

32nd IEEE ICECS – Sunday, November 16th, 2025

02:00 PM – 03:00 PM	Tutorial 1
	Ricardo Reis and Luciano Ost Toward Resilient Autonomous IoT Systems: Assessing and Mitigating Radiation-Induced Soft Errors Room: Harti/Agdal
03:00 PM – 04:00 PM	Tutorial 2
	Pedram Mohseni Capacitive Wireless Power Transfer to Biomedical Implants: Link Design, Implementation, and Related Power Management Integrated Circuitry Room: Harti/Agdal
04:00 PM – 05:00 PM	Tutorial 3
	Padmanava Sen Key Hardware Enablers for Next Generation Reconfigurable and Energy-efficient RF systems Room: Harti/Agdal
05:00 PM – 06:00 PM	Tutorial 4
	Ahmed Lakhssassi Multi-Heat Sources Silicon-Die Thermal Monitoring Using Embedded Sensor Cells Unit: Challenges and Methodology for thermal peaks detection Room: Harti/Agdal

32nd IEEE ICECS – Monday, November 17th, 2025

09:00 AM – 10:00 AM	Bahia			
	Opening Ceremony			
10:00 AM – 10:30 AM	Hotel Lobby (hall)			
	Golden Break			
10:30 AM – 11:30 AM	Bahia Keynote 1 Pr. Danilo Demarchi <i>Let the Plants do the Talking: Climate-Smart Agriculture listening the messages received from Plants and Soil</i> Chair: Mohamad Sawan			
Room	Bahia	Koutoubia	Harti	Agdal
	S11 (A):	S11 (B):	S11 (C):	Workshop I
11:30 AM – 01:00 PM	Neuromorphic and In-memory Computing (1) Chair: Mounir Boukadoum	Amplifiers Co-Chairs: Ahmed Lakhssassi & Abdelati Reha	ADC Chair: Fayrouz Haddad	The 4th IEEE Circuits and Systems Standards Activities Workshop <i>Open RTL-to-GDSII Flow Standards Workshop</i> Chair Abdallah Kassem
01:00 PM – 02:30 PM	Hotel Restaurant Lunch Break			
Room	Bahia	Koutoubia	Harti	Agdal
	S12 (A):	S12 (B):	S12 (C):	Workshop II
02:30 PM – 04:00 PM	Neuromorphic and In-memory Computing (2) Chair: Vassilis Alimisis	Biomedical and Bio-Inspired Co-Chairs: Mourad Loulou & Corentin Piozin	Energy-Aware / Energy-Harvesting Systems and Services Co-Chairs: Andrea Ballo & Padmanava Sen	The 4th IEEE Circuits and Systems Standards Activities Workshop <i>Open RTL-to-GDSII Flow Standards Workshop</i> Chair Abdallah Kassem
04:00 PM – 04:30 PM	Hotel Lobby (hall) Coffee Break			
05:00 PM – 07:00 PM	Tour Marrakesh			

32nd IEEE ICECS – Tuesday, November 18th, 2025

Room	Bahia			
09:00 AM – 10:00 AM	Keynote 2 Pr. Hai (Helen) Li Big AI for Small Devices Chair: Mohamad Sawan			
10:00 AM – 10:30 AM	Hotel Lobby (hall) Coffee Break			
Room	Bahia	Koutoubia	Harti	Agdal
10:30 AM – 11:30 AM	S21 (A):	S21 (B):	S21 (C):	S21 (D):
	Cryptography / Encryption	DAC	DC / DC Converter	Linear and Non-Linear Circuits and Systems
	Co-Chairs: Ming-Der Shieh & Ghita Zaz	Chair: Pingda Guan	Chair: Abdelati Reha	Chair: Tales Cleber Pimenta
Room	Bahia	Koutoubia	Harti	Agdal
11:30 AM – 01:00 PM	S22 (A):	S22 (B):	S22 (C):	S22 (D):
	Digital Circuits and Systems	Smart Sensors / Smart Systems	CAD/VLSI Systems and Application	PLL / Oscillator
	Chair: Ghita Zaz & Ayoub Fentis	Chair: Tommaso Polonelli	Chair: Mohamed A. Abd El Ghany	Co-Chairs: Mourad Loulou & Himadri Singh Raghav
01:00 PM – 02:30 PM	Hotel Restaurant Lunch Break			
Room	Bahia	Koutoubia	Harti	Agdal
02:30 PM – 04:00 PM	S23 (A):	S23 (B):	S23 (C):	S23 (D):
	Transmitter / Receiver / Modulation Circuits	Memristor / RRAM / TSPC / BiCMOS	EDA / Test and Reliability	Circuits and Systems
	Co-Chairs: Aziza Hssen & Marc Rosales	Chair: Ahmed Madian	Co-Chairs: Tommaso Rizzo & Danilo Santoro	Chair: Asmae Chakir
04:00 PM – 04:30 PM	Hotel Lobby (hall) Coffee Break			
Room	Bahia			Virtual room
04:30 PM – 05:00 PM	W&YP: WiCAS & DEICAS & YP Panel Co-Chairs: Asmae Chakir, Zeinab Hijazi & Hanaa Hachimi			OL: OnLine Chair: Ghita Zaz
Room	Bahia			
05:00 PM – 06:00 PM	W&YP: WiCAS & DEICAS & YP Poster Session Co-Chairs: Asmae Chakir, Zeinab Hijazi & Hanaa Hachimi			
07:30 PM – 10:00 PM	Restaurant “Chez Ali” Gala Dinner			

32nd IEEE ICECS – Wednesday, November 19th, 2025

Room	Bahia			
09:00 AM – 10:00 AM	Keynote 3 Dr Hicham Bouzekri Green Hydrogen: the next chapter in decarbonization of hard to abate sectors Chair: Abdallah Kassem			
10:00 AM – 10:30 AM	Hotel Lobby (hall) Coffee Break			
Room	Bahia	Koutoubia	Harti	Agdal
	S31 (A):	S31 (B):	S31 (C):	S31 (D):
10:30 AM – 11:30 AM	FPGA-I Chair: Cesar Albenes Zeferino	Sensors and Sensing Systems-I Co-Chairs: Abbas Dandache & Chiara Micheli	OTA / OOK Co-Chairs: Luciano Ost & Rafat Damseh	Analog and Digital Integrated Circuits in CMOS, Algorithms and Models for Aerospace Applications Chair: Asmae Chakir
Room	Bahia	Koutoubia	Harti	Agdal
	S32 (A):	S32 (B):	S32 (C):	S32 (D):
11:30 AM – 01:00 PM	FPGA-II Chair: Luca Frontini	AI/ML/DL Co-Chairs: Mohamed A. Abd El Ghany & Zineb Hidila	Signal Processing, Image and Video Chair: Owen Casha	Society / Industry / Human-centric Society / Nanosatellite and smart IoT Chair: Meryem Abid
01:00 PM – 02:30 PM	Hotel Restaurant Lunch Break			
Room	Bahia	Koutoubia	Harti	Agdal
	S33 (A):	S33 (B):	S33 (C):	S33 (D):
02:30 PM – 04:00 PM	FPGA-III Chair: Fakhreddine Ghaffari	Analog / Mixed Signals / RF Circuits (2) Chair: Raafat Lababidi	Digital / Analog Circuits and IoT Chair: Tales Cleber Pimenta & Mohamed Lamane	Analog / Mixed Signals / RF Circuits (1) Co-Chairs: Spyridon Vlassis & Sameh Ahmed Assem Mostafa Ibrahim
04:00 PM – 04:30 PM	Hotel Lobby (hall) Coffee Break			
04:30 PM – 05:00 PM	Bahia Closing Ceremony			

Monday, November 17th

S11 (A): Neuromorphic and In-memory Computing

11:30 AM – 01:00 PM

Room: Bahia

Chair: Mounir Boukadoum (University of Quebec at Montreal, Canada)

1. Enhanced Endurance and Tunnel Electro-Resistance Ratio for Ferroelectric Tunnel Junctions by Band Engineering

Yefan Zhang, Yang Liu, Peng Yang, Shihao Yu, Xiaopeng Luo, Zihao Hou, Wei Wu, Sen Liu, Bing Song, Haijun Liu, Yinan Wang and Qingjiang Li (National University of Defense Technology, China)

2. Spiking Liquid Time-Constant Networks (sLTC): an Energy-Efficient and Adaptive Neuromorphic Approach

Karen Vanhalle (KU Leuven, Belgium); Georges G.E. Gielen (Katholieke Universiteit Leuven, Belgium)

3. A Low-Power Analog Integrated Decision Tree Classifier Architecture for Apnea-ECG Detection

Vassilis Alimisis, Konstantinos Cheliotis, Anna Mylona and Vasileios Moustakas (National Technical University of Athens, Greece); Paul Peter Sotiriadis (Johns Hopkins University EPP & Soteco Electronics LLC, USA)

4. A Power-Efficient Analog Integrated K-Means Classifier Architecture for Brain Stroke Prediction

Vassilis Alimisis, Konstantinos Cheliotis, Anna Mylona and Vasileios Moustakas (National Technical University of Athens, Greece); Paul Peter Sotiriadis (Johns Hopkins University EPP & Soteco Electronics LLC, USA)

5. A Versatile Time-Domain Winner-Take-All Spike Decoder for Neuromorphic Systems

Pedro Sartori Locatelli and Mahsa Zareie (Dalhousie University, Canada); Dalton Martini Colombo (Federal University of Minas Gerais, Brazil); Michael S Freund and Kamal El-Sankary (Dalhousie University, Canada)

S11 (B): Amplifiers

11:30 AM – 01:00 PM

Room: Koutoubia

Co-Chairs: Ahmed Lakhssassi (Université du Québec en Outaouais, Canada) and Abdelati Reha (EMSI Marrakech, Morocco)

1. A 13.56 MHz Inductive Wireless Power Transfer System for Active Implantable Medical Devices

Andrea Dentis, Paolo Motto Ros, Letizia Cantore, Stefano Concadoro and Danilo Demarchi (Politecnico di Torino, Italy)

2. Design Flow of a Multi-Path Nested Miller Compensation Three-Stage Amplifier: Frequency Domain and Large Input Signal Response

Giuseppe Manfredini, Tommaso Rizzo, Michele Lombardo and Paolo Angelini (STMicroelectronics, Italy)

3. An Ultra Low Noise, Low Offset Chopper Operational Amplifier in 180 nm Technology

Clément Dufossée (University of Bordeaux, France); Jean-Baptiste Begueret (University of Bordeaux I, France); Thierry Taris (University of Bordeaux I, France); Adrien F. Vincent (University of Bordeaux, France); Sylvain Saïghi (University of Bordeaux UMR 5218 IMS, France)

4. A Bias-Control Technique for Efficiency Improvement in CMOS Class-E Power Amplifiers

Roberto Cancelli, Gianfranco Avitabile and Antonello Florio (Politecnico di Bari, Italy)

5. CORA-OpAmp: a Compact Open-Source Reinforcement-Learning Approach for Operational Amplifier Optimization in IHP SG13G2

Maximilian Scherzer and Mario Auer (Graz University of Technology, Austria)

6. PVT-Inclusive mmWave IC Sizing Optimizations Boosted by ANN-Based Performance Regressors and Transfer Learning

Pedro Paiva and Filipe Azevedo (IT, Instituto Superior Técnico - University of Lisbon, Portugal); Ricardo M. F. Martins (Instituto de Telecomunicações, Portugal & Instituto Superior Técnico - University of Lisbon, Portugal)

S11 (C): ADC

11:30 AM – 01:00 PM

Room: Harti

Chair: Fayrouz Haddad (University of Toulon, France)

1. Comparative Study of Single Event Transient Effects on Dynamic Comparator in Bulk CMOS

Ming Yan and Kamal El-Sankary (Dalhousie University, Canada); Li Chen (University of Saskatchewan, Canada)

2. A 100 V Input Common-Mode Range Compact Three-Step Incremental ADC Architecture Evaluation Achieving 101.48 dB SNDR and 6.46 μ VRMS Input-Referred Noise

Timothee Tremblay (University of Lille, France); Matthieu Desvergne, Patrik Arno and Andreia Cathelin (ST Microelectronics, France); Andreas Kaiser (University of Lille, France)

3. A 208 MS/s 32-Channel Burst-Sampling ADC in 0.18 μ m BiCMOS

Kenny Tobias Vohl (RWTH Aachen, Germany); Tobias Zekorn (Power Integrations, Switzerland & RWTH Aachen University, Germany); Erik Wehr (RWTH Aachen, Germany); Ralf Wunderlich (RWTH Aachen University, Germany); Stefan Heinen (RWTH Aachen, Germany)

4. Low Power ADC Buffer: a Python Based Gm/ID Design Methodology

Tiago Cortez (Tyndall National Institute (MCCI), Portugal); Cian O'Donnell (MCCI, Ireland & Tyndall National Institute, Ireland); Daniel O'Hare (Tyndall National Institute, Ireland)

5. A Subranging ADC with Redundant Shared-Ladder DAC for Low-Modulation AM Readout

Johan Arbustini (Kiel University, Germany); Eric Elzenheimer (Christian-Albrechts-Universität zu Kiel & Faculty of Engineering, Germany); Henrik Wolframm and Michael Höft (Kiel University, Germany); Robert Rieger (University of Kiel, Germany); Andreas Bahr (Technische Universität Dresden, Germany)

Room: Agdal**Chair:** Abdellah kassem (Notre Dame University, Lebanon)**◆ IEEE Circuits and Systems Society Standards Activities Sub Division**

The IEEE Circuits and Systems Society (CASS) has established the Standards Activities Sub Division (SASD) under its Technical Activities (TA) Division. In collaboration with IEEE Standards Association (IEEE SA), IEEE CASS SASD would be able to provide an open, inclusive, and transparent environment for voluntary consensus standardization, and other industry consensus activities in the area of Circuits and Systems.

The mission of SASD is to encourage all the relevant stakeholders to participate in standardization activities, promote the use of IEEE standards, and develop useful products that leverage IEEE standards within the scope of the CASS. This new initiative also aims to promote and foster a close relationship between academia and industry communities. Professionals or ad hoc industry groups engaged in standardization activities related to CASS should consider bringing their activities under the IEEE CASS SASD to take advantage of the broader impact of IEEE Standards.

◆ The 4th IEEE Circuits and Systems Standards Activities Workshop

The workshop aims to identify priority areas such as intermediate representations, constraint and timing formats, exchange specifications, and tool interoperability APIs, while fostering collaboration between academia, industry, and open-source communities. ORFSW 2025 will gather researchers, practitioners, and industry experts to discuss emerging needs and opportunities for open, interoperable standards across RTL-to-GDSII design flows.

◆ Speakers :

- **Edmund Humenberger** (Symbioticeda, Austria)

Topic: Boosting Design Productivity with True Open and Free Data Formats

- **Hai (Helen) Li** (Duke University, USA)

Topic: Transforming EDA with Foundational Models: From Autonomous Design Agents to Post-training Customization

◆ Panel:

- **Prouvee Jerome** (Cea Leti, France)
- **Boon Chong Ang** (INTEL, Malaysia)
- **Mohamed A Abdelghany** (German University in Cairo (GUC), Egypt)
- **Hossam O. Ahmed** (American University of the Middle East (AUM), Kuwait)
- **Ahmed Madian** (Nile University, Egypt)

Room: Bahia

Chair: Vassilis Alimisis (National Technical University of Athens, Greece)

1. A Clock-Free Analog Time-Domain Dendrite Circuit for Neuromorphic Computing

Elaine Greenfield (Rochester Institute of Technology, USA); Tejasvi Das and Cory Merkel (Rochester Institute of Technology, USA)

2. Biologically Inspired Multi-Timescale Sequence Processing in Hybrid CMOS-Memristive Hardware

Ming-Jay Yang (Forschungszentrum Jülich, Germany); Pascal Nieters (Institute of Cognitive Science); Johannes Hellwig, Dimitrios Spithouris and Regina Dittmann (Forschungszentrum Jülich, Germany); Gordon Pipa (Institute of Cognitive Science, Germany); John Paul Strachan (RWTH Aachen, Germany)

3. Low-Power Asynchronous Comparator with Current Feedback for Emerging-Memory-Based Computing

Paolo Gibertini (University of Groningen, The Netherlands); Erika Covi (University of Groningen, The Netherlands & Zernike Institute for Advanced Materials, The Netherlands)

4. Robustness of Memristor Neural Networks to Stuck-at Faults: A Two-Layer MNIST Case Study

Hassen Aziza (Universite of Aix-Marseille, France); Karine Coulié and Wenceslas Rahajandraibe (Aix-Marseille University, France)

5. Dynamic Error Correction for Memristive Devices via Passive Resistance-to-Time Encoding

Ioannis Tompris, Ioannis K. Chatzipaschalis, Iosif-Angelos Fyrigos and Georgios Sirakoulis (Democritus University of Thrace, Greece)

6. Toward Neuromorphic TinyML for Efficient Visual Perception

Ismail Lamaakal (Mohammed Premier University, Morocco & FPB, Morocco); Chaymae Yahyati and Khalid El Makkaoui (Mohammed Premier University, Morocco); Ibrahim Ouahbi (Mohammed First University, Morocco); Yassine Maleh (UMS, Morocco)

Room: Koutoubia

Co-Chairs: Mourad Loulou (National School of Engineering of Sfax, Tunisia) and Corentin Piozin (Aarhus University, Denmark)

1. Extended Charge-Pump Pulser for Bipolar 5-Level Operations in Medical Ultrasound

Marco Rossano, Gianfranco Avitabile and Antonello Florio (Politecnico di Bari, Italy)

2. Miniaturized Dual 400 mV LDO Regulators with 7.3-21.5 nA Quiescent Current for Biomedical Implants

Yuwei Liu (EPFL - Swiss Federal Technology Institute of Lausanne, Switzerland); Ali Meimandi and Sandro Carrara (EPFL, Switzerland)

3. Subject-Specific Parameter Optimization for Event-Driven Encoding of sEMG in Regression-Based Motor Control

Corentin Piozin and Hoda Fares (Aarhus University, Denmark); Farshad Moradi (Aarhus University & Integrated Circuits and Electronics Lab., Denmark)

4. An Integrated Heating and Fluorescence Detection Device for LAMP-Based Microfluidic Point-of-Care Diagnosis of Tuberculosis

Jehad Alibaser, Erwin Realizan, Robby Zablan and Ralph Maru Grande (University of the Philippines Diliman, Philippines); Michael Kim JR B Mendoza, Joannah Marie T Bislumbre, John Meldwin D Cuaes and Coleen M Pangilinan (University of the Philippines Manila, Philippines); Rafael M Pangilinan (University of the Philippines Diliman, Philippines); Raul V Destura (University of the Philippines Manila, Philippines); Marc Rosales (University of the Philippines, Philippines); John Richard Hizon and Maria Theresa De Leon (University of the Philippines Diliman, Philippines)

5. Portable Impedance Microfluidic Platform for 60-Minute Antibiotic Susceptibility Testing

Hanane Tissir (Polytechnique Montreal, Canada)

6. Electrical Bio-Stimulation, Practical Safety for Circuits in Clinical Use

Eric A. Bharucha (Université Laval, Canada); Younes Messaddeq (Laval University, Canada); Benoit Gosselin (Laval University & Smart Biomedical Microsystems Lab, Canada); Simon Tremblay (Quantum Systems, Canada); Stephane Hamel (ABB Bomem, Canada)

S12 (C): Energy-Aware/Energy-Harvesting Systems and Services

02:30 PM – 04:00 PM

Room: Harti

Co-Chairs: Andrea Ballo (University of Catania, Italy) and Padmanava Sen (Research Group Leader, Barkhausen Institut gGmbH, Germany & Barkhausen Institut gGmbH, Germany)

1. Utilizing Transmission Lines for Efficient Energy Harvesting in 5G Networks

Rashid Rashidzadeh and Maryam Eshaghi (University of Windsor, Canada)

2. Efficient Energy Harvesting Topologies from ULV Input Signals: Analysis and Experimental Results

Marcio Bender Machado (Federal Institute of Sao Paulo, Brazil); Pedro de Castro (IFSP Campus Sertãozinho, Brazil); Mohamad Sawan (Westlake University, China & Polytechnique Montréal, Canada)

3. Piezoelectric Energy Harvesting Using Fully Integrated SECE Method: An Analytical Study of the Residual Voltage

Laura Vicente-García (University of Santiago de Compostela, Spain); Óscar Pereira (University of Santiago de Compostela); Paula López (University of Santiago de Compostela, Spain)

4. Energy-Aware Systems and Services: A Fair Balancing Payoff of Shared Voluntary Investments in Power Systems

Antonio T Alexandridis (University of Patras, Greece)

5. Internet of Energy (IoE): a Literature Review Study

Adulai Djalo (UNILAB, Brazil); Sumaé Embalo (USP, Brazil); Mariano Vunge (UNILAB, Brazil); Syntia R. R. Souza (UFRPE, Brazil); Tales Cleber Pimenta (Universidade Federal de Itajuba, Brazil); Sabi Y M Bandiri (UNILAB, Brazil)

6. Internet of Energy Applications for Intelligent Microgrid and Smart Grid Management

Youness Hakam (EMSI, Morocco)

S21 (A): Cryptography/Encryption

10:30 AM – 11:30 AM

Room: Bahia

Co-Chairs: Ming-Der Shieh (National Cheng Kung University, Taiwan) and Ghita Zaz (The National School of Arts and Crafts, Hassan II University, Morocco)

1. Algorithm and Hardware Co-Design Exploration for NTRU Equation Solving

Ming-Der Shieh and Jun-Hao Liao (National Cheng Kung University, Taiwan)

2. Area-Efficient Hardware Design for Approximate Basis Conversion in RNS-Variant CKKS Schemes

Qi-Xian Wu, Tsu-Hsiung Huang and Ming-Der Shieh (National Cheng Kung University, Taiwan)

3. A Compact QRNG for IoT Applications

Nicola Massari, Luca Parmesan and Alessandro Tontini (Fondazione Bruno Kessler, Italy)

4. Attack on Memory Encryption in MPSoCs Using HT-Infected AES Core

Nilanjana Das, Mattis Hasler and Friedrich Pauls (Barkhausen Institut, Germany); Yogesh Verma (Barkhausen Institut, Germany); Sebastian Haas (Barkhausen Institut, Germany)

S21 (B): DAC

10:30 AM – 11:30 AM

Room: Koutoubia

Chair: Pingda Guan (University College Dublin, Ireland)

1. A Dual-Rate Hybrid DAC for High-Speed 6G Massive MIMO Transceivers

Akram Akbari (Nokia Bell Labs, France & TELECOM PARIS, France); Eric Wantiez (Thales, France); Cristobal Perez (Nokia Bell Labs, France); Chadi Jabbour (Telecom Paris, France)

2. A 4096-Channel, 1.13mW/Ch Pixel-Level Driver Circuits for Optical Phased Arrays with 12-Bit R-2R DAC and Cross-Coupled Push-Pull 15Vpp Voltage Output Amplifier

Junfeng Wang, Kejun Wu, Qilin Liang, Qianfeng Zhang, Zhen Yu, Yihu Yu, Ning Ning, Jing Li, Zhong Zhang and Qi Yu (University of Electronic Science and Technology of China, China)

3. Power Consumption Reduction in Digital Beamforming Exploiting Sigma-Delta DACs

Patrick Pandja Ndongo (CEA LETI, France); Dominique Morche (CEA Leti, France); Inbar Fijalkow (ETIS / CY Cergy Paris University, ENSEA, CNRS, France)

4. Simulation-Based Analysis of a New Algorithmic Calibration Technique for the R-2R DACs

Ugur Cini (Uskudar University, Turkey)

S21 (C): DC/DC Converter

10:30 AM – 11:30 AM

Room: Harti

Chair: Abdelati Reha (EMSI, Morocco)

1. DC-DC Boost Converter Design with External Control via Optical Fiber for Cryogenic Applications

Marco Bassani and Massimo Lazzaroni (Università degli Studi di Milano, Italy); Danilo Santoro (University of Parma, Italy); Valeria Trabattoni (University of Milan, Italy); Andrea Zani (INFN Milano, Italy)

2. Adjustable Setpoint Proportional (ASP) Control for Interleaved Switched Capacitor DC/DC Converter

Ahmed Al-Qallaf (StarIC Inc., Canada) and Kamal El-Sankary (Dalhousie University, Canada)

3. Comparison of Charge Pumps Configurations Using First-Order Dynamics

Seifeddine Bahhar (University of Guelph, Canada); Masoud Askariraad and Stefano Gregori (University of Guelph, Canada)

4. An Area-Efficient Design Strategy for Dickson Charge Pumps on Flexible Substrate

Andrea Ballo, Alfio Dario Grasso and Gaetano Palumbo (University of Catania, Italy)

S21 (D): Linear and Non-Linear Circuits and Systems

10:30 AM – 11:30 AM

Room: Agdal

Chair: Tales Cleber Pimenta (Universidade Federal de Itajuba, Brazil)

1. Dead-Zone Free Memristor-Based Phase-Frequency Detector for Duty-Cycled Transceivers

Nahla Elazab Elashkar (Electronics Research Institute (ERI), Egypt); Ahmed Khalil, Mohamed Aboudina and Hossam A. H. Fahmy (Cairo University, Egypt); Ghada Ibrahim (Electronics Research Institute, Egypt)

2. A Chaotic Jerk-Based Reservoir Computing Approach for DoS Attack Detection

Thalita Nazare and Erivelton Nepomuceno (Maynooth University, Ireland)

3. Lyapunov Exponent Estimation via Switch-Based Initial Condition Control in SPICE-like Simulations

Thalita Nazare (Maynooth University, Ireland); Ryan Murphy (Maynooth University, Ireland) and Erivelton Nepomuceno (Maynooth University, Ireland)

4. High-Precision CMOS Multiplier with Wide Dynamic Range

Dirk Killat (Brandenburg University of Technology, Germany); Pavol Pitonak (Anabrid GmbH, Germany); Bernd Ulmann (FOM University of Applied Sciences & Anabrid GmbH, Germany)

S22 (A): Digital Circuits and Systems

11:30 AM – 01:00 PM

Room: Bahia

Co-Chairs: Ghita Zaz (The National School of Arts and Crafts, Hassan II University, Morocco) and Ayoub fentis (EMSI, Morocco)

1. Modified Wallace-Tree Architecture Design and Implementation for High-Speed Multiplier

Bing-Huang Wu, Tung-Chin Tsai and Ming-Hwa Sheu (National Yunlin University of Science & Technology, Taiwan); Chung-Ho Chen (National Cheng-Kung University, Taiwan)

2. Flattening the Hierarchical Navigable Small World Graph for Efficient Hardware-Based Vector Search

Xuyang Xia (The University of Edinburgh, United Kingdom (Great Britain)) and Alex Serb (University of Edinburgh, United Kingdom (Great Britain))

3. An Improved AI-Based Micro-Single-Event-Latchup (Micro-SEL) and SEL Detection in a COTS System Against R/C/L-Induced (Power Management) Distortions

Junkai Zhao, Caoyang Yu and Jiwei Wang (Nanyang Technological University (NTU), Singapore); Yin Sun (Nanyang Technological University, Singapore); Qing Tony Zhang (Zero-Error Systems Pte Ltd, Singapore); Tong Ge (NTU, Singapore); Kwen Siong Chong and Wei Shu (Zero-Error Systems Pte Ltd, Singapore); Joseph Chang (NTU, Singapore)

4. LOMOS: a Power-Efficient Topology for CMOS Logic Gate Design

Salma Saher Gabr and Sameh Ahmed Assem Mostafa Ibrahim (Ain Shams University, Egypt)

5. SeAL: A Provably Complete Fault-Injection Tool for Asynchronous Circuits

Raghda El Shehaby (Vienna University of Technology (TU Wien), Austria); Matthias Fuegger (CNRS, LMF, ENS Paris-Saclay, France); Florian Huemer (Vienna University of Technology (TU Wien), Austria); Andreas Steininger (Vienna University of Technology, Austria)

6. Readout Circuits for Three-Dimensional Integration of Single-Photon Avalanche Diode Detector Arrays

Zhenjie Wang and Bhaskar Choubey (University of Siegen, Germany)

S22 (B): Smart Sensors/Smart Systems

11:30 AM – 01:00 PM

Room: Koutoubia

Chair: Tommaso Polonelli (ETH Zurich, Switzerland)

1. Evaluating Electric Charge Variation Sensors for Camera-Free Eye Tracking on Smart Glasses

Alan Magdaleno, Pietro Bonazzi, Tommaso Polonelli and Michele Magno (ETH Zurich, Switzerland)

2. Traffic-Based Air Pollution Monitoring System for Urban Intersections

Asil Andrei B. Acasio (University of the Philippines Diliman, Philippines); John Karlo N Cenabre (University of the Philippines Diliman & UP Center for Air Research in Urban Environments, Philippines); Ken Zachary D Rollo (University of the Philippines Diliman, Philippines & UP Center for Air Research in Urban Environments (CARE), Philippines); Jaybie A. de Guzman and Isabel Austria (University of the Philippines Diliman, Philippines); Marc Rosales (University of the Philippines, Philippines); John Richard Hizon (University of the Philippines Diliman, Philippines)

3. Low-Power Real-Time Keyword Spotting for Autonomous Edge Devices

Michael Grzybek, Andrew Comtois, Masoud Askarirad and Stefano Gregori (University of Guelph, Canada)

4. Contact and Slippage Detection Algorithm Using a Soft PVDF-Based Sensing System

Razan Khalifeh (University of Genoa, Italy); Chiara Micheli (University of Genova, Italy)

5. Enhancing Intelligent Battery Management on Automotive Microcontrollers Using LightGBM

Khaled Sidahmed Sidahmed Alamin and Chao Song (Politecnico di Torino, Italy); Sara Vinco (Politecnico Di Torino, Italy); Francesco Daghero (Politecnico di Torino, Italy)

6. Automatic License Plate Recognition (ALPR) Using YOLO and Small Language Models for Edge Explainable Surveillance Systems

Yasser Hmimou (EMSI, Morocco & IACS Laboratory, ENSET Mohammedia, Hassan II University, Casablanca, Morocco); Zineb Hidila (Lpri Emsi, Morocco); Azeddine Khat (Lab SSDIA, Morocco)

S22 (C): CAD/VLSI Systems and Application

11:30 AM – 01:00 PM

Room: Harti

Chair: Mohamed A. Abd El Ghany (German University in Cairo & TU Darmstadt, Egypt)

1. Comparative Evaluation of Reinforcement Learning and Evolutionary Algorithms for Effective Analog Circuit Sizing

Eleni Papageorgiou (Aristotle University of Thessaloniki, Greece); Cătălin Vișan (Politehnica Bucharest, Romania); Andi Buzo (Infineon Technologies Romania&Co SCS, Romania); Georg Pelz (Infineon Technologies AG, Germany); Horia Cucu (Politehnica University of Bucharest, Romania); Thomas Noulis (Aristotle University of Thessaloniki, Greece)

2. AI-Assisted Design of a Compact Voltage Monitoring System with a Millisecond-Delayed Fault Detection Circuit

Ahmed Abuelnasr, Isa Hassan Altoobaji, Mostafa Amer and Ahmad Hassan (Polytechnique Montreal, Canada); Yvon Savaria (École Polytechnique de Montréal, Canada)

3. Transfer Learning for Efficient Analog Design Migration Across Process Nodes Using Reinforcement Learning

Eleni Papageorgiou (Aristotle University of Thessaloniki, Greece); Andi Buzo (Infineon Technologies Romania&Co SCS, Romania); Georg Pelz (Infineon Technologies AG, Germany); Thomas Noulis (Aristotle University of Thessaloniki, Greece)

4. RISC-V Core Based Controller for LPDDR4X SDRAM PHY-Training

Omar Hisham (German University in Cairo, Egypt); Viktor Weinelt, Hannes Korn and Klaus Hofmann (TU Darmstadt, Germany); Mohamed A. Abd El Ghany (German University in Cairo & TU Darmstadt, Egypt)

5. A 5 Gb/s Half-Rate Clock and Data Recovery with Adaptive Equalizer Using ISI Detecting Technique

Yan-Ci Li, Kuo-Hsing Cheng and Shi-Yang Sun (National Central University, Taiwan); Hong-Yi Huang (National Taipei University, Taiwan)

S22 (D): PLL/Oscillator

11:30 AM – 01:00 PM

Room: Agdal

Co-Chairs: Mourad Loulou (National School of Engineering of Sfax, Tunisia) and Himadri Singh Raghav (University of Edinburgh, United Kingdom (Great Britain))

1. High Frequency 8-Phase Feed-Forward Current Starved Ring Oscillator

Mounika Akula (Silicon Austria Labs, Austria); Ion Vornicu (Silicon Austria Labs GmbH, Austria); Laurentiu Acasandrei (Silicon Austria Labs, Austria)

2. Dealing with Non-Idealities of Power-Clock Generation for Adiabatic Systems

Himadri Singh Raghav, Sachin Maheshwari, Mike Smart, Themistoklis Prodromakis and Alex Serb (University of Edinburgh, United Kingdom (Great Britain))

3. Characterization of a 5 GHz Frequency Divider for a Cryogenic PLL in 22-nm FDSOI

Himadri Shekhar Bhattacharyya (Research Associate at Fraunhofer EMFT, Germany); Johannes Weber (Research Associate, Germany); Erkan Nevzat Isa (Fraunhofer EMFT, Germany); Enno Boehme (Researcher, Germany); David Borggreve (Fraunhofer EMFT, Germany); Amelie Hagelauer (Fraunhofer, Germany)

4. A High-Linearity 250-MHz Constant-Slope Digital-to-Time Converter

Peng Chen (University College Dublin, Ireland & Infineon, Ireland); Viet Nguyen (University College Dublin, Ireland); Hongtao Huang and Xiongchuan Huang (Fudan University, China); Feifan Hong, Pingda Guan and Robert Bogdan Staszewski (University College Dublin, Ireland)

5. A Programmable 1.2 V to 18 V Charge Pump with an Internal 500 kHz Clock in 55nm CMOS

Alessandro Lanteri (Universita' degli Studi di Milano-Bicocca, Italy); Luca Sant and Richard Gaggl (Infineon Technologies Austria, Austria); Andrea Baschiroto (University of Milano Bicocca, Italy)

6. Comparison of Ultra-Low Phase Noise BAW-Based NMOS and PMOS Cross-Coupled Oscillators

Estevan Chia Hung Tu (University of Bordeaux, France); Jean-Baptiste Begueret (University of Bordeaux I, France); Stéphane Thuriès (NXP Semiconductors, France); Emmanuel Pistono (University Grenoble Alpes, CNRS, IMEP-LAHC, France); Florence Podevin and Sylvain Bourdel (Université Grenoble Alpes, Grenoble INP, RFIC-Lab, France)

Room: Bahia

Co-Chairs: Aziza Hssen (Universite of Aix-Marseille, France) and Marc Rosales (University of the Philippines, Philippines)

1. LO Leakage Cancellation Using Upconverter Mixer Transistors Back-Gate Bias Control in a 22 nm FDSOI 39 GHz Transceiver

Jerome Prouvee, Olivier Guille and Baudouin Martineau (CEA-LETI, France); Cedric Dehos and Abdelaziz Hamani (CEA, France); Dominique Morche (CEA Leti, France)

2. A 20 Gb/s Half-Rate PAM-4 Clock and Data Recovery with Data Independent Phase Tracking Compensation Technique

Kuang-Ya Wu, Kuo-Hsing Cheng, Yu-Yen Ke and Chih-Wei Tsai (National Central University, Taiwan); Hong-Yi Huang (National Taipei University, Taiwan)

3. Architectural Trade-Offs in the Design of High-Speed PAM-3 Wireline Transmitters

Adis Panjevic (University of Sarajevo, Faculty of Electrical Engineering, Bosnia and Herzegovina); Davide Menin and Andrea Bandiziol (Infineon Technologies Austria AG, Germany); Tarik Uzunovic (University of Sarajevo, Faculty of Electrical Engineering, Bosnia and Herzegovina)

4. Design of a 160- μ W OOK Transmitter Utilizing the Quenching Principle for Super-Regenerative Transceivers

Sherif Saleh (Institute for Microsystem and Technology, Germany)

5. Sensitivity Analysis of Self-Interference Cancellation in Differentially-Fed Shared-Patch Antenna Arrays for in-Band Full-Duplex Applications

Hanan Ouled Ongoura (Lab-STICC, University of Brest, France); Hadi Hijazi (Ensta & Institut Polytechnique de Paris, France); Marc Le Roy (Lab-STICC, France); Raafat Lababidi (Ensta, France & Institut Polytechnique de Paris, France); Andre Perennec (Lab-STICC, France); Roland Gautier (University of Brest, France); Benewende Yves Ulrich Simpre (Lab-STICC, University of Brest, France); François-Maël Robert and Meriem Nesrine Djama (University of Brest, France)

6. BLE and mmWave Data Fusion Techniques for an Indoor Positioning System

Christine Erica A. Aguilar, Rhea Lynn R. Recomio and Mhar E. Tamayo (University of the Philippines Diliman, Philippines); Marc Rosales (University of the Philippines, Philippines); Paul Jason Co and John Richard Hizon (University of the Philippines Diliman, Philippines)

Room: Koutoubia

Chair: Ahmed Madian (Nile University, Egypt)

1. A Reading Scheme for 3T3R RRAM and Their Arrays Recognizing 64 States

Running Guo, Stefan Pechmann and Amelie Hagelauer (Technical University of Munich, Germany)

2. A Fast Reading Method for Multi-Level RRAM in Small-Scale Arrays

Running Guo, Keyu Liu, Stefan Pechmann and Amelie Hagelauer (Technical University of Munich, Germany)

3. Design of a Retentive and Single-Event Upset Tolerant TSPC Flip-Flop

Ahmet Cirakoglu (The University of Edinburgh, United Kingdom (Great Britain)); Alex Serb and Khaled Humood (University of Edinburgh, United Kingdom (Great Britain)); Mark Zwolinski (University of Southampton, United Kingdom (Great Britain)) and Themistoklis Prodromakis (University of Edinburgh, United Kingdom (Great Britain))

4. High-Voltage (5-Vpp) Driver Monolithically Integrated with Thermally Tunable Optical Ring Resonators in a Silicon Photonics Technology

Maxim Weizel (Paderborn University / Heinz Nixdorf Institute); Sergiy Gudyriev (X-FAB Global Services); Andrea Zazzi (University of California Berkeley, USA); Juliana Müller (Black Semiconductor, Germany); Tobias Schwabe (Paderborn University, Germany); Jeremy Witzens (Institute for Integrated Photonics, RWTH Aachen, Germany); Christoph Scheytt (University of Paderborn, Germany)

5. An Analogue Counter Using Memristor for Single Photon Detectors

Hao Qian, Shengchao Zhang and Zidu Li (University of Siegen, Germany); Paul C.-P. Chao (National Chiao Tung University, Taiwan); Bhaskar Choubey (Seigen University, Germany)

6. A Sense-FET-Based Charge Sensor with Auto-Zero Offset Cancellation and 3.1ns Response Time for Charge Control of SIMO DC-DC Converters

Erik Wehr, Kenny Tobias Vohl and Tom Herzog (RWTH Aachen, Germany); Ralf Wunderlich (RWTH Aachen University, Germany); Stefan Heinen (RWTH Aachen, Germany)

S23 (C): EDA/Test and Reliability

02:30 PM – 04:00 PM

Room: Harti

Co-Chairs: Tommaso Rizzo (STMicroelectronics, Italy) and Danilo Santoro (University of Parma, Italy)

1. A New Online Fault Detection Mechanism for Neural Network Applications

Luca De Paola, Giuseppe Esposito, Juan Guerrero and Matteo Sonza Reorda (Politecnico di Torino, Italy)

2. VerTrace: An Open-Source Toolchain for Portable Stimulus Vertical Reuse

Petr Bardonek and Marcela Zachariasova (Brno University of Technology, Czech Republic)

3. Accelerated Radiation Testing Method for Processor-Based Computing Systems

Luiz Henrique Laurini (Univ. Grenoble Alpes, CNRS, Grenoble INP, TIMA, 38000 Grenoble, France); Luciano Ost (Wolfson School, Loughborough University, LE11 3TU Loughborough, U.K.); Sergio Cuenca-Asensi (Dept. of Computer Technology, Univ. of Alicante, Spain); Benjamin Cheymol (Univ. Grenoble Alpes, CNRS, IN2P3, Grenoble INP, LPSC, 38000 Grenoble, France); Emmanuel Atukpor (Institut Laue-Langevin, 38000 Grenoble, France); Rodrigo Possamai Bastos (Univ. Grenoble Alpes, CNRS, Grenoble INP, TIMA, 38000 Grenoble, France)

4. Comparative Thermal Analysis of Single vs. Arrayed Layouts for Integrated Power Transistors Using COMSOL

Mostafa Amer, Ahmed Abuelnasr and Ahmad Hassan (Polytechnique Montreal, Canada); Yvon Savaria (École Polytechnique de Montréal, Canada)

5. Leveraging Convolutional Autoencoders for Post-Layout Performance Estimation of Analog ICs

Carlos Almeida (Instituto Superior Técnico - Universidade de Lisboa, Synopsys, Portugal); Marco Oliveira (Synopsys, Portugal); Lihong Zhang (Memorial University of Newfoundland, Canada); Ricardo M. F. Martins (Instituto de Telecomunicações, Portugal & Instituto Superior Técnico - University of Lisbon, Portugal)

6. Bridging Formal and Dynamic Verification: A Unified Methodology for Design Verification

Kareem Wasiem Ibrahim Elsaid (Si-Vision, Egypt & Ain shams university, Egypt); Magdy Ahmed Abbas, Ahmed Abdelmonem and Philopateer Abdullah (Cairo University, Egypt); Anton Saber (Ain Shams University, Egypt)

Room: Agdal

Chair: Asmae Chakir (EMSI Casablanca, Morocco)

1. Magnetic Induction Based Modeling and Optimization of Wireless Channels in Underground High-Conductivity Media

Farouk Jawhari (University of Bordeaux, France & SLB, France); Guillaume Ferré (University of Bordeaux, France); Dominique Dallet (IMS Laboratory - Bordeaux INP - University Bordeaux, France); Toshihiro Nomura (SLB, France)

2. Enhanced Voltage Reference Circuit Design Using Quadratic Function Modeling of MOSFET Characteristics in the Saturation Region

Shuya Isawa, Kawori Sekine and Kazuyuki Wada (Meiji University, Japan); Francois Rivet (University of Bordeaux, France); Herve Lapuyade (University of Bordeaux & IMS Labs, France); Yann Deval (University of Bordeaux & IMS Laboratory, France)

3. CircuitRIS: a Simulation Framework for Analyzing Circuit-Level Non-Idealities in RIS-Aided Wireless Communications

Stefano Lioce (Centre Inria d'Université Côte d'Azur, France); Antonello Florio and Gianfranco Avitabile (Politecnico di Bari, Italy); Walid Dabbous (Inria, Université Côte d'Azur, France)

4. An Ultra-Low Power CMOS Pulse Generator for Skymionic Circuits

George Chararas (Aristotle University of Thessaloniki, Greece); Christoforos Moutafis (University of Manchester, United Kingdom (Great Britain)); Vasilis Pavlidis (Aristotle University of Thessaloniki, Greece)

5. SiGe Power Amplifier Module for 5G FR2 Beamforming

Marcos Lajovic Carneiro (Pontifical Catholic University of Goiás, Brazil); Anais Tourissaud and Steeven Voisin (University of Bordeaux, France); Romain Mathieu (United Monolithic Semiconductors, France); Nathalie Deltimple (Bordeaux INP & IMS Lab, France); Eric Kerhervé (University of Bordeaux, France)

6. Control of PV-Hydrogen System Using Inverter-Based Architecture for Clean Energy Transition with DSP TMS320F28379D

Youness Hakam (EMSI, Morocco) and Mohamed Tabaa (EMSI Casablanca, Morocco)

Room: Agdal

Chair: Ghita Zaz (The National School of Arts and Crafts, Hassan II University, Morocco)

1. Segmented Exponent Alignment and Dynamic Wordline Activation for Floating-Point Analog CIM Macros

Weiping Yang, Shilin Zhou, Jiawei Xue, Hui Xu and Changlin Chen (National University of Defense Technology, College of Electronic Science and Technology)

2. Reconfigurable Equalizers for Digital-to-Analog Converters in Multiple Nyquist Bands Using Differentiator-Multiplier Channel Model

Likang Sun (National University of Defence Technology, China); Mingxin Deng, Yinan Wang, Lang Qin, Zhiwei Li, Sen Liu, Qingjiang Li and Hui Xu (National University of Defense Technology, China)

3. Energy-Efficient CNN Acceleration with MSDF Digit-Serial Arithmetic on FPGA

Muhammad Usman, Yousef Sadegheih and Dorit Merhof (University of Regensburg, Germany)

4. Proposed a Ternary Multiplexer Using CNTFET

Ramzi A. Jaber and Abdallah Kassem (Notre Dame University, Lebanon); Ali Massoud Haidar (Beirut Arab University, Lebanon)

5. EcoTech: a Wildfire Prediction and Detection System

Aya Sharrouf and Rayan Emad (Notre Dame University, Lebanon); Nadine Bou Dargham (Notre-Dame University, Lebanon); Mustapha Hamad (Notre Dame University-Louaize, Lebanon); Abdallah Kassem (Notre Dame University, Lebanon)

6. A Negative Feed-Forward Technique to Recover Bioelectric Signals Contaminated by Artifacts

Rabin Raut (Concordia University, Canada); Kwabena Asamoah (Northwest Tel, Canada)

7. Integer Quantization of Nonlinear Operations Towards Hardware-Friendly ViTs

Tianyi Sun, Tuo Ma, Jiali Liu, Zhiwei Li, Qingjiang Li, Yinan Wang, Haijun Liu and Sen Liu (National University of Defense Technology, China)

8. A Timing Complementary Ternary Content-Addressable Memory Based on Memristor

Haodong Hu, Hui Xu, Jiali Liu, Zhiwei Li, Haijun Liu, Yinan Wang and Sen Liu (National University of Defense Technology, China)

9. Low-Power Low-Complexity 10-Bit Single-Ended SAR ADC in 65-nm CMOS for Biomedical Applications

Kawther Ibrahim Arafa (Electronics Research Institute (ERI), Egypt); Dina Ellaithy (Electronics Research Institute, Egypt); Mohamed Abouelatta (Ain Shams University, Egypt); Heba Shawkey (Electronics Research Institute (ERI), Egypt); Abdelhaliem Zekry (Ain Shams University & Fac. of Engineering, Egypt)

Room: Bahia

Co-Chairs: Asmae Chakir (EMSI, Morocco), Zeinab Hijazi (LIU, Lebanon) and Hanaa Hachimi (UIT Morocco)

“Empowering the Next Generation: Inspiring Change, Breaking Barriers, and Building the Future”

This inspiring session is dedicated to celebrating the impact of women in engineering across academia, industry, and entrepreneurship. The session will begin with a dynamic round table featuring diverse voices sharing their leadership journeys, challenges, and strategies for success as women in STEM (Science, Technology, Engineering, and Mathematics). This will be followed by interactive discussions with the audience and panelists to foster meaningful dialogue and exchange.

This session is open to all conference participants and is especially valuable for young professionals, women project leaders, and anyone passionate about innovation, inclusion, and leadership in STEM.

A round-table discussion will be organized during the session, led by academic and industrial experts to share their expertise. 2 pages papers selection process will be launched to identify high-impact research for a poster presentation during the session. Selected participants will then present short, impactful posters that highlight innovation, clarity, and real-world relevance. All participants will receive a certificate of participation, and the Best Poster will be recognized live during the closing ceremony.

Invited speakers :

- Prof. **Hai (Helen) Li**, (Duke University, USA)
- Prof. **Hanaa Hachimi** (UIT, Morocco)
- Prof. **Nathalie Deltimple**, (IMS Bordeaux, France)
- **Thalitha Emmanuelle Nazaré**, (Maynooth University, Ireland)

Topics:

- Communication and leadership in engineering teams
- transform one’s career path into a success story
- Bridging the gap between academia and industry
- overcome barriers, and inspire new generations
- Innovation and entrepreneurship led by women
- Navigating gender challenges in engineering careers

Room: Bahia, Koutoubia, Harti, Agdal

Co-Chairs: Asmae Chakir (EMSI, Morocco), Zeinab Hijazi (LIU, Lebanon) and Hanaa Hachimi (UIT Morocco)

1. AI-Enhanced Control Strategies for Multi-Motor Electric Vehicles: A Preliminary Review

Fanou Primela (ENSAM RABAT, Morocco)

2. 3.1 GHz Interdigital Filters for RF Applications: Design and Implementation

Zia Nadir and Hassan Al-Lawati (Sultan Qaboos University, Oman)

3. Target-Aware Automated RTL Generation for RISC-V SoC Designs: A Model-Driven Approach

Mohamed Badawy (Infineon Technologies AG, Germany & Technical University of Munich, Germany); Jiulong Wang (Infineon Technologies AG, Technical University of Munich, Germany); Paritosh Kumar Sinha and Wolfgang Ecker (Infineon Technologies AG, Germany)

4. An Analog Hardware Squarer-Based Edge Detector for Breast Cancer

Anna Mylona and Vassilis Alimisis (National Technical University of Athens, Greece); Paul Peter Sotiriadis (Johns Hopkins University EPP & Soteco Electronics LLC, USA)

5. Current Bleeder-Based Mixer with -8.4 dB FOM, 10 dB NF, 18.5 dB Conversion Gain at 4.6 GHz

Sachin Kumar (Indian Institute of Technology Mandi, India); Hitesh Shrimali (IIT Mandi, India)

6. Raising Awareness of Energy Consumption in Machine Learning

Samara Santos (Maynooth University, Ireland); Laís Medeiros (Federal University of Recôncavo Da Bahia, Brazil); André L. C. Ottoni (Universidade Federal de Ouro Preto, Brazil); Rita Borgo (Kings College London, United Kingdom (Great Britain)); Erivelton Nepomuceno (Maynooth University, Ireland)

7. Optimized TinyML Models Based on Efficient Knowledge Distillation Implementation for Textures Classification

Sara Awada, Hiba Al Youssef and Zeinab Hijazi (Lebanese International University, Lebanon); Ali Ibrahim (LIU, Lebanon)

8. Design of Portable Communication Interface for Battery Management System Towards Efficient State Monitoring

Zeinab Hijazi and Jamal Hajj Chehade (Lebanese International University, Lebanon); Ali Ibrahim (LIU, Lebanon)

Room: Bahia

Chair: Cesar Albenes Zeferino (Univali, Brazil)

1. FERRad: a Radiation-Hardened Embedded FPGA for Harsh Environments Applications

Luca Frontini (INFN Milan, Italy); Alessandra Camplani (Copenhagen University, Denmark); Valentino Liberali (Università degli Studi di Milano, Italy); Andrea Mazzanti (Macquarie University, Australia); Luca Palini (Istituto Nazionale di Fisica Nucleare, Italy); Jafar Shojai (Macquarie University, Australia); Alberto Stabile and Monica Setia Vasquez Mora (Istituto Nazionale di Fisica Nucleare, Italy)

2. Systematic Framework Leveraging Early Assessment of DNN Reliability for Efficient and Reliable FPGA-Based Inference Deployment

Vu Dang Nguyen Trinh and Otmane Ait Mohamed (Concordia University, Canada); Fakhreddine Ghaffari (ETIS CNRS CY Cergy Paris Université ENSEA, France)

3. FPGA-Based Platform for Food Classification Using Hyperspectral Images

Leonardo Rebello Januário, Bruna Henning Pereira, Bruno Jaciel de Mello, Douglas Rossi de Melo and Felipe Viel (University of Vale do Itajaí, Brazil); Cesar Albenes Zeferino (University of Vale do Itajaí, Brazil)

4. A Fixed-Point FPGA Implementation of Enhanced Chaotic PSO with Conditional Oppositional-Based Learning

Yassir Maataoui (Abdelmalek Essaadi University, Morocco); Hamid Chekenbah (Abdelmalek Essaadi University & Polydisciplinary Faculty of Larache, Morocco); Soufiane El mounni (Hassan II University, Morocco); Suhail Odeh (Bethlehem University, Palestine); Rafik Lasri (University Abdelmalek Essaadi-FPL, Morocco)

Room: Koutoubia

Co-Chairs: Abbas Dandache (University of Lorraine, France) and Chiara Micheli (University of Genova, Italy)

1. Fall Detection by Bimodal Sensing with Late Fusion

Haythem Rehouma (University of Quebec at Montreal, Canada); Mounir Boukadoum (Université du Québec à Montréal, Canada)

2. A Microbolometer-Based Time-to-First-Spike Pixel for Infrared Imaging

Ayoub Talbi (Université Grenoble Alpes & Orioma, France); Laurent Fesquet (Grenoble INP, France); Marco Erickson Passy Kengani (Orioma, France); Skandar Basrour (University of Grenoble-Alpes France, France); Mohamed Akrarai and Mohammadreza Dolatpoor Lakeh (Grenoble INP, France)

3. 20-Channel Analog Boxcar Averager with 0.4ppm Resolution for Pump-Probe Optical Spectroscopy

Giulio Gubello, Giuseppe Sciortino and Dario Polli (Politecnico di Milano, Italy); Giulio Cerullo (Dipartimento di Fisica, Politecnico di Milano, Italy); Giorgio Ferrari (Politecnico di Milano, Italy)

4. Frequency Domain Investigation of the Indentation Response of a Soft PVDF Based Tactile Sensor

Mohamad Yaacoub, Yahya Abbass, Chiara Micheli, Daniele D. Caviglia and Maurizio Valle (University of Genova, Italy); Luigi Carassale (University of Genova, Italy); Lucia Seminara (University of Genova, Italy)

Room: Harti

Co-Chairs: Luciano Ost (Loughborough University, United Kingdom) and Rafat Damseh (United Arabs Emirates University, United Arab Emirates)

1. An Area Efficient OTA in Standard 28nm CMOS Technology for Aerospace Applications

Kashif Nisar, Marco Privitera, Andrea Ballo and Alfio Dario Grasso (University of Catania, Italy)

2. Comparative Analysis of Bulk-Driven and Gate-Driven Self-Cascode OTA in Subthreshold MOS

Salvatore Pennisi, Marco Privitera and Muhammad Omer Shah (University of Catania, Italy)

3. 43 μ W 28 nm CMOS Large Input Output Dynamic Range Buffer for D-to-a Converter for Pixel Detectors in High Energy Physics

Fabio Dottavi (University of Pavia, Italy); Luca Gelmi (University of Pavia, Italy & University of Cagliari, Italy); Marcello De Matteis (Università di Milano Bicocca, Italy)

4. A 22nm CMOS 0.017mm² 0.9V 0.26nW-Standby-Power 2.7mW-Peak-Power 37GHz Biocompatibly-Covered Ingestible OOK Transmitter Enabling 1cm Communication via Simulated Large Intestine Model for Digital Pills

Kento Okamura (Kyoto University, Japan); Takeshi Fujiyabu (University of Tokyo, Japan); Hisataka Maruyama (Nagoya University, Japan); Kei Awano, You Wu and Hiroaki Kitaie (Kyoto University, Japan); Jin Nakamura and Masaya Kaneko (Meitec Corporation, Japan); Yuta Kimura and Hiroaki Nakamura (Shuhari System, Japan); Shufan Xu, Ruilin Zhang, Kunyang Liu and Hirofumi Shinohara (Kyoto University, Japan); Daisuke Anzai (Osaka Metropolitan University, Japan); Natsuko Inagaki and Taichi Ito (University of Tokyo, Japan); Kiichi Niitsu (Kyoto University, Japan)

Room: Agdal

Chair: Asmae Chakir (EMSI Casablanca, Morocco)

1. Design of a Hardware-Efficient Accumulator for Applications with Large Guard Bit Requirements

Luca Tegazzini (University of Napoli Federico II, Italy & University of Pavia, Italy); Gennaro Di Meo (University of Napoli Federico II, Italy); Nicola Petra (University of Naples "Federico II", Italy); Davide De Caro (Università di Napoli, Italy); Antonio G M Strollo (University of Napoli Federico II, Italy)

2. Adaptive LIF Spiking Neural Networks for Satellite Anomaly Detection

Andrea La Gala (University of Milano-Bicocca, Italy); Mattia Tambaro (University of Milano Bicocca, Italy); Lorenzo Stevenazzi (University of Milano-Bicocca, Italy); Gianluca Furano (European Space Agency ESTEC, The Netherlands); Marcello De Matteis (Università di Milano Bicocca, Italy)

3. Characterization-Guided Strategies for Transients Faults Mitigation in Digital Circuits

Maxime Le Bigot (Safran & Laboratory Etis, France); Leroy François (Safran, France); Fakhreddine Ghaffari (ETIS CNRS CY Cergy Paris Université ENSEA, France); Olivier Romain (Université Cergy-Pontoise, France)

4. Performance Analysis of Encoding Schemes in Hyperdimensional Computing for EEG Signals

Jose Francois Abedejos, Fredrick Angelo Galapon, Lawrence Roman Quizon, Anastacia B Alvarez and Adelson Chua (University of the Philippines Diliman, Philippines)

Room: Bahia

Chair: Luca Frontini (INFN Milan, Italy)

1. Evaluating FPGA Architectures for Quantized CNN Inference in Construction Monitoring Applications

George de Borba Nardes, Wesley Grignani and Thiago Haas Rausch (University of Vale do Itajai, Brazil); Luiz Fernando Heidrich Duarte (Webphy Technologies, Brazil); Douglas Rossi de Melo and Cesar Albenes Zeferino (University of Vale do Itajai, Brazil)

2. High-Precision Time Measurement on FPGA: an Optimized TDC Approach

Arash Amini Bardpareh, Eleonora Vacca, Corrado De Sio, Sarah Azimi and Luca Sterpone (Politecnico di Torino, Italy); Elisa Fiorina (Universita' di Torino, Italy); Emanuele Maria Data and Felix Mas Milián (INFN, Italy)

3. An Iterative Design and Validation Methodology for RISC-V Custom Extension

Pierre Filiol (Ensta Bretagne, France); Luc Jaulin (ENSTA Bretagne, France); Jean-Christophe Le Lann (ENSTA Bretagne - Lab-STICC, France); Theotime Bollengier (Ensta Bretagne, France)

4. Memory-Less 12-Bit Direct Digital Frequency Synthesizer Architecture on FPGA

Kalle I. Palomäki and Jari Nurmi (Tampere University, Finland)

5. Resource Efficient Direct Digital Frequency Synthesizer Architecture on FPGA

Kalle I. Palomäki and Jari Nurmi (Tampere University, Finland)

6. Modular 1 Gbps Hardware TCP/IP FPGA Readout for MPGD Applications with APV25

Fatima Bzeih (University of Padua - Genoa - INFN Genoa, Italy); Paolo Musico (INFN Genoa, Italy); Evaristo Cisbani (INFN Rome, Italy); Chiara Micheli (University of Genova, Italy)

Room: Koutoubia

Co-Chairs: Mohamed A. Abd El Ghany (German University in Cairo & TU Darmstadt, Egypt) and Zineb Hidila (Lprie Emsi, Morocco)

1. Artificial Intelligence Approaches for Energy Efficiency in RDF Storage - a Literature Review

Wafae El kaysouni (École Nationale des Sciences Appliquées de Tanger (ENSA Tanger) Université Abdelmalek Essaâdi & Equipe de Recherche en Ingénierie des Données et des Systèmes (IDS), Morocco); Ahmed Rabhi (EMSI, Morocco); Badir Hassan (Abdelmalek Essaâdi University, Morocco)

2. Methodology for Analyzing the Vehicle System Data of the Onboard Power System Using Machine Learning Models as an Enabler of Data-Driven Development

Osman Aksu (BMW Group, Germany); Xinyi Liu (Technische Universität München, Germany); Michael Peter Schmid, Florian Bierwirth and Mišel Radosavac (BMW Group, Germany); Hans-Georg Herzog (Technical University of Munich (TUM), Germany)

3. Hardware-Oriented and Precisely Approximated Online Softmax for Deep Learning Models

Soshi Hirayae, Kanta Yoshioka, Yuichiro Tanaka and Hakaru Tamukoh (Kyushu Institute of Technology, Japan)

4. Multithreading Libraries Impact on the Soft Error Reliability of Real-Time Applications

Antonio Nunes, Jonas Gava, Areeb Sherjil, Jose Eduardo Thums and Germano Girondi (UFRGS, Brazil); Ricardo A L Reis (Universidade Federal do Rio Grande do Sul, Brazil); Luciano Ost (Loughborough University, United Kingdom (Great Britain))

5. Addressing Data Heterogeneity and Disparity in Federated Learning

Dinah Waref, Rawan E Kamel and Yomna Alayary (German University in Cairo, Egypt); Mohamed A. Abd El Ghany (German University in Cairo & TU Darmstadt, Egypt); Mohammed A.-Megeed Salem (German University in Cairo & Ain Shams University, Egypt)

6. Energy-Efficient Video Analytics with Edge Computing and Machine Learning

Dinah Waref (German University in Cairo, Egypt); Mohamed Elbatrawy (The German University in Cairo, Egypt); Yomna Alayary (German University in Cairo, Egypt); Mohamed A. Abd El Ghany (German University in Cairo & TU Darmstadt, Egypt); Mohammed A.-Megeed Salem (German University in Cairo & Ain Shams University, Egypt)

S32 (C): Signal Processing, Image and Video

11:30 AM – 01:00 PM

Room: Harti

Chair: Owen Casha (University of Malta, Malta)

1. A Memoryless Stream Processing Architecture for Energy-Efficient Signal Processing

Clara Ciocan (CEA, France); Anthony Kolar (Centralesupelec, France); Mathieu Thevenin (Université Paris-Saclay, France & CEA, CNRS, France)

2. 100MS/s Time-Mode PWM Signal Processing Building Blocks

Spyridon Vlassis, Konstantinos P Pagkalos and Aikaterini I. Chronopoulou (University of Patras, Greece)

3. Image Preprocessing for Enhancement of CNN-Based Regression

Deniz Stephanie Weißbrodt (Federal Institute for Occupational Safety and Health (BAuA), Germany); Marawan Tawheed Abdelhady (German University in Cairo, Egypt); Mohamed Hamed Fahmy (The German University in Cairo, Egypt); Thea Raduentz (Federal Institute for Occupational Safety and Health, Germany)

4. Detecting Data Poisoning via LRP Heatmap Features: a Chest X-Ray Case Study

Akhila Asgar (United Arab Emirates University, United Arab Emirates); Ahmed Bataineh and Abdullah Al-Amaren (Al Hussein Technical University, Jordan); Rafat Damseh (United Arabs Emirates University, United Arab Emirates)

5. Neural Architecture Search for over-the-Air Telecommunication Signal Classification

Félix David Suárez Bonilla (Microelectrónica de Sevilla, IMSE-CNM, Spain); Jose M de la Rosa (IMSE-CNM/University of Seville, Spain); Gustavo Liñán-Cembrano (Microelectrónica de Sevilla, IMSE-CNM, Spain)

6. Curvilinear Layout for CMOS Image Sensors Task-Specific Imaging

Qiushuang Zhang and Hendrik Sommerhof (Uni Siegen, Germany); Michael Moeller (University of Siegen, Germany); Andreas Kolb (Siegen University, Germany); Bhaskar Choubey (Seigen University, Germany)

S32 (D): Society/Industry/Human-centric Society/Nanosatellite

11:30 AM – 01:00 PM

and smart IoT

Room: Agdal

Chair: Meryem Abid (EMSI, Morocco)

1. An Integrated Flow for Predicting Radiation Effects in CubeSat Onboard Electronics

Eleonora Vacca, Corrado De Sio and Luca Sterpone (Politecnico di Torino, Italy)

2. ORSGRAND: Hardware-Efficient Ordered Reliability Symbol GRAND Decoder for Low-Latency Multiuser IoT Applications

Arslan Hassan, Muhammad Adeel Pasha and Momin Uppal (Lahore University of Management Sciences, Pakistan)

3. Advancing Wound Management with Smart and Sustainable Electronics for a Human-Environment-Centric Society: a Life Cycle Assessment Approach

Theresa Seeholzer (University of Freiburg, Germany & Infineon Technologies AG, Germany); Adrian-Razvan Petre and Shavini Stuart (TNO, The Netherlands); Rüdiger Quay (University of Freiburg, Germany)

4. MultiModal Human-Robot Interaction for CobotAssisted Disassembly: a Comparative Study of Voice, Gesture, GUI, and Brain Signal Control

Soufiane Ameer (CCPS Laboratory, ENSAM, University of Hassan II Casablanca Morocco, Morocco); Kaouter Karboub (EMSI, Morocco); Mohammed Hamlich (Hassan II University, Morocco); Richard Bearee (Arts et Métiers Institute of Technology, LISPEM, HESAM Université, Morocco)

5. Ontology-Driven Semantic Honeytrap with Digital Twin Integration for Context-Aware Cyber Deception in Industrial OT Systems

Youness Ghazi (Université Hassan II de Casablanca, Morocco & EMSI, Morocco); Mohamed Tabaa (EMSI Casablanca, Morocco); Mohamed Ennaji (he National School of Arts and Crafts, Hassan II University, Morocco); Ghita Zaz (The National School of Arts and Crafts, Hassan II University, Morocco)

6. Assistive Cobot for E-Waste Disassembly: Multi-Sensor HRC with Tool Recommendation

Soufiane Ameer (CCPS Laboratory, ENSAM, University of Hassan II Casablanca Morocco, Morocco); Kaouter Karboub (EMSI, Morocco); Mohamed Tabaa (EMSI Casablanca, Morocco); Mohammed Hamlich (Hassan II University, Morocco); Richard Bearee (Arts et Métiers Institute of Technology, LISPEM, HESAM Université, Morocco)

S33 (A): FPGA-III

02:30 PM – 04:00 PM

Room: Bahia

Chair: Fakhreddine Ghaffari (ETIS CNRS CY Cergy Paris Université ENSEA, France)

1. U-HAWK: A Hardware-in-the-Loop Framework for Sensor-Rich Embedded Systems Testing

Anderson R P Domingues, Lucas Damo, Thiago Zilberknop, Luigi Salvatore Bos-Mikich, Sérgio J Filho and Fernando Gehm Moraes (PUCRS, Brazil); Luciano Ost (Loughborough University, United Kingdom (Great Britain)); Ney Calazans (UFSC, Brazil)

2. Power and Cross-Section Optimization for an FPGA-Based Cosmic Radiation Sensor

Stefan Popa, Andrei Bertescu, Cristian Furtună and Artur Kazak (Transilvania University of Brasov, Romania); Mihai Ivanovici (Transilvania University of Brasov & MIV Imaging Venture, Romania); Alexei Martiniuc (Technical University of Moldova (TUM), Moldova); Viorel Carbune and Vladimir Melnic (Technical University of Moldova, Moldova); Nicolae Gheorghe Secieru (Technical University of Moldova (TUM), Moldova)

3. Using Automatic Code Generation to Streamline the Real-Time FPGA Deployment of DNNs at the Edge

Joao R Faria and Fábio D. L. Coutinho (Universidade de Aveiro, Portugal); Arnaldo Oliveira (Universidade de Aveiro - DETI / Instituto de Telecomunicações - Aveiro, Portugal)

4. Pure-Hardware YOLO-Inference via FPGAs

Ibrahim Qamar, Mohamed Khaled Refai, Mk, Saleh Sharouk, Saif Gebril, Ahmed Matar, Saber Mahmoud and Seif M Megahed (Cairo University, Egypt); Mervat M. A. Mahmoud (Electronics Research Institute, Egypt)

5. Predictive Modeling of FPGA Resource and Power Consumption for Configurable CNN Operators

Philippe S Magalhães (Jean Monnet University, France); Virginie Fresse (Université Jean Monnet, Saint Etienne, France); Benoit Suffran (ST Microelectronics, France); Olivier Alata (University Jean Monnet, France)

Room: Koutoubia

Chair: Raafat Lababidi (Ensta, France & Institut Polytechnique de Paris, France)

1. Interpolation Based Direct Digital Synthesizer with FMCW Capabilities for Automotive RADAR Applications

Adrien Maurice Vincent (Université de Bordeaux, France & NXP Semiconductors, France); Dominique Dallet (IMS Laboratory - Bordeaux INP - University Bordeaux, France); Jean-Baptiste Begueret (University of Bordeaux I, France); Stéphane Thuriès (NXP Semiconductors, France)

2. Characterization and Redesign of a Modular 65-nm ASIC for Photon Counting with 20 E-Noise

Leonardo Nassi (Politecnico di Milano, Italy & Istituto Nazionale di Fisica Nucleare (INFN), Italy); Adele Ciavarella-Ciavarella, Marco Carminati, Giacomo Borghi and Carlo Fiorini (Politecnico di Milano, Italy); Serena Farina (Scuola Universitaria Superiore, Italy); Michela Uslenghi (INFN Italy, Italy)

3. A Fully-Synthesizable and-or-Invert-Based Pseudo-Dynamic Voltage Comparator

Antonio Manno (University of Catania, Italy); Giuseppe Scotti (Sapienza University of Rome, Italy); Gaetano Palumbo (University of Catania, Italy)

4. Improving the Efficiency of Bayesian Optimization Using Robust Scaling Tchebycheff Method in Op-Amp Circuit Design

Tsuyoshi Masubuchi (Kyoto Institute of Technology, Japan)

5. An Analytical Approach for Designing Passive Matching Networks

Owen Casha (University of Malta, Malta)

6. Multi-Objective Optimization of Standard Cells Performance at Transistor Level, a Comparison of Different Meta-Heuristics Efficiency

Thomas Lods (Institut des Nanotechnologies de Lyon, France & STMicroelectronics, France); Bastien Aghetti, Olivier Minez and Mayeul Cantan (STMicroelectronics, France); Lioua Labrak (Nanotechnology Institute of Lyon, France); Alain Aurand (STMicroelectronics, France); Nacer Abouchi (CPE Lyon, France)

Room: Harti

Co-Chairs: Tales Cleber Pimenta (Universidade Federal de Itajuba, Brazil) and Mohamed Lamane (EMSI LPRI, Morocco)

1. SlotFi: A Time Slotted ALOHA anti-Collision Protocol Using Wi-Fi Envelope Detection

Luis Esteban Hernández (University of Puerto Rico - Mayagüez, USA); Miguel López-Benítez (University of Liverpool, United Kingdom (Great Britain)); Alberto Regadio Carretero (University of Alcalá de Henares, Spain); Vladimir M. Milovanović (University of Kragujevac, Serbia)

2. Polysilicon PIN Diode Characterization and Scaling in Low-Cost 40nm Technology for IoT Applications

Wiame El Khayyari (STMicroelectronics, France); Noémie Couzi (Aix-Marseille University, France & STMicroelectronics, France); Jeremy Postel-Pellerin (Aix-Marseille University, IM2NP, France); Hassen Aziza (Université of Aix-Marseille, France); Abderrezak Marzaki, Alexandre Malherbe, François Courbin, Arnaud Regnier and Stephan Niel (STMicroelectronics, France)

3. Energy Consumption Characterization of Dual-Core Operations in the RP2040 Microcontroller for IoT Applications

Ioannis Sofianidis, Vasilis Konstantakos and Spiros Nikolaidis (Aristotle University of Thessaloniki, Greece)

4. A Reconfigurable and Scalable Ultra-Low-Power RISC-V Architecture Based on System Requirements for Battery-Based IoT Devices

Mohamed A. Elshiemy (Nile University, Egypt & Nanoelectronics Integrated Systems (NISC) Center, Egypt); Ahmed Soltan (Nile University, Egypt)

5. Microcontroller SRAM PUF for IoT Applications: Experimental Evaluation

Kamal Y. Kamal (University of Guelph, Ontario, Canada); Stefano Gregori (University of Guelph, Canada)

6. Multi-Modal Explainable Deep Learning-Assisted Signal Integrity Prediction Methodology

Jiyoung Yoon (Samsung Electronics, Korea (South) & Yonsei University, Korea (South)); Taeryeong Kim (Yonsei University, Korea (South)); Ki Chul Chun and Jonghoon Kim (Samsung Electronics, Korea (South)); Seong-Ook Jung (Yonsei University, Korea (South))

S33 (D): Analog/Mixed Signals/RF Circuits (1)

02:30 PM – 04:00 PM

Room: Agdal

Co-Chairs: Spyridon Vlassis (University of Patras, Greece) and Sameh Ahmed Assem Mostafa Ibrahim (Ain Shams University, Egypt)

1. Wide-Bandgap All-Metal Mushroom Unit Cells with Air Gap Shifting and Stress Mitigation for 30 GHz Gap Waveguide Applications

Ghiayas Tahir (National University of Computer and Emerging Sciences, Pakistan); Arshad Hassan, Shawkat Ali, Arshad Khan and Bo Wang (Hamad Bin Khalifa University, Qatar); Abdelkrim Khelif (Hamad Bin Khalifa University, Doha, Qatar); Amin Bermak (Hamad Bin Khalifa University, Qatar)

2. A High Linearity 5-GHz 4-Bit Sub 1ps-DNL Phase Interpolator

Hossam Ehab Mahmoud and Sameh Ahmed Assem Mostafa Ibrahim (Ain Shams University, Egypt); Dina El-Damak (German University in Cairo, Egypt)

3. A 65 pF-CL, -46 dB-PSRR at 1 MHz, Wide Supply Bulk-Biasing FVF-Based LDO Consuming 6.6 uA

Francesco Spreafico (University of Milano-Bicocca, Italy); Luca Sant and Richard Gaggl (Infineon Technologies Austria, Austria); Andrea Baschiroto (University of Milano Bicocca, Italy)

4. Fast and Accurate Modeling of RF Front-Ends for Wake-Up Radios: Implementation and Integration of Behavioral Blocks for System-Level Simulation

Vittoria Paoli, Ettore Noccetti and Gabriele Ducci (University of Pisa, Italy); Marco Ronchi (STMicroelectronics, Italy); Elio Guidetti (ST Microelectronics, Italy); Francesco Frattini (STMicroelectronics Italy, Italy); Sergio Saponara (University of Pisa, Italy)

5. A 1- to 5-Gb/s Adaptive Equalizer with Window-Specified Counter-Based Adaptation Method

Yu-Wun Chao and Ming-Yan Xu (National Cheng Kung University, Taiwan); Soon-Jyh Chang (NCKU, Taiwan)

6. Simulation-Based Evaluation of Critical Short-Circuits in Power Electronic Systems as an Approach to Derive a System-Dependent Failure Rate According to ISO 26262

Osman Aksu (BMW Group, Germany); Jana Janeva and Jörg Kammermann (Technical University of Munich (TUM), Germany); Michael Peter Schmid, Florian Bierwirth and Mišel Radosavac (BMW Group, Germany); Hans-Georg Herzog (Technical University of Munich (TUM), Germany)