics platforms based on hybrid integration

Mircea GUINA

Tampere University, Finland

ID57 Investigating the Copper Peel and Solder Joint Shear Strength on Biodegradable Substrates

O. Krammer, G. Hambuch, R. Bátorfi, B. Illés and A. Géczy

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

ID119 Flexible Supercapacitors for Energy Supply in Smart Textiles – Applications and Prototype

I. R. Radulescu, C. M. Lupescu, E. Perdum, L. Dinca[1)], R. Negroiu[2)]

[1)] Department of Material Research and Investigation, INCDTP - Bucharest, Romania

[2)] CETTI - Faculty of Electronics, Politehnica Bucharest, Romania

ID85 Impact of Fe-NPs doped flux on electromigration in Sn-based solder joints of chip-sized SMD components at lower Joule heating

I. Wodak[1)], G. Khatibi[1)], A. Yakymovych[1)], F. Khodabakhshi[1)], O. Krammer[2)] and A. Géczy[2)]

1) Institute of Chemical Technologies and Analytics, TU Wien, Vienna, Austria

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

ID62 On the Forgetting Factors of the RLS Algorithm Based on Third-Order Tensor Decomposition

R. Otopeleanu[1)], C. Paleologu[1)], J. Benesty[2)], C. Elisei-Iliescu[3)], C. L. Stanciu[1)], and C. Anghel[1)]
1) Department of Telecommunications, POLITEHNICA Bucharest, Romania
2) INRS-EMT, University of Quebec, Montreal, Canada
3) CNS, ROMATSA, Bucharest, Romania

15:10 - 16:30 Poster Session 3 (Starts with a pitching session)
EEST | GMT +3h

Session Chair: Radu Gabriel BOZOMITU, Gheorghe Asachi Technical University of Iaşi, Romania
Session Co-Chair: Alexandra FODOR, Technical University of Cluj-Napoca, Romania

ID4 P3.1 The Intelligent Cover for Comfort and Diagnosis

M. Hnatiuc, G. Popa
Electronic and Telecommunication Department, Constanta Maritime University, Constanta, Romania

ID23 P3.2 Small-Scale V2V-VLC for Enhanced Road Traffic Safety

E. Hajj Moussa[1)], A. E. Marcu[2)], R. Abdallah Chehade[1)], G. Ballouz[1)], and B. Ionescu[3)]
1) Electrical Engineering Department, Faculty of Engineering - Branch II, Lebanese University, Roumieh, Lebanon
2) Electronic Technology and Reliability Department, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania
3) Applied Electronics and Information Engineering Department, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

ID29 P3.3 Comparative Study of Artificial Intelligence and Machine Learning Algorithms on Synthetic Lithium-Ion Cell Data

E. M. Olariu[1)], A. I. Ilies[2)], H. Hedesiu[1)], and G. Chindris[2)]
1) Electrical Engineering Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania,
2) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID31 P3.4 A New Remote System for Monitoring Physiological Parameters of Elderly People

T. I. Ursache[1)], R. G. Bozomitu[1)], and C. Rotariu[2)]
1) Faculty of Electronics, Telecommunications and Information Technology, “Gheorghe Asachi” Technical University of Iaşi, Romania,
2) Faculty of Medical Bioengineering, “Grigore T. Popa” University of Medicine and Pharmacy of Iaşi, Romania

ID33 P3.5 Decision support prototype for farmers based on environmental parameter modelling through supervised machine learning

D. I. Săcăleanu, M. Lămășanu, R. C. Constantinescu, and L. A. Perișoară
Faculty of Electronics, Telecommunication and Information Technology, National University of Science and Technology Politehnica Bucharest, Romania

ID49 P3.6 Development of an Electronic Monitoring System for a Savonius Wind Turbine

G. A. Mătușa, M. C. Mareș, and P. Svasta
Centre for Technological Electronics, and Interconnection Techniques, National University of Science and Technology "POLITEHNICA" Bucharest, Romania

ID56 P3.7 Automated Greenhouse

V. Veliciu[1)], V. Cristescu[1)], L. Viman[2)]
1) Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania
2) Applied Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID58 P3.8 Linearity Evaluation and Influence of the Reference Voltage for ADC Converter of Embedded Devices

I. H. Baciu, G. Chindris and M. Taut
Applied Electronics Department, Technical University of Cluj Napoca, Cluj Napoca, Romania

ID60 P3.9 Concept and Challenges in Microcontroller Artificial Intelligence Development

C. Corches1), A. I. Ilieș2), M. Daraban2), and G. Chindris2)
1) Automation Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania 2) Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID63 P3.10 Dynamic adaptation algorithm of Lora communication parameters in wireless sensor networks

D. I. Săcăleanu, S. V. Nadoleanu, Irina Petra Manciu, L. A. Perișoară, and R. C. Constantinescu
Faculty of Electronics, Telecommunication and Information Technology,
National University of Science and Technology Politehnica Bucharest, Romania

ID65 P3.11 Optimizing Power Consumption: A Comparative Analysis of Radio Modules used in Embedded Systems

M. C. Mareș, G. A. Mătușa, C. Săndulescu and P. Svasta
Centre for Technological Electronics, and Interconnection Techniques, National University of Science and Technology "POLITEHNICA" Bucharest, Romania

ID78 P3.12 Monitoring System with Autonomous Power Supply and Remote Radio Transmission

A. Drumea, D. I. Dedu, C.-I. Marghescu, R.C. Negroiu, and M. Pantazica
Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Bucharest, Romania

ID89 P3.13 Haptic system for the remote control of a robotic structure

A. G. Toma[1)], C. C. Molder[1)], A.G. Mătușa[2)]
1)Centre of Excellence in Robotics and Autonomous Systems-CERAS, "Ferdinand I" Military Technical Academy, 050141 Bucharest, Romania
2)Centre for Technological Electronics, and Interconnection Techniques, National University of Science and Technology "POLITEHNICA" Bucharest, Romania

ID96 P3.14 Electronic Apiary Monitoring System with Built-in Sensors and Motorized Hive Access Control

G. Florea[1)], N. Codreanu[1)], V. V. Alexandrescu[2)], and V. A. Preda[3)]
1) Department of Electronics Technology and Reliability, Center for Technological Electronics and Interconnection Techniques, Faculty of Electronics, Telecommunications, and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Romania
2) S.C. VVA Software Services S.R.L, Ploiești, Prahova
3) S.C. Urgent IT Solutions S.R.L, Ploiești, Prahova

ID103 P3.15 Advanced Electronics System for the Improvement of Concrete Factories Management

G. Florea[1)], N. Codreanu[1)] and V. V. V. Alexandrescu[2)]
1) Department of Electronics Technology and Reliability, Center for Technological Electronics and Interconnection Techniques, Faculty of Electronics, Telecommunications, and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Romania
2) S.C. Uniserv International S.R.L, Ploiești, Prahova

ID108 P3.16 Design and Implementation of a Temperature Monitoring System for the Safety of Electric Vehicle Transport on Maritime Transport

M. V. Moise and C. Oncioiu
Centre for Electronics Technology and Interconnection Techniques, Polytechnic University of Bucharest, Romania

ID112 P3.17 PCB temperature controller for automated soldering

V. Cristescu[1)], V. Veliciu[1)], L. Viman[2)]
1) Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania,
2) Applied Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID116 P3.18 2.4 GHz bandwidth spectrum analyser with frequency change using microcontroller

B. Dumitrascu, L. Baicu, and N. Nistor
Department of Electronics and Telecommunications, University "Dunarea de Jos" of Galati, Galati, Romania

ID117 P3.19 Microcontroller communication using Yagi antenna at 2.4 GHz

N. Nistor, B. Dumitrascu, L. Baicu
Department of Electronics and Telecommunications,University "Dunarea de Jos" of Galati, Romania

ID118 P3.20 WardWiz: My Personal Stylist

A. Bhawarthi, N. Lokhande[2)], S. Lokhande, R. Lole[2)], T. Lonkar, V. Loya, B. Lunawat[3)]
Computer Science, Vishwakarma Institute of Technology, Pune, India
2) Computer Science Engineering with Artificial Intelligence, Vishwakarma Institute of Technology, Pune, India
3) Information Technology, Vishwakarma Institute of Technology, Pune, India

ID120 P3.21 Solar Powered Raspberry Pi for Internet of Things and Wireless Sensor Networks

V. Voicu, D. Petreuș, and R. Etz
Department of Applied Electronics, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID12 P3.22 Development of Control Strategies for an Industrial Robot to Increase Energy Efficiency

M. – Al. Dobrea[1)], M. Vasluianu[2)], G. Neculoiu[2)], G.-V. Olteanu[1)], E. Vârlan[1)], M.-G. Boicu[2)]
[1)] Faculty of Automatic Control and Computer Science, University POLITEHNICA of Bucharest, Romania
[2)] Faculty of Hidrotechnics, Technical University of Civil Engineering of Bucharest, Romania

ID17 P3.23 NLP-Based Solutions for Call Center Optimization

S. Segărceanu[1)], R. Chevereșan[1)], G. Stoica[2)], M. Ceaparu[1)], T. Pintilie[1)], M. Niculae[1)], I. Gavăt[1)], G. Suciu[1)]
1) R&D Department, Beia Consult International, Bucharest, Romania
2) R&D Department, SMM INVEST CO SRL, Bucharest, Romania

ID59 P3.24 Defining Energy Requirements and Management for Hybrid Autonomous Underwater Vehicles

I. Cosma, I. Petre, G. Suciu, A. Catrina, M. Marin, M.-F. Dudau
Research & Development, BEIA Consult International, Bucharest, Romania

ID91 P3.25 Facial Reccognition Algorithms on Embedded Sysyems

V. Constantinescu, C. C. Molder
Centre of Excellence in Robotics and Autonomous Systems-CERAS, "Ferdinand I" Military Technical Academy, Bucharest, Romania

ID105 P3.26 Intelligent System for Integration in 5G Networks

E.G. Stănescu, T. C. Stoian and D. I. Năstac
Faculty of Electronics, Telecommunications and Information Technology, POLITEHNICA University of Bucharest, Romania

ID106 P3.27 TnyVec: A programming language for creating scripting environments

A. F. Ene and D. I. Năstac
Faculty of Electronics, Telecommunications and Information Technology, National University of Science and Technology POLITEHNICA Bucharest, Romania

ID109 P3.28 Implementation of a prototype measurement system for power transformers

B.S. Nedelcu, M.V. Moise and P. M. Svasta
Center for Electronics Technology and Interconnection Techniques, Polytechnic University of Bucharest, Romania

ID18 P3.29 Resistive and Capacitive Sensors Driver for Irrigation Applications

A.-A. Alexa, R. Fizeșan
Applied Electronics Department, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ID35 P3.30 On calibration of the magnetometer with the help of the gyroscope

S. Mischie
Department of Electronics Measurement and Optoelectronics, Politehnica University of Timisoara, Timisoara, Romania

ID54 P3.31 Qubit simulation software

I. Almahoud
Polytechnica Univ. Electronics Doctoral School, Bucharest – Romania

ID26 P3.32 The conducted emission attenuations produced by the ON-GRID photovoltaic systems loaded with residential consumers

D. Penciu, S. Andreica, M. Purcar, R. Gliga and C. Munteanu
Department of Electrotechnics and Measurements, Technical University of Cluj-Napoca, Cluj-Napoca/ Romania

ID34 P3.33 A study on multi-modal LLM reasoning for defect detection

A. A. Tulbure[1)], E. H. Dulf[1)], D. Danciu[2)], and A. A. Tulbure[3)]

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

2) Cluj Barr Association, Cluj-Napoca, Romania

3) Dept. of Engineering, “1 Decembrie 1918” University of Alba Iulia, Romania

16:30 – 17:30 Industrial Session 3

EEST | GMT +3h

Session Chair: Paul SVASTA, POLITEHNICA of Bucharest, Romania

Session Co-Chair: Ovidiu Aurel POP, Technical University of Cluj-Napoca, Romania

NXP Romania	**IFM Prover**
SYSWIN SOLUTIONS	**APTE, IMAPS Romania**