

ICM2015 Program

December 20-23

Farah Golden Tulip, Casablanca, Morocco

Sunday December 20		Room CHALLA and Room KOUTOUBIA
Slot Time		
Start	10:00 12:00	Registration – Main hall
Session 1	13:00 14:30	Tutorial 1 (Dr. Emmanuel Simeu) Indirect Test and Control of Analogue/RF Circuits
Session 2	14:30 16:00	Tutorial 2 (Dr. Khalid Nabil Salama) Future computing systems: The case for memristors
Session 3	16:00 17:30	Tutorial 3 (Dr. Otmane Ait mohamed) Hardware Verification: Challenges & New Trends
Coffee Break	17:30 18:00	Welcome reception

Monday December 21		Plenary Room	Room CHALLA	Room KOUTOUBIA
Slot Time	Time			
Start	08:00 09:00	Registration– Main hall		
Session 1	09:00 10:15	Opening Ceremony (Prof. Mohamad Sawan and Prof. Kamal Daissaoui) Keynote 1 (Prof. Patrick Girard) – Plenary Room Test of Low Power Devices « Constraints and Industrial Practices »		
Coffee Break	10:15 10:45	Coffee Break		
Session 2	10:45 12:45	S1 Circuits and Systems	S1 CAD Tools and Design	SS1 S. Smart Sensor and Sensor Network
Lunch	12:45 14:30	Lunch Break		
Session 3	14:30 16:00	S2 Circuits and Systems	S1 Micro/Nanoelctronics	SS2 S. Biomedical
Coffee Break	16:00 16:30	Coffee Break		
Session 3	16:30 18:00	S3 Circuits and Systems	S2 CAD Tools and Design	SS3 S. Complex Systems
Social Event	20:00 00:00	Musical Concert : GALA Farah Golden Tulip		

Tuesday December 22		Plenary Room	Room CHALLA	Room KOUTOUBIA
Slot Time	Time			
Session 1	09:00 10:00	Keynote 2 (Prof. Jean Michael Sallése) – Plenary Room Principle of Junctionless Field Effect Transistors		
Coffee Break	10:00 10:30	Coffee Break		
Session 2	10:30 12:00	S4 Circuits and Systems	S2 Micro/Nanoelctronics	SS4 S. Biomedical
Lunch	12:00 14:00	Lunch Break		
Session 3	14:00 16:00	Poster Session – Main hall		
Session 5	14:00 16:00	Panel Session – Plenary Room		
Social Event	16:00 19:00	Visit Quartier Habous, Mosquée Hassan 2, Corniche		

Wednesday December 23		Plenary Room	Room CHALLA	Room KOUTOUBIA
Slot Time	Time			
Session 1	09:00 10:00	Keynote 3 (Dr. Hicham Bouzakeri) – Plenary Room Microelectronics in Morocco « Lessons learned & perspectives »		
Coffee Break	10:00 10:30	Coffee Break		
Session 2	10:30 12:30	S5 Circuits and Systems	S3 Micro/Nanoelctronics	SS5 S. Renewable Energy
	12:30	Closing Ceremony – Award certificates		

Sunday, December 20

10:00 AM - 12:00 PM

Reg: Registration

1:00 PM - 2:30 PM

TU2: Indirect Test and Control of Analogue/RF Circuits

Dr. Emmanuel Simeu

Chair: Fouad El haj hassan (UL, Liban)

Testing high-performance AMS and RF circuits embedded in complex integrated systems and ensuring high test quality at low cost for these AMS and RF designs has become a challenging task. The complexity of AMS and RF cores, together with shrinking device dimensions limit accessibility to the internal nodes of the circuits. The objective of this tutorial is to present recent research developments in the field of BIST, monitoring and adaptation for RF and AMS circuits. Special attention will be paid to new approaches for controlling and adapting the performances of IPs embedded in SoC or SiP. In particular for efficient management of performances and energy in battery-operated power hungry devices as the radio frequency (RF). In fact, for each device, parameter variability, ageing mechanisms and operation disturbances can make difficult to guarantee the required performance level while only one power supply is applied. New research directions are focusing on the development of embedded test instruments providing indirect measurement metrics that are used to include, power management, ageing and reliability monitoring, defect coverage, yield recovering, diagnosis capabilities, etc.

2:30 PM - 4:00 PM

TU2: Future computing systems: The case for memristors

Dr. Khalid Nabil Salama

Chair: Ali Siadate (ENSAM, France)

Current CMOS-Based technologies are facing design challenges related to the continuous scaling down of minimum feature size according to Moore's law. Moreover, the conventional computing architecture is no more an effectual way to fulfill modern applications demands, such as big data analysis, pattern recognition, and vector processing. Therefore, there is an exigent need to shift to new technologies, at both the architecture and the device levels. Recently, memristor devices and structures attracted attention for being promising candidates for this job. Memristor device adds a new dimension for designing novel circuits and systems. In addition, high-density memristor-based crossbar is widely considered to be the essential element for future memory and bio-inspired computing systems. However, there are numerous challenges that need to be addressed before the memristor genuinely replaces current memory and computing technologies, which is the motivation behind this research effort. Altogether, we believe that our contributions to the emerging technology help in pushing it to a next level and shortened the way for a much better futuristic computing systems.

4:00 PM - 5:30 PM

TU3: Hardware Verification: Challenges & New Trends

Dr. Otmane Ait Mohamed

Chair: Karim Alami (EMSI, Morocco)

The increasing popularity of System-on-Chip (SoC) circuits results in many new challenges. One major challenge is to ensure the functional correctness of such complicated circuits. Coverage Directed Test Generation (CDTG) is an essential part of functional verification, where the objective is to generate input stimulus that maximize the coverage of a design. Coverage helps to determine how well the input stimulus verified the design under verification. CDTG techniques analyze coverage results and adapt the input stimulus generation process to improve the coverage. In this tutorial, we will give a general introduction to verification of complex digital systems, define the various validation techniques, and focus on CDTG validation procedure. We will introduce the main concept of SystemVerilog language, which is gaining a lot in popularity within CAD community.

Monday, December 21

8:00 AM - 9:00 AM

Reg: Registration

Room: Main Hall

9:00 AM - 10:15 AM

key1: Opening Ceremony + Keynote 1

Test of Low Power Devices « Constraints and Industrial Practices »
Patrick Girard

Room: Plenary Room

Chair: Mohamed Tabaa (Department of Research and Innovation, EMSI, Morocco)

10:45 AM - 12:45 PM

S1: Circuit and Systems

Plenary Room

Chairs: Fabrice Monteiro (University of Lorraine, France), Karim Alami (EMSI, Morocco)

- 11:00** ***Roll Angle Estimation of a Spinning Object: Experimental Setup and Preliminary Results***
Clement Thomas and Markus Stefer (French-German Research Institute of Saint-Louis, France); Loic Bernard (ISL, France)
- 11:20** ***Image quality assessment using nonlinear learning methods***
Rshdee Alhakim (University of Grenoble & TIMA Lab, France); Ammar Marwen and Emmanuel Simeu (TIMA Laboratory, Grenoble University, France); Fritz Lebowsky (STMicroelectronics, France)
- 11:40** ***Efficient Architectures for HEVC Luma Interpolation Filter***
Ahmed Salem (Egypt Japan University of Science and Technology, Egypt); Ahmed Shalaby (Egypt Japan University for Science and Technology, Egypt); Mohammed Sayed (Egypt-Japan University of Science and Technology, Egypt)
- 12:00** ***A 65nm ASIC based 256 NIST Prime Field ECC Processor***
Hamad Al Marzooqi and Mahmoud Al-Qutayri (Khalifa University, UAE); Hani Saleh (Khalifa University of Science, Technology & Research, UAE); Khaled Salah (Khalifa University of Science, Technology and Research (KUSTAR), UAE)
- 12:20** ***Dynamic Channel Coding Reconfiguration in Software Defined Radio***
Ahmed Sadek (Cairo University, Egypt); Hassan Mostafa (University of Toronto, Canada); Amin Nassar (Cairo University, Egypt)

S1: CAD and tools

Room CHALLA

Chair: Mohanna Yasser (LebUni, Lebanon)

- 11:00** ***Toward Efficient Synthesis Method of Multifunctional Logic Circuits***
Vaclav Simek and Richard Ruzicka (Brno University of Technology, Czech Republic); Adam Crha (Faculty of Information Technology & Brno University of Technology, Czech Republic)
- 11:20** ***An Efficient Hybrid Power Modeling Approach for Accurate Gate-Level Power Estimation***
Alejandro Nocua Cifuentes (University of Montpellier & Laboratory of Informatics, Robotics and Microelectronics of Montpellier, France); Arnaud Virazel and Alberto Bosio (Laboratory of Informatics, Robotics and Microelectronics of Montpellier, France); Patrick Girard (LIRMM, France); Cyril Chevalier (STMicroelectronics, France)
- 11:40** ***Reducing the Number of Embedded Multipliers in Squaring Large Size Complex Numbers***

- 12:00** Nouredine Chabini (Royal Military College of Canada, Canada)
General fuzzy models for dynamical systems
 Kheireddine Chafaa (University of Batna, Algeria); Mouna Ghanai (Electronics Department, University of Batna, Batna, Algeria); Lamir Saidi (Laboratoire Automatique Avancée et Analyse des Systèmes (LAAAS), Algeria)
- 12:20** **Core and Back-End Enhancements for CUPSHOP HW/SW Partitioning Tool**
 Rania Hassan (Faculty of Engineering, Cairo University, Egypt); Ahmed Hamed (Faculty Of Engineering, Cairo University & Cairo University, Egypt); Mohamed B Abdelhalim (Arab Academy for Science, Technology & Maritime Transport, Egypt); Serag E. -D Habib (Cairo University, Egypt)

SS1: Smart sensor and sensor network

Room KOUTOUBIA

Chair: Ali Hamie (Arts Sciences & Technology University in Lebanon (AUL), Lebanon), Rachid Saadane (EHTP, Morocco)

- 11:00** **Security approaches based on elliptic curve cryptography in wireless sensor networks**
 Salah Said (RITM-ESTC / CED-ENSEM, University Hassan II, Morocco)
- 11:20** **Enhanced algorithm for QRS detection using discrete wavelet transform (DWT)**
 Wissam Jenkal (ENSA, Morocco); Rachid Latif (ENSA, University Ibnou Zohr, Morocco); Ahmed Tomanari (ENSA Agadir - Ibn Zohr University, Morocco); Dliou (ENSA agadir, Morocco); Oussama El b'charri (ENSA Agadir - Ibn Zohr University, Morocco)
- 11:40** **A Low-cost design of Transceiver based on DWPT for WSN**
 Chehaitly Mouhamad (LGIPM, France); Tabaa Mohamed (EMSI, Morocco); Fabrice Monteiro and Abbas Dandache (University of Lorraine, France); Ali Hamie (Arts Sciences & Technology University in Lebanon (AUL), Lebanon)
- 12:00** **Network Coding for Energy optimization and Throughput Enhancement of WideMac for IR-UWB based WSN**
 Tarik Chanyour (ENSIAS - Mohamed V University - Rabat, Morocco); Hanane Chergui Hali (Faculty of Science, Ibn Tofaïl University, Morocco); Rachid Saadane (Ecole Hassania des Travaux Publiques de Casablanca, Morocco); Mostafa Belkasm (ENSIAS - Mohammed V University - Rabat, Morocco)
- 12:20** **Distributed consensus algorithm and its application to detect coverage hole in sensor networks**
 Anas Hanaf (University of Reims Champagne-Ardenne & CReSTIC, France); Alban Goupil (Université de Reims Champagne-Ardenne, France); Maxime Colas (DéCom/University of REIMS CHAMPAGNE-ARDENNE, France); Guillaume Gelle (University of Reims Champagne-Ardenne & CReSTIC, France)

2:30 PM - 4:00 PM

S2: Circuit and systems

Plenary Room

Chairs: Emmanuel Simeu (TIMA Laboratory, Grenoble University, France), Dellagi Sofiene (LGIPM, France)

- 2:30** **Harvesting Energy From Data Lines For Avionics Applications: Power Conversion Chain Architecture**
 Maryam Mohajertehrani and Umar Shafique (Polytechnique Montreal, Canada); Yvon Savaria (École Polytechnique de Montréal, Canada); Mohamad Sawan (Polytechnique Montréal, Canada)
- 2:50** **Digital image stailization for video images**
 Mohanna Yasser (LebUni, Lebanon); Hamze Alaeddine (University of Brest, France); Oussama Bazzi and Ali Alaeddine (Lebanese University, Lebanon)
- 3:10** **Real time EEG compression for energy-aware continous mobile monitoring**
 Mohamed Adel Serhani (UAE University, UAE); Mohamed Elmenshawy (Concordia University, Canada); Abdelghani Benharref (University of Wollongong, Australia); Alramzana Nujum Navaz (UAE University, UAE)
- 3:30** **Comparison Between Analog and Digital Locking MPPT Unit for Micro-scale PV Energy Harvesting Systems**
 Nourane G. Tawfik (German University in Cairo, Egypt); Hassan Mostafa (University of Toronto, Canada); Yehea Ismail (Northwestern University, USA)

S1: Mico/Nanoelectronics

Room CHALLA

Chairs: Luc Hebrard (University of Strasbourg, France), Abdelhakim Khatab (ENIM/Université Lorraine, France)

2:30 ***Effective Device Electrical Parameter Extraction of Nanoscale FinFETs: Challenges and Results***
Alessandra Leonhardt (Unicamp, Brazil); Luiz Fernando Ferreira (Federal University of Rio Grande do Sul, Brazil); Sergio Bampi (Federal University of Rio Grande do Sul & Microelectronics Group at UFRGS, Brazil); Leandro Manera (Unicamp, Brazil)

2:50 ***Accelerated Lifetime Tests and Failure Analysis of an Electro-thermally Actuated MEMS valve***
Haithem Skima, Kamal Medjaher, Christophe Varnier, Noureddine Zerhouni and Eugen Dedu (FEMTO-ST, France); Julien Bourgeois (UFC/FEMTO-ST Institute, France)

3:10 ***Insights for Utilizing the Memristor as a Multi-bit Based Memory***
Mostafa El-Khouly (German University in Cairo, Egypt); Ahmed Madian (NCRRT & Egyptian Atomic Energy Authority, Egypt); Hassan Mostafa (University of Toronto, Canada)

3:30 ***Small-Signal Gain Calculations for a CMOS Analog Amplifier using Short Channel Equations Using nm Technology***

Neda Tawalbeh (Princess Sumaya University for Technology, Jordan); Mahmoud Hassan (University, Jordan); Hazem Marar (Princess Sumaya University for Technology, Jordan)

SS2: Biomedical

Room KOUTOUBIA

Chair: Omar Bouattane (LSSDIA, ENSET, Mohammedia)

2:30 ***Pulse Interval Modulation for Biomedical Wireless Sensors***
Décio R. M. Faria (UNIFEI, Brazil); Tales C Pimenta and Robson Moreno (Universidade Federal de Itajuba, Brazil)

2:50 ***Robust Low Power NB PHY Baseband Transceiver for IEEE 802.15.6 WBAN***
Awny El-Mohandes (Egypt Japan University of Science and Technology, Egypt); Ahmed Shalaby (Egypt Japan University for Science and Technology, Egypt); Mohammed Sayed (Egypt-Japan University of Science and Technology, Egypt)

3:10 ***Inductive Degeneration Low Noise Amplifier for IR-UWB Receiver for Biomedical Implant***
Maissa Daoud (University of sfax, Tunisia); Rahma Aloulou (LETI, Tunisia); Hassene Mnif (National Engineering School of Sfax, University of Sfax, Tunisia); Mohamed Ghorbel (ATMS, Tunisia)

3:30 ***A New WSN Transceiver based on DWPT for WBAN applications***
Saadaoui Safa and Tabaa Mohamed (EMSI, Morocco); Fabrice Monteiro and Abbas Dandache (University of Lorraine, France); Karim Alami (EMSI, Morocco)

4:30 PM - 6:00 PM

S3: Circuit and systems

Plenary Room

Chairs: M'hamed Drissi (NSA of Rennes, France)

4:30 ***On-chip analog PI controller for calibration of Rogowski coils***
Simon Paulus and Jean-Baptiste Kammerer (University of Strasbourg, France); Joris Pascal (University of Applied Sciences Northwestern Switzerland, Switzerland); Calogero Bona (ABB Switzerland Ltd Corporate Research, Switzerland); Luc Hebrard (University of Strasbourg, France)

4:50 ***A Comparative Analysis of Optimized CMOS Neural Amplifier***
Ahmed El-Attar, Saif Ahmed, Youssef Abdelkader and Mohamed Badran (Cairo University, Egypt); Ali Hassan (Faculty of Engineering, Cairo University, Egypt); Hassan Mostafa (University of Toronto, Canada)

5:10 ***A Circular Patch Antenna Using Two-Dimensional Photonic Crystal Substrate***
Boualem Mekimah (University of Constantine1, Algeria); Abderraouf Messai (University of Constantine 1, Algeria); Abdelkrim Belhedri (University of Constantine1, Algeria)

5:30 ***SBLs: Speed Based Lane Changing System in VANETS***
Jetendra Joshi (NIIT University & NIIT University, India); Kritika Jain, Yash Agarwal and Manash Jyoti Deka (NIIT University, India); Pravit Tuteja (Niit University, India)

S2: CAD and Tools

Room CHALLA

Chair: Hafid Griguer (EMSI, Rabat, Morocco)

4:30 *New Fine-Grained Clustering Algorithm on GPU Architecture for Bias Field Correction and MRI Image Segmentation*

Ait Ali Noureddine (Labo SSDIA, ENSET Mohammedia, Morocco); Cherradi Bouchaib (CRMEF, El Jadida, Morocco); Omar Bouattane (EMSI, Lebanon); Youssefi Mohamed and Raihani Abdelhadi (Labo SSDIA, ENSET Mohammedia, Morocco)

4:50 *An Enhancement Transient Response of Capless LDO with improved Dynamic Biasing Control for SoC Applications*

Hatim Ameziane (Usmbaf, Morocco); Kamal Zared (USMBA & USMBA, Morocco); Hassan Qjidaa (USMBA, Fez, Morocco)

5:10 *FPGA implementation of Data Encryption Standard using time variable permutations*

Soufiane Oukili and Seddik Bri (Moulay Ismail University, Meknes, Morocco)

5:30 *Simulation of Ground Penetrating Radar Imaging Under Subsurface*

Gamil Alsharahi (Abdelmalek Essaadi University, Morocco); Abdellah Driouach (Abdelmalek Essaâdi University, Morocco); Ahmed Faize (Mohammed 1st University, Morocco)

SS3: Complex Systems

Room KOUTOUBIA

Chairs: Dominique Sauter (University of Lorraine & CRAN-CNRS UMR7039, France), Abdellah Ailane (EMSI, Morocco)

4:30 *Formal Modeling, Verification and Implementation of a Train Control System*

Mohammad Hossein Askari-Hemmat and Otmane Ait Mohamed (Concordia University, Canada); Mounir Boukadoum (Université du Québec à Montréal, Canada)

4:50 *Maintenance optimization of series-parallel systems operating missions with scheduled breaks*

Abdelhakim Khatab (ENIM/Université Lorraine, France); El-Houssaine Aghezzaf (Ghent University, Belgium); Diallo Claver (Dalhousie University, Canada)

5:10 *Sampling rate optimization for fault diagnosis of distributed networked control systems*

Dominique Sauter (University of Lorraine & CRAN-CNRS UMR7039, France)

5:30 *An Optimal Integrated Maintenance Strategy with Switching Policy under Subcontracting Constraint*

Hajej Zied (University of Lorraine, France); Dellagi Sofiene (LGIPM, France); Nidhal Rezg (University of Lorraine, Tunisia)

5:50 *PMU Based Centralized Adaptive Load Shedding Scheme in Smart Grid*

Hamid Bentarzi (IGEE, University of UMBB, Boumerdes, Algeria)

8:00 PM – 00:00 PM

Musical concert: GALA

Farah Golden Tulip

Tuesday, December 22

9:00 AM - 10:00 AM

key2: Keynote 2

Principle of Junctionless Field Effect Transistors

Jean Michael Sallèse

Room: Plenary Room

Chair: Mohamad Sawan (Polytechnique Montréal, Canada)

10:30 AM - 12:00 PM

S4: Circuit and systems

Plenary Room

Chair: Ali Siadat (ENSAM, France) , Chafik Samir (EMSI, Morocco)

- 10:30** *Differentiated Service for NoC-based Multimedia Applications*
 Atef Dorai (Jean-monnet University, Tunisia); Virginie Fresse (Université Jean Monnet, Saint Etienne, France); El-Bay Bourennane (University of Burgundy & LE2I Laboratory, France); Abdellatif Mtibaa (ENIM, Tunisia)
- 10:50** *A New 65nm-CMOS 1V 8GS/s 9-bit Differential Voltage-Controlled Delay Unit Utilized for a Time-Based Analog-to-Digital Converter Circuit*
 Abdullah Elbayoumi (Valeo Interbranch Automotive Software & Cairo University, Egypt); Hassan Mostafa (University of Toronto, Canada); Ahmed M Soliman (Cairo University, Egypt)
- 11:10** *Biomimicry to Network on Chip: Router Heart Rate*
 Ahmed El-Naggar (Alexandria University, Egypt); Ahmed Shalaby (Egypt Japan University for Science and Technology, Egypt)
- 11:30** *A 14-bit Low-Power Interface Circuit for Piezo-Resistive Pressure Sensors*
 Amr Walid (Ain Shams University, Egypt); Ayman Ismail (Engineering, Egypt)
- 11:50** *A practical algorithm using virtual point light for the rendering process*
 Khemliche Sarra (University of Biskra Algeria, Algeria); Babahenini Mohamed Chaouki, Bahi Naima and Zerari Abd El Moumène (LESIA, Algeria)

S2: Micro/Nanoelectronic

Room CHALLA

Chair: Jean-micheal Sallese (EPFL, Switzerland)

- 10:30** *Memristor Emulator Based On Single CCII*
 Abdullah G. Alharbi (University of Missouri - Kansas City, MO, USA); Zainulabideen J. Khalifa (King Fahad University of Petroleum and Minerals, Saudi Arabia); Mohammed E. Fouda (Faculty of Engineering, Cairo University, Egypt); Masud H. Chowdhury (University of Missouri Kansas City, Kansas City, MO, USA)
- 10:50** *A Novel TSV-Based Power Harvesting System for Low-Power Applications*
 Khaled Salah Mohamed (Mentor Graphics, Egypt)
- 11:10** *Effect of crystallite size and precursor molarities on electrical conductivity in ZnO Thin Films*
 Okba Belahssen (University of Biskra & LPCMA Biskra, Algeria); Said Benramache (University of Biskra, Algeria); Boubaker Benhaoua (University of El-oued, Algeria)
- 11:30** *Performance Investigation and Linearity Analysis of New Cylindrical MOSFET for Wireless Applications*
 Jay Hind Kumar Verma (University of delhi South Campus & Semiconductor Device Research Laboratory, India); Subhasis Haldar (Motilal Nehru College, University of Delhi, India); R s Gupta (Maharaja Agrasen Institute of Technology, India); Mridula Gupta (Semiconductor Device Research Laboratory, India)

SS4: Biomedical

Room KOUTOUBIA

Chairs: Brahim Elbhiri (EMSI Rabat, Morocco), Mohamed Tabaa (Department of Research and Innovation, EMSI, Morocco)

- 10:30** *Embedded Agent for medical image segmentation*
 Bensag Hassna (LSSDIA, Morocco); Youssfi Mohamed (Labo SSDIA, ENSET Mohammedia, Morocco); Omar Bouattane (EMSI, Lebanon)
- 10:50** *Interdigitated Electrodes Biosensor for DNA Sequences Detection*
 Ayoub Bourjilat (Université de Lorraine, France); Djilali Kourtiche and Frederic Sarry (Université de Lorraine-CNRS, France); Mustapha Nadi (Université de Lorraine-CNRS & Institut Jean Lamour, France)
- 11:10** *Self-Charging of Medical Instruments Based on Bioelectric Potentials*
 Khalifa Elmansouri and Rachid Latif (FSA, Morocco)

2:00 PM - 4:00 PM

PS: Poster Session

Rooms: Main Hall, Plenary Room, Room CHALLA, Room KOUTOUBIA

Chairs: Abbas Dandache (University of Lorraine, France), Sanaa El filali (Faculty of Sciences Ben Msik, Morocco), Mohamed El aroussi (EHTP, Morocco)

A Curvelet-based approach for breast masses detection in digital mammograms

Berraho Sanae (LARIT, Morocco); Mounir Ait Kerroum (Mohamed V-Agdal University, Morocco); Youssef Fakhri (University IbnTofail Faculté des Sciences de Kénitra, Morocco); Tabaa Mohamed (EMSI, Morocco); B Chouri (EMSI, Macao)

Neuro-Space Mapping Technique for microwave nonlinear circuits Modeling

Taj-eddin Elhamadi and Mohamed Boussouis (fs Tetouan, Morocco)

Implementation of a 17 bits Pulse Width Modulation Circuit using FPGA

Lucas Salomon (UNIFEI, Brazil); Robson Moreno and Tales C Pimenta (Universidade Federal de Itajuba, Brazil)

Low-Power CMOS Variable Gain Amplifier Design in 0.18 μ m Process

Fahmi Ayadi (University of sfax Tunisia, Tunisia); Sawssen Lahyani (ENIS, Tunisia)

A SWOT Analysis of TSV: Strengths, Weaknesses, Opportunities, and Threats

Khaled Salah Mohamed (Mentor Graphics, Egypt)

Shifting the half wave dipole antenna resonance using EBG structure

Abdenacer ES-salhi (Université Mohamed 1er, Morocco); Mohammad El Ghabzouri (Mohammed First University UMP, Morocco); Paulo Mendes (University of Minho, Portugal)

Direct-Elevator: A Modified Routing Algorithm for 3D-NoCs

Maha Beheiry and Ahmed Aly (Mentor Graphics, Egypt); Hassan Mostafa (University of Toronto, Canada); Ahmed M Soliman (Cairo University, Egypt)

Synchrosqueezing Characterize Non-Stationary Signals: Application on Gait-Vertical Ground Reaction Force

Mohamad O. Diab (Rafik Hariri University & College of Engineering, Lebanon); Bassam Moslem (Rafik Hariri University & RHU, Lebanon); Rami Alkhatib (RHU, Lebanon); Christophe Corbier (Université Jean-Monnet, France); Mohammed El Badaoui (University of Saint Etienne, France)

On Getting Energy for Medical Equipment from Human Body

Yehya Ghallab (Helwan University, Egypt)

Enhancing Power Delay Product in DRAMs Using Resonant Tunneling Diode Buffer

Ahmed Lutfi Elgreatly (Port-Said University, Faculty of Engineering, Egypt); Ahmed Ahmed Shaaban Dessouki (Port Said University, Egypt); Sayed El-Rabie (Dep. of Electronic and Communication Eng., Egypt)

Validation of a multi-exponential alternative model of solar cell and comparison to conventional double exponential model

Mohammadi Benhmida (Chouaib Doukkali University, Faculty of Sciences, Morocco); Rachid Bendaoud (Chouaib Doukkali University, Faculty of Sciences, Morocco); M'hamed El Aydi (Regional Center for Education and Training, Morocco); Said Yadir (Faculté des Sciences-Université Chouaib Doukkali, Morocco); Charaf Hajjaj (Chouaib Doukkali University, Faculty of Sciences, Morocco); Youssef Errami and Smail Sahnoun (Faculty of Science University, Chouaib Doukkali, Morocco)

Low Voltage Low Power Highly Linear OTA using Bulk Driven Technique

Nejib Hassen, Karima Garradhi and Thouraya Ettaghzouti (University of Monastir, Tunisia); Kamel Besbes (University of Monastir & Centre for Research on Microelectronics & Nanotechnology CRMN Sousse, Tunisia)

Evaluating the Feasibility of Centralized Router for Network on Chip

Mostafa Khamis and Amir Zaytoun (Alexandria University, Egypt); Ahmed Shalaby (Egypt Japan University for Science and Technology, Egypt)

A Reconfigurable 2-D IDCT Architecture for HEVC Encoder/Decoder

Ahmed Kilany (Information Technology Institute, Egypt); Maher Mohamed (EJUST University & Benha University, Egypt); Ahmed Shalaby (Egypt Japan University for Science and Technology, Egypt); Mohammed Sayed (Egypt-Japan University of Science and Technology, Egypt)

RSSI optimization method for indoor positioning systems

Youssef Aiboud and Hafid Griguer (EMSI, Morocco); M'hamed Drissi UEB (INSA of Rennes, France)

First specifications of Urban Traffic-Congestion Forecasting Models

Abdellah Daissaoui (EMSI, Morocco); Azedine Boulmakoul (FSTM, Morocco); Habbas Zineb (University of Lorraine, France)

Comparison between Active AC-DC Converters For Low Power Energy Harvesting Systems

Ehab Belal (Cairo University, Egypt); Hassan Mostafa (University of Toronto, Canada); Mohamed Sameh Said (Cairo University, Egypt)

A comparison of multi-resolution and multi-orientation for breast cancer diagnosis in the full-field digital mammogram

Abdelaziz Addioui and Faouzia Benabbou (Faculty of Sciences Ben Msik, Morocco); Mohamed El Aroussi (LETI-EHTP & Mohammed V University, Morocco); Sanaa El filali (Faculty of Sciences Ben Msik, Morocco)

Comparison of Control Structures for Variable Speed Wind Turbine

Salma El Aimani (Ibn Zohr University, Morocco)

Precise electric measurements with temperature using 10-bit embedded system: Application on photovoltaic junctions

Malaoui Abdessamad (Sultan Moulay Slimane University of Beni Mellal, Morocco)

review current CRM architectures and introducing new adapted architecture to Big Data

Daif Abderrahmane (University HASSANE II, Morocco)

Simulation and Control of Takagi-Sugeno Uncertain Model of Buck Converter by Linear Programming

Rkia Oubah (EMSI, Morocco); Abdellah Benzaouia (University Cadi Ayyad, Morocco); Ahmed El Hajjaji (University of Picardie Jules Verne & MIS Lab, France)

2:00 PM - 4:00 PM

P2: Panel session

Rooms: Plenary Room

Chair: M'hamed Drissi UEB (INSA of Rennes, France)

4:30 PM - 06:30 PM

Visit

Quartier Habous, Mosquée Hassan 2, corniche

Wednesday, December 18

9:00 AM - 10:00 AM

key3: Keynote 3

Microelectronics in Morocco « Lessons learned & perspectives »

Hicham Bouzekeri

Room: Plenary Room

Chair: Fabrice Monteiro (University of Lorraine, France)

10:30 AM - 12:30 AM

S5: Circuit and Systems

Plenary Room

Chair: Oussama Elissati (Institut National des Postes et Telecommunications & TIMA Lab., Morocco)

- 10:30** *Real-time Lane Detection in Different Illumination Conditions*
Ismail El hajjouji (ENSA de Tanger, Morocco); Aimad El Mourabit (National School of Applied Sciences of Tangier & LabTic, Morocco); Zakariae Asrih, Benaissa Bernoussi and Salah Mars (ENSA de Tanger, Morocco)
- 10:500** *Power optimization of Decode-and-Forward assisted ARQ relaying*
Ali Kamouch and Abdelaali Chaoub (LEC, Mohammadia School of Engineers, Mohammed V-Agdal University, Morocco); Zouhair Guennoun (Ecole Mohammadia d'Ingenieurs & Laboratoire d'Electronique et de Communications, Morocco)
- 11:10** *Bearing Fault Diagnosis Based on Alpha-Stable distribution feature extraction and wSVM Classifier*
B Chouri (EMSI, Macao); Mohamed El Aroussi (LETI-EHTP & Mohammed V University, Morocco); Fabrice Monteiro (University of Lorraine, France); Tabaa Mohamed (EMSI, Morocco); Abbas Dandache (University of Lorraine, France)
- 11:30** *Design rules for RF Micro Energy Harvesting under near Field probing considerations*
Hafid Griguer, Hicham Lalj and Mohamed amine Benfatah (EMSI, Morocco); M'hamed Drissi UEB (INSA of Rennes, France)
- 11:50** *Polarization Insensitive Metamaterial Absorber For Energy Harvesting*
Hicham Lalj, Hafid Griguer and Mohamed amine Benfatah (EMSI, Morocco); M'hamed Drissi UEB (INSA of Rennes, France)
- 12:10** *A new FPGA-based DPLL algorithm to improve SAT solvers*
Khadija Bousmar (EMSI, Morocco); Fabrice Monteiro and Habbas Zineb (University of Lorraine, France); Dellagi Sofiene (LGIPM, France); Abbas Dandache (University of Lorraine, France)

S3: Micro/Nanoelectronic

Room CHALLA

Chairs: Hicham Bouzakeri (MASCIR, Morocco), Hicham Lalj (EMSI, Morocco)

- 10:30** *Highly Linear Low Voltage Low Power OTA using source-degeneration Technique and Universal Filter Application*
Nejib Hassen, Karima Garradhi and Thouraya Ettaghzouti (University of Monastir, Tunisia); Kamel Besbes (University of Monastir & Centre for Research on Microelectronics & Nanotechnology CRMN Sousse, Tunisia)
- 10:50** *A Novel High Bandwidth Current Mode Instrumentation Amplifier*
Zineb M'harzi and Mustapha Alami (National Institute of Post and Telecommunication (INPT), Rabat, Morocco); Farid Temcamani (Superior National School of Electronics and its Applications (ENSEA), France)
- 11:10** *Performance Enhancement Of 0.18 μ m CMOS OnChip Bandpass Filters Using H-Shaped Parasitic Element*
Nessim Mahmoud (Egypt Japan University of Science and Technology & EJUST, Egypt); Anwer Sayed Abd El-Hameed (Assistant Research & Egypt-Japan University for Science and Technology (E-JUST), Egypt); Adel Barakat (Electronics Research Institute (ERI), Egypt); Adel Bedair and Ahmed Allam (Egypt-Japan University of Science and Technology, Egypt); Ramesh K Pokharel (Kyushu University, Japan)
- 11:30** *A60-GHz double-Y balun-fed on-chip Vivaldi antenna with improved gain*
Anwer Sayed Abd El-Hameed (Assistant Research & Egypt-Japan University for Science and Technology (E-JUST), Egypt); Nessim Mahmoud (Egypt Japan University of Science and Technology & EJUST, Egypt); Adel Barakat (Electronics Research Institute (ERI), Egypt); Adel Bedair and Ahmed Allam (Egypt-Japan University of Science and Technology, Egypt); Ramesh K Pokharel (Kyushu University, Japan)

SS5: Renewable Energy and sources

Room KOUTOUBIA

Chair: Omar Bouattane (LSSDIA, Mohammedia), Jamila Bakkoury (LSSDIA, Mohammedia)

10:30 *Design and Performance Analysis of Energy Conversion Chain, from Multilevel Inverter until the Grid*

Chirine Benzazah (University of Sultan Moulay Slimane Faculty of Sciences and Technology & Laboratory of Automatic, Energy Conversion and Microelectronics (LACEM), Morocco); Loubna Lazrak and Mustapha Ait Iafkih (University of Sultan Moulay Slimane, Faculty of Sciences and Technology, Morocco)

10:50 *Parameters Identification of a Thin-Film Photovoltaic Panels*

Abdellatif Obbadi (Laboratory: Electronics, Instrumentation and Energy Faculty of Science University, Chouaib Doukkali, Morocco); Youssef Errami, Abdelkrim Elfajri and Mustapha Agunaou (Faculty of Science University, Chouaib Doukkali, Morocco); Mohammadi Benhmida (Chouaib Doukkali University, Faculty of Sciences, Morocco); Smail Sahnoun (Faculty of Science University, Chouaib Doukkali, Morocco)

11:10 *Validation of a multi-exponential alternative model of solar cell and comparison to conventional double exponential model*

Rachid Bendaoud (Chouaib Doukkali University, Faculty of Sciences, Morocco); M'hamed El Aydi (Regional Center for Education and Training, Morocco); Said Yadir (Faculté des Sciences-Université Chouaib Doukkali, Morocco); Youssef Errami and Smail Sahnoun (Faculty of Science University, Chouaib Doukkali, Morocco); Mohammadi Benhmida (Chouaib Doukkali University, Faculty of Sciences, Morocco)

11:30 *Control, monitoring and evaluation cost of stand alone PV plants*

Chrif Adnane (science , Tunisia)

11:50 *Physical parameters extraction by a new method using solar cell models with various ideality factors*

Mohammadi Benhmida (Chouaib Doukkali University, Faculty of Sciences, Morocco); Said Yadir (Faculté des Sciences-Université Chouaib Doukkali, Morocco); Houssam Amiry (Chouaib Doukkali University, Faculty of Sciences, Morocco); Rachid Bendaoud (Chouaib Doukkali University, Faculty of Sciences, Morocco); M'hamed El Aydi (Regional Center for Education and Training, Morocco); Ahmed Elhassnaoui (Chouaib Doukkali University, Faculty of Sciences, Morocco); Abdellatif Obbadi (Laboratory: Electronics, Instrumentation and Energy Faculty of Science University, Chouaib Doukkali, Morocco)

12:10 *New method to improving hydrogen production by an adaptive photovoltaic system and P&O algorithm*

dahbi sanae (University Mohammed First Oujda/Morocco, Morocco)

12:30 AM

Reg: Closing Ceremony - Award certificate

Plenary Room, Room CHALLA, Room KOUTOUBIA

Chair: Mohamad Sawan (Polytechnique Montréal, Canada)