



Sunday, December 14, 2008 (Tutorials)

(8:30 – 12:00)

T1: **Low Power, Robust SRAMs for Nano- Metric Technologies**, Manoj Sachdev
(University of Waterloo) **(M9-006)**

T2: **Pushing the limits of energy consumption: opportunities and challenges**,
Massimo Alioto (University of Siena) **(M9-007)**

(13:30 – 17:00)

T3: **Design Methodology of Multi-core, GHz Processor Designs in 45nm
Technology**, Vidyasagar Ganesan (Advance Micron Devices - AMD) **(M9-006)**

T4: **Large Area Digital Imaging Technology**, Karim Karim (University of
Waterloo) **(M9-007)**



Monday, December 15, 2008

Registration (8:00-16:00)

Opening Ceremony (10:00-11:00) (M2-AIzuhri Hall)

Keynote 1 (11:00-11:45) (M2-AIzuhri Hall)

Title of Talk "Power Management for VLSI: The History and the Outlook"

Farid Najm, University of Toronto

Plenary Chair: Prof. Mohamed Elmasry

Coffee Break (11:45-12:00)

Session 1: Analog Circuit Techniques (I) (12:00-13:40) (M9-006)

Session Chair: Soliman Mahmoud

Session co-Chair: Ahmed El-Wakil

New CMOS Digitally Controlled Variable Gain Amplifier: Soliman Mahmoud, Tarek Hassan (German University in Cairo)

CMOS Fully Differential CMOS Four-Quadrant Analog Multiplier: Soliman Mahmoud (German University in Cairo, Egypt)

New CMOS Operational Transresistance Amplifier: Abdelrahman: Kafrawy (German University in Cairo), Ahmed Soliman (Cairo University)

High-Speed Area-Efficient Operational Amplifiers Compatible with: Digital CMOS Technologies: Hamed Aminzadeh, Mohammad Danaie (Ferdowsi University of Mashhad)

An Ultra-Low-Voltage Ultra-Low-Power OTA With Improved Gain Bandwidth Product: Milad Razzaghpour (Sadjad Institute for higher education), Abbas Golmakani (Ferdowsi University of Mashhad)



Session 2: Digital Signal and Data Processing (12:00-13:40) (M9-007)

Session Chair: M. P. Kennedy

Session co-Chair: Syed Atef Banawan

Application Aspects of the Diophantine Frequency Synthesis Methodology (**Invited Paper**) Paul P. Sotiriadis (John Hopkins University)

Design Methodology for a Reduced Complexity Single Quantizer Digital Delta-Sigma Modulator: Zhipeng Ye, Michael Kennedy (University College Cork, Ireland)

A Novel Structure for Realization of a Pseudo Two Path Band-Pass Filter : Mohammad Rashtian (Islamic Azad university), Omid Hashemipour (Shahid Beheshti University), Keivan Navi (Shahid Beheshti Univ.)

Digital Circuit Design for FPGA based Implementation of ICA for real time Blind Signal Separation: Mouloud OUNAS, Salim Chitroub, Rachida Touhami, Said Gaoua, (USTHB University, Algeria), Mustapha Yagoub (University of Ottawa, Canada)

Fully Programmable CMOS Traingular and Trapezoidal function Generators: Ahmed Taher, Soliman Mahmoud (German University in Cairo)

Session 3: Digital VLSI Design (12:00-13:40) (M9-008)

Session Chair: Mahmoud Al-Qutayri

Session co-Chair: Bassel Soudan

Efficient Techniques for Realizing Large-Size Signed Multipliers in FPGAs: Shuli Gao, Dhamin Al-Khalili, Nouredine Chabini (Royal Military College of Canada)

A 65nm LEVEL-1 CACHE FOR MOBILE APPLICATIONS: Baker Mohammad (University of Texas, Austin), Ken Lin (Qualcomm Inc.), Paul Bassett (Qualcomm Inc.), Adnan Aziz (University of Texas, Austin)

A Methodology for Arithmetic Reduction of the Static Power Consumption Verified on Filter Architectures: Peter Nilsson (Lund University, Sweden)



Optimized Local Interconnect for Cluster-based Mesh FPGA Architecture: Zied Marrakchi, Hayder Mrabet, Habib Mehrez (Paris 6 university, France)

Decoupling Capacitor Optimization for Nanotechnology Designs: Bardia Bozorgzadeh, Ali Afzali-Kusha (University of Tehran, Iran)

Lunch (13:40-14:40)

Session 4: RF Techniques (14:40-16:45) (M9-006)

Session Chair: Lutfi Albasha

Session co-Chair: Leonard MacEachern

Active Inductor Symbolic Analysis : Leonard MacEachern (Carleton University), Daniel Olszewski (AMCC, Canada), Samy Mahmoud (Carleton University)

Improvement of Carrier Power to Third-Order Intermodulation Distortion Power Ratio in CMOS Distributed Amplifiers: Ziad El-Khatib, Leonard MacEachern, Samy Mahmoud (Carleton University, Canada)

Design of Novel High Isolation RF Wideband Low Noise Amplifier for Digital TV Applications: Lutfi Albasha (American University Of Sharjah)

A Fully-Integrated Linearized CMOS Bidirectional Distributed Amplifier as UWB Active Circulator: Ziad El-Khatib, Leonard MacEachern, Samy Mahmoud (Carleton University, Canada)

Bit-Error-Rate Performance of Inter-Chip RF/Wireless Interconnect Systems: Md. Sajjad Rahaman, Masud Chowdhury (University of Illinois at Chicago)

Steady-state and Transient Temperature Distribution in GaAs Microwave Circuits: Shriram Krishnamoorthy, Masud Chowdhury (University of Illinois at Chicago)



Session 5: Systems on Chip (I) (14:40-16:45) (M9-007)

Session Chair: Abdessamad Falhi

Session co-Chair: Chedly Yahya

A Signal Conditioner for Planar High-Frequency Inductive Contactless Position Sensors (**Invited Paper**): Mohamad Rahal and Andreas Demosthenous (University College London)

Investigating Issues of On-Chip Voltage Regulator in Nanoscale Integrated Circuits: Juliana Gjanci, Masud Chowdhury (University of Illinois at Chicago)

Design Of Multi-Sensors Energy Efficient Reconfigurable Embedded Systems : Abdessamad Falhi (CSEM-UAE Innovation Center LLC, UAE)

Sensitivity optimization of a foot plantar pressure micro-sensor : Yufridin Wahab, Aladin Zayegh, Rezaul Begg, R. Veljanovski (Victoria University, Australia)

Modeling of a Smart Humidity Sensor : Souhil Kouda, Zohir Dibi, Meddour Fayçal (Batna university, Algeria)

A new structure Voltage-Mode digital fuzzifier with low power and high accuracy: Meysam Abbasinia, A. Khoie, Kh. Hadidi (Urmia university, Iran)

Session 6: Wireless Systems (14:40-16:45) (M9-008)

Session Chair: Saleh R. Al-Araji

Session co-Chair: Karim Abed-Meraim

Advanced Techniques for Enhancing Wireless RF Transmitters' Power Efficiency Transmitters (**Invited Paper**) Slim Boumaiza, University of Waterloo

Noise-Shaped Post-Mixer Blocker Filter for Integrated Receivers: Ahmet Tekin, Kenneth Pedrotti (University of California Santa Cruz, USA) Hassan Elwan (Newport Media Inc., USA) Numan S. Dogan (North Carolina A&T State University, USA)



A CMOS Complex Gm – C Filter for Low-IF Bluetooth Receiver: Mohammed Fahmy, Soliman Mahmoud (German University in Cairo)

Low voltage, low power CMOS Front-end for Bluetooth Applications: Omar Kassem, Soliman Mahmoud (German University in Cairo)

A CMOS Channel Select Filter for Dual Mode Bluetooth/WLAN Direct-Conversion Receiver: Alaa El-Din Hussein, Hussain Al-Zaher, Noman Tasadduq (KFUPM, Saudi Arabia)

A 1W, 900MHz Class-F RF Power Amplifier with 56% PAE in 0.18-um CMOS Technology: Javad Javidan, Pooya Torkzadeh, Mojtaba Atarodi (Sharif Univ.)

Coffee Break (16:45 – 17:00)

Session 7: CAD for VLSI (I) (17:00-19:00) (M9-006)

Session Chair: Massimo Alioto

Session co-Chair: Asim Al-Khalili

Placement Algorithm For Multiplier-Based FPGA Circuits : Jacques Athow, Asim Al-Khalili (Concordia University, Canada)

Methodology for Thermal Aware Topologies and Partitioning with Better Lateral Spreading: Pavankumar V (Intel), Prashant Agrawal (IBM), Ashwin Muppalla (Georgia Institute of Technology), Srinivasa Stg (Intel), Ajit Pal (Indian Institute of Technology)

Simultaneous Routing and Buffer Insertion Algorithm for Interconnect Delay Optimization in VLSI Layout Design: Mohamed Khalil-Hani, Nasir Shaikh-Husin (Universiti Teknologi Malaysia)

CAD Models of the Input Admittance of RC Wires: Comparison and Selection Strategies: Massimo Alioto (University of Siena, Italy)

Automatic Layout Generator of Domain Specific FPGA: Hayder Mrabet, Hussain Parvez, Zied Marrakchi, Habib Mehrez (University of Pierre et Marie Curie, France) Andre Tissot (Commissariat a l'Energie Atomique)



Area-Delay Minimization for Library-Free Synthesis with Logical Effort : Matthew Pullerits, Adnan Kabbani (Ryerson University, Canada)

Session 8: Device Characterization and Modeling (17:00-19:00) (M9-007)

Session Chair: Rezaul Hasan

Session co-Chair Eesa Bastaki

Modeling SiC MPS diodes : Janusz Zarebski, Krzysztof Gorecki, Jacek Dabrowski (Gdynia Maritime University, Poland)

The nonlinear compact thermal model of power MOS transistors : Krzysztof Grecki, Janusz Zarbski (Gdynia Maritime University, Poland)

Analysis of Thermoelectric and Thermomechanical Effects in MOSFETs : Shriram Krishnamoorthy, Masud Chowdhury (University of Illinois at Chicago)

Electrical study of NiFe/Al₂O₃/Si Tunnel diodes for magnetic memories : RABIA Benabderrahmane, Mehdi Kanoun, Nicolas Bruyant, Hervé Achard, Claire Baraduc, Ahmad Bsiesy (Spintec(CEA/CNRS))

MESFET Small Signal Model Parameter Extraction Using Particle Swarm Optimization : SAMRAT SABAT, Vijay Raju M, Layak Ali (University of Hyderabad, India)

Gate Level Static Power Estimation in UDSM Processes: Hussam Al-Hertani, Dhamin Al-Khalili, Côme Rozon (Royal Military College of Canada)

Session 9: Embedded Systems (17:00-19:00) (M9-008)

Session Chair: Amr Youssef

Session co-Chair: Abdel Rahman Al-Ali

A HW/SW Partitioning Algorithm For Multitask Reconfigurable Embedded Systems: Maisam Bassiri, Hadi Shahriar Shahhoseini (Iran University of Science and Technology, Iran)



SystemC HW/SW Co-Design Methodology applied to the design of an Elliptic Curve Crypto System on Chip : Mohamed Khalil-Hani, Yuan Wen Hau (Universiti Teknologi Malaysia)

Maude-based Design Space Exploration of Embedded Systems
Fateh Boutekkouk, Mohammed Benmohammed (L.E.A.T, France)

Analytical performance estimation from Generalized Semi Markov Process Model for Hierarchical Bus Bridge based SoC Communication Architecture: Ulhas Deshmukh, Vineet Sahula (Malaviya National Institute of Technology, India)

An Area Optimized Implementation of the Advanced Encryption Standard: Abdel Alim Kamal, Amr Youssef (Concordia University)

Impact of Cache Power Reduction Techniques in Multi-core Processor using Network On-Chip Paradigm: Abinash Roy, Sandhya Jeevan, Jingye Xu, Masud Chowdhury (University of Illinois at Chicago, USA)



Tuesday, December 16, 2008

Keynote 2 (9:30-10:15) (M9-007)

Title Of Talk "Microprocessor Development: Retrospective and Future Challenges"

Vojin G. Oklobdzija, University of California - Davis

Plenary Chair: Boualem Boashash

Coffee Break (10:15-10:45)

Session 10: Analog Circuit Techniques (II) (10:45-12:50) (M9-006)

Session Chair: Rezaul Hasan

Session co-Chair: Abul kadir Hamid

On the Energy Efficiency of Analog Circuits in Nanoscale CMOS Technologies
(Invited Paper): Trond Ytterdal and Carsten Wulff (Norwegian University of Science and Technology)

An Inductive Buffered Transimpedance Amplifier stage for Optical Transceivers in 130nm CMOS: Rezaul Hasan (Massey university, New Zealand)

A current mode CMOS IC for biological signals measurement in noisy environment :
Mohsen AYACHI (Institut d'Electronique du Solide et des Systèmes, France)

Implementation of Chua's Circuit with UGCs : Carlos Sanchez-Lopez, A. Castro-Hernández, A. Pérez-Trejo F.E. Morales-López, B. Cante-Michcol and M.A. Carrasco-Aguilar (Autonomous University of Tlaxcala, Mexico)

A Low-Power Low-Voltage Programmable Rectification and SH Circuit: Adnan Harb (UAE University, UAE)

Low Voltage Highly Linear Tunable BiCMOS OTA Using Parasitic Vertical Bipolar Transistor in CMOS Technology: Hesham F. A. Hamed (El-Minia University, Egypt)



Session 11: Digital Circuits (10:45-12:50) (M9-007)

Session Chair: Bernard Courtois

Session co-Chair: Ibrahim Kamel

Compact and Simple Output Transition Time Model in Nanometer CMOS Gates:
Massimo Alioto (University of Siena), Massimo Poli (University of Siena), Gaetano Palumbo (University of Catania)

1-Bit Sub Threshold Full Adder in 65nm CMOS Technology: Farshad Moradi, Dag T. Wisland, Tuan Vu Cao (University of Oslo), Ali Peiravi (Ferdowsi University of Mashhad), Hamid Mahmoodi (San Francisco State University)

Semiconductor Optical Amplifier-Based All-optical Modified Signed-digit Adder: A. Cherri (Kuwait University, Kuwait), Mustapha Hamad (Notre Dame University-Louaize, Lebanon)

Temperature Dependence of Propagation Delay Characteristic in FinFET Circuits:
Samaneh Soleimani Amiri, Ali Afzali-Kusha, Behjat Forouzandeh (University of Tehran, Iran)

Low-Power High-Performance Logic Style for Low-Voltage CMOS Technologies:
Bardia Bozorgzadeh, Ehsan Zhian-Tabasy, Ali Afzali-Kusha (University of Tehran, Iran)

Low Noise CMOS implementation of Order Weight Average Operator for Fuzzy Logic Controller Chip: Kazem Gheysari, Abdollah Khoei, Khayrollah Hadidi, Nasser Kamali, (Urmia University, Iran)

Session 12: MEMS and Devices (10:45-12:50) (M9-008)

Session Chair: Ahmed El- Wakil

Session co-Chair: Chedly Yahya

Design of a MEMS Sensor for Surgical Handpiece: Mehrdad Mottaghi, Farzan Ghalichi, Habib Badri Ghavifekr (Sahand University of Technology, Iran)



Design and Modeling of One-port SAW Resonator at 2.45 GHz for Wireless Application Base on GaPO4: Sayed Alireza Mousavi, Aidy Ali, Mohd Nizar Hamidon, M. Rahimi, Roslina Sidek, M.R. Khabbazi, M. bayat (University Putra, Malaysia)

Nanoscale SOI MOSFETs with Double Step Buried Oxide: A Novel Structure for Suppressed Self-heating Effects: Sara Heydari, Ali Asghar Orouji (Semnan university, Iran) Morteza Fathipour (University of Tehran, Iran)

A Novel Impact Ionization MOS (I-MOS) Structure using a Silicon-Germanium/Silicon Heterostructure Channel: Hamed Nematian, Morteza Fathipour, Maryam Nayeri (University of Tehran, Iran)

Studies and Minimization of Kink Effect in SOI MOSFET Devices with SELBOX Structure: Narayanan Madathumpadical, Hasan Al-Nashash, Baquer Mazhari (American University of Sharjah, UAE), Dipankar Pal (B.I.T. Mesra, India)

Design of an Electrostatic MEMS Microgripper System Integrated with Force Sensor: Kinnan Amjad, Shafaat A. Bazaz (GIK Institute of Engineering Sciences & Technology, Pakistan), Yongjun Lai (Queen's University Kingston, Canada)

Lunch (12:50-14:15)

Session 13: RF Circuits (14:15-16:15) (M9-006)

Session Chair: Antonio Liscidini

Session co-Chair: Ahmed El-Wakil

Single-stage RF quadrature front-end receivers for ultra low power applications
(Invited Paper) Antonio Liscidini , (University of Pavia)

A 5.5-GHz 3mW LNA and Inductive degenerative CMOS LNA noise figure calculation: Siroos Toofan, Abdolreza Rahmati (Iran University of Science and Technology, Iran), Adib Abrishamifar (Iran University of Science and Technology, Iran), Mariagrazia Graziano (Politecnico di Torino, Italy), Gholamhasan Roientan Lahiji (Iran University of Science and Technology, Iran)



A Novel Transformer Network and Its Analysis for Power Combiner Blocks in CMOS Technology: Javad Javidan, Pooya Torkzadeh, Mojtaba Atarodi (Sharif University of Technology, Iran)

Nanoscale Field Effect Diode as a High Frequency and Ultra LowPower Variable Gain Amplifier in AGC Circuits: Farzan Jazayeri, Ashkan Jalili, Ahmad Sammak, Farshid Raissi, Behjat Forouzandeh (University of Tehran, Iran)

0.18 μm Fully Integrated 900 MHz CMOS LNA with Input and Output On-chip matching for Multi-standard Mobile Receiver: Mohd Tafir Mustaffa, Aladin Zayegh, R. Veljanovski, Alex Stojcevski (Victoria University, Australia), Tun Zainal Azni Zulkifli (Universiti Sains Malaysia, Malaysia)

System Challenges in the Design of a Broadband RFIC receiver for DVB-H mobile systems: Lutfi Albasha (American University Of Sharjah)

Session 14: VLSI Design for Communications (14:15-16:15) (M9-007)

Session Chair: Abdallah Naem

Session co-Chair: Qassim Nasir

Providing Both Guaranteed and Best Effort Services Using Spatial Division Multiplexing NoC with Dynamic Channel Allocation and Runtime Reconfiguration
(Invited Paper): Jimbo Lim¹, E Hunt Siow¹, Yajun Ha¹ (National University of Singapore) and Pramod Kumar Meher² (Nanyang Technological University)

Power Analysis Attacks to Cryptographic Circuits: a Comparative Analysis of DPA and CPA: Massimo Alioto, Massimo Poli, Santina Rocchi (University of Siena)

On the VLSI Implementation of Low Complexity K-Best MIMO Decoders: Sudip Mondal (Rensselaer Polytechnic Institute), Ahmed Eltawil (University of California, Irvine), Khaled Salama (Rensselaer Polytechnic Institute)

A low power 10 Gbps voltage mode output driver with good return loss performance: Khaldoon Abugharbieh (National Semiconductor, USA), Shoba Krishnan (Santa Clara Univesity), Jitendra Mohan (National Semiconductor, USA), Devnath Varadarajan (National Semiconductor, USA)



Efficient Hardware Implementation for 802.16e Double Binary Turbo Decoder: Amr M. A. Hussien, Hossam A. H. Fahmy, Mohamed Khairy (Cairo University, Egypt)

VLSI Design Techniques and Strategies for Implementing Adaptive Equalizer: Ab Al-Hadi Ab Rahman, Izam Kamisian, Ahmad Zuri Sha'ameri Faculty of Electrical Engineering Universiti Teknologi Malaysia

**Session 15: Topics on Nanoelectronics/Nanotechnology (14:15 – 16:15)
(M9-008)**

Session Chair: Hasan Al-Nashash

Session co-Chair: Ismail Shahin

A Circuit Model for Bio-chemical Cell Signaling Receptor Protein and Phosphorylation Cascade pathway: Rezaul Hasan (Massey university, New Zealand)

CMOS-Nano FPGA Utilizing Mechanical Switches: Ming Liu (Chinese Academy of Sciences, China) Wei Wang (University at Albany)

Quantum Capacitance Extraction for Carbon Nanotube Interconnects: Vidur Parkash, Ashok Goel (Michigan Tech University, USA)

Statistical Latency Analysis of Carbon Nanotube Interconnects due to Contact Resistance Variations: Nisha Kuruvilla, Raina J p (VIT University, India)

A Novel Nanoscale Tunnel FET Structure for Increasing On/Off Current Ratio: Mahdi Vadizadeh, Morteza Fathipour, Arash Amid Iran (University of Tehran, Iran)

Coffee Break (16:15-16:40)

Session 16: Testing and Verification (16:40 - 18:30) (M9-006)

Session Chair: Bassel Soudan

Session co-Chair: Kahtan A. Mezher

Efficient Methodology for Boundary Scan Insertion and Pattern Generation for MCM Based Designs: Anilkumar Nimmagadda, Soma Shekar (Tessolve Services Pvt Ltd, India)



Custom Formal Verification Technique For Partial Product Reduction Tree: Marco Castellano (University of Pavia, Italy), Paola Baldrighi (University of Pavia, Italy),

Carla Vacchi (University of Pavia, Italy), Mauro Natuzzi (STMicroelectronics), Alberto Furlan (STMicroelectronics)

Temporal Constraints Analysis for Timing Verification of Systems: Alena Tsikhanovich (University of Montreal, Canada), El Mostapha Aboulhamid (University of Montreal, Canada), Guy Bois (Ecole Polytechnique de Montréal, Canada)

Preventing IP Over-Deployment in a Multiple IP SOC Design: Bassel Soudan (Sharjah University, UAE), Wael Adi (Technical University of Braunschweig, Germany)

Session 17: Data Converters (16:40 - 18:30) (M9-007)

Session Chair: Paul Sotiriadis

Session co-Chair: Hakan Johansson

On the Compensation of Frequency-Response Mismatch Errors in Time-Interleaved ADCs (**Invited Paper**) Hakan Johansson (Linkoping University)

Efficient Enumeration of 2D Euclidean Distances Sudip Mondal, Khaled Salama (Rensselaer Polytechnic Institute, USA)

A 10-bit Low-Power SAR ADC With a Tunable Series Attenuation Capacitor: Lado Filipovic, Leonard MacEachern (Carleton University, Canada)

A 15 Bits 12 MS/s 5th-Order Sigma-Delta Modulator for Communication Applications: Mehdi Taghizadeh, Abdolreza Nabavi (Tarbiat Modares University, Iran), Davood Mahmoodi (Shiraz University, Iran)



Session 18: CAD for VLSI (II) (16:40 - 18:30) (M9-008)

Session Chair: Sofiene Tahar

Session co-Chair Mohamed Saad

GRAPHICAL MODEL VALIDATION METHODS FOR ANALOG AND MIXED-SIGNAL ELECTRONIC CIRCUITS DESIGN: Husam Hamad, Adnan Al-Smadi, Abdallah Ijeh (Yarmouk University, Yemen)

Fast Synthesis of Analog Circuits Based on Evolutionary Optimization of ANFIS Space Mapped Model: Vahid Asadpour, Milad Razzaghpour (Sadjad University, Iran)

On the Simulation Performance of Contemporary AMS Hardware Description Languages: Rajeev Narayanan, Naeem Abbasi, Mohamed Zaki, Ghiath Al Sammane Sofiene Tahar (Concordia University, Canada)

A Novel Approach for Skew Compensation in Energy Recovery Clock Distribution Networks: Seyed Ebrahim Esmaeili, Asim Al-Khalili, Glenn Cowan (Concordia Univ.)

Interconnect Wire Length Estimation for Stochastic Wiring Distributions: Mohamed Hefeida, Masud Chowdhury (University of Illinois at Chicago)

BANQUET (19:30-23:00) (Medical Colleges)



Wednesday, December 17, 2007

Keynote 3 (9:30-10:15) (M9-007)

Title of Talk "Integrated Circuit Brokers : Where do they come from? Where are they heading?"

Bernard Courtois, TIMA-CMP

Plenary Chair : Mohab Anis

Coffee Break (10:15-10:45)

Session 19: Device Innovation and Applications (10:45-12:45) (M9-006)

Session Chair: Vojin G. Oklobdzija

Session co-Chair: Karim Karim

Current mode active pixel sensor architectures for large area digital imaging: Karim Karim (University of Waterloo), Farhad Taghibakhsh (University of Toronto), Mohammad Hadi Izadi, Nader Safavian, Dali Wu (University of Waterloo)

Investigation of Using the Organic Thin Film Transistors in the Pixel Circuit of the Active Matrix Organic Light Emitting Diode Flat Panel Display: Mohamed Montasser, Darek Korzec (The German University in Cairo, Egypt)

Design of an exponential stage for organic pixel addressing: Ahmed Abd el Halim, Darek Korzec (The German University in Cairo, Egypt)

Performance Monitoring of Solar Photovoltaic Systems Using Reference Cells: Chedly Yahya (Sharjah University, UAE)

Impedance Characterization of MEMS based All Diamond Neural Probe: Najamuddin, Shafaat A. Bazaz (Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan) H.Y.Chan, D.M.Asalam (Michigan State University, USA)



Session 20: Topics on Processor Design (10:45-12:45) (M9-007)

Session Chair: Hussam Fahmy

Session co-Chair: Abdul Motaleb El Saddik

Multi-Core Processors: A New Way Forward and Challenges: Abinash Roy, Jingye Xu, Masud Chowdhury (University of Illinois at Chicago, USA)

Analysis of Non-Optimal LRU Decisions in High-performance Processors: Keveh Jokar Deris, Amirali Baniasadi (University of Victoria)

Asymptotic Performance Analysis and Optimization of Resource-Constrained Multi-Core Architectures: Jeong-Gun Lee (Hallym University, Korea), Eungu Jung (The Attached Institute of ETRI, Korea), Dong-Wook Lee (The Attached Institute of ETRI, Korea)

Branch Prediction for Network Processors: David Bermingham, Zhen Liu, Xiaojun Wang (Dublin City University, Ireland), Bin Liu (Tsinghua University, China)

A Cost-Effective Error Detection and Roll-back Recovery Technique for Embedded Microprocessor Control Logic: Hassan Ghasemzadeh-Mohammadi, Hamed Tabkhi, Seyed Ghassem Miremadi, Alireza Ejlali (Sharif University, Iran)

Session 21: Clock and Data Recovery (10:45-12:45) (M9-008)

Session Chair: M. Mansour

Session co-Chair: Henrik Sjoland

On the Design of Low Phase-Noise CMOS LC-Tank Oscillators **(Invited Paper)** : Makram M. Mansour (National Semiconductor Corporation), Mohammad M. Mansour (American University of Beirut)

Time Evolution of the Voltage-Controlled Signal in Charge Pump PLL Applications : Sinisa Milicevic, Leonard MacEachern (Carleton University)

A Novel Voltage-Controlled Ring Oscillator Based on Nanoscale DG-MOSFETs : Savas Kaya, Anish Kulkarni (Ohio University)



A 24-GHz LC-QVCO in 130-nm CMOS using 4-bit Switched Tuning : Markus Tormanen, Henrik Sjoland (Lund University, Sweden)

Design of a Quadrature Clock Conditioning Circuit in 90-nm CMOS Technology : Tarek Zaki, Damir Ferenci, Markus Groezing, Manfred Berroth (University of Stuttgart, Germany)

7GHz Voltage Control Ring Oscillator for UWB applications : Negar Rashidi, Abdolreza Nabavi, Maryam Mehrabian (Tarbiat Modares University, Iran)