

Tuesday 22nd Jan 2008

16:00 REGISTRATION: UC Bistro, Tower C, G/F, HKUST

17:00 Welcome Reception: UC Bistro, Tower C, G/F, HKUST

Wednesday 23rd Jan 2008

08:00 REGISTRATION: Lecture Theatre J, LTJ, HKUST

09:00-09:10 Opening Ceremony

09:10-09:20 Welcome Address: Professor Roland Chin, Vice President for Academic Affairs, HKUST

09:20-09:40 Committees Address: General and Program Chairs

09:40-10:20 Keynote by Professor Niraj K. Jha, EEE Department, Princeton University, USA "Digital System Testing: Emerging Issues, Trends and Solution Approaches" venue: Lecture Theatre J, LTJ.

10:20-10:50 BREAK

10:50-12:10 SESSION 1, (Lecture Theatres J and K, HKUST)

10:50-12:10 Session 1A: Analogue Design 1, venue: Lecture Theatre J, LTJ.

Chairs: Chung-Yu Wu (NCTU, Taiwan), Leung Lai Kan Lincoln (CUHK, Hong Kong)

- A Design of 14-bits ADC and DAC for CODEC Applications in 0.18 μ m CMOS process
Donghyun KO, Jihoon JUNG, younggun PU, SangKyung SUNG, KangYoon LEE, (Konkuk University, South Korea)
Chul NAM (SiliconHarmony. South Korea)
- Compensation-Capacitor Free Pseudo Three-Stage Amplifier with Large Capacitive Loads
Ka NANG LEUNG, Yanqi ZHENG (The Chinese University of Hong Kong)
- The design and optimization of a 25kS/s 10bit Micropower Current S/H Cell for Weak Current Bio-medical Applications
Ka Leong TSANG, Jie YUAN (HKUST, Hong Kong)
- A Single-Stage SEPIC PFC Converter for Multiple Lighting LED Lamps
Hsiu-Ming HUANG, Shih-Hsiung TWU, Shih-Jen CHENG, Huang-Jen CHIU (National Taiwan University of Science and Technology)

10:50-12:10 Session 1B: SoC and NoC Testing, venue: Lecture Theatre K, LTK.

Chairs: Michel Renovell (LIRMM, France), Cheng-Wen Wu (NTHU, Taiwan)

- Using Genetic Evolutionary Software Application Testing to Verify a DSP SoC
Adriel CHENG, Cheng-Chew LIM (University of Adelaide, Australia)
Yihe SUN, Hu HE, Zhixiong ZHOU, Ting LEI (Tsinghua University, China)
- Channel Width Utilization Improvement in Testing NoC-Based Systems for Test Time Reduction
Jia LI, Qiang XU, Yu HU, Xiaowei LI (ICT, Chinese Academy of Sciences, China)
- Coordinated versus Uncoordinated Checkpoint Recovery for Network-on-Chip based Systems
Claudia RUSU, Lorena ANGHEL (TIMA Laboratory, France)
Cristian GRECU (University of British Columbia, Canada)
- Testing of a Highly Reconfigurable Processor Core for Dependable Data Streaming Applications
Hans G. KERKHOFF (University of Twente, The Netherlands)
Jarkko J. M. HUIJTS (TDT, The Netherlands)

12:10-13:20 LUNCH at UC Bistro, Tower C, G/F, HKUST

13:20-15:00 SESSION 2 (Lecture Theatres J and K, HKUST)

13:20-15:00 Session 2A: Signal and Image Processing, venue: Lecture Theatre J, LTJ.

Chairs: Yuminosuke Yano (Ehime University, Japan), Kam Tim Woo (HKUST, Hong Kong)

- A Fast Algorithm for the Chirp Rate Estimation
Jihai CAO, Ning ZHANG, Lin SONG (Harbin Institute of Technology, China)
- Crack Detection on Asphalt Surface Image Using Enhanced Grid Cell Analysis
Siwaporn SORNCHAREAN, Suebskul PHIPHOBMONGKOL (Chulalongkorn University, Thailand)
- Image Model Use for 1D Near Optimal Interpolation for Image Super-resolution
Andrew GILMAN, Donald G. BAILEY, Stephen R. MARSLAND (Massey University, New Zealand)
- Performance Estimation of Crash Control System using Image Processing
Sriram MURALI, Ramachandran SHANKAR (Anna University, India)

13:20-15:00 Session 2B: Advanced Communication Systems, venue: Lecture Theatre K, LTK.

Chairs: Zhihua Wang (Tsinghua University, China), Farid Flitti (HKUST, Hong Kong)

- A High Speed CMOS Transmitter and Rail-to-Rail Receiver
Feng ZHANG, Lingyi HUANG, Weinwu HU (Institute of Computing Technology, China)
- Design of a 12-Channel 120-Gb/s Optical Receiver Array in 0.18- μ m CMOS Technology
W. S. OH, K. PARK, J. C. CHOI, C. J. KIM, S. I. LEE, J. K. MOON (Korea Electronics Technology Institute, South Korea)
- 99-dB High-Performance Delta-Sigma Modulator for 20-kHz Bandwidth
Youngkil CHOI, Hyungdong ROH, Hyunseok NAM, Jeongjin ROH (Hanyang University, South Korea)
- Analysis and Design of a Continuous-Time Sigma-Delta Modulator with 20MHz Signal Bandwidth, 53.6dB Dynamic Range and 51.4dB SNDR
Tao WANG, Liping LIANG (Tsinghua University, China)

15:00-15:30 BREAK & POSTERS

15:00-15:30 Poster Session 1, venue: Area outside Lecture Theatre K & J.

Chair: Abbas Amira (Brunel University, UK)

- An FPGA Implementation of the Searcher Algorithm
A. SAGAHYROON, M. EI TARHUNI, S. IBRAHIM (American University of Sharjah, United Arab Emirates)
- Analysis of CPU Utilisation and Stack Consumption of a Multimedia Embedded System
Amith KUMAR, Nuggehalli RAMACHANDRA, (Delphi Corporation, USA)
Avin Kumar KANNUR (Arizona State University, USA)
- Research on System Usability of Digital Libraries in China
Yaohua YU, Zhengjie LIU (Dalian Maritime University, China)
- A Fast Two-Stage Sample-and-Hold Amplifier for Pipelined ADC Application
Jian RUAN, (Peking University, China)
Chung Len LEE (National Chiao Tung University, Taiwan)
- Low Phase Noise Bond Wire VCO for DVB-H
Ki-Jin KIM, K. H. AHN, T. H. LIM (Korea Electronics Technology Institute, South Korea)
- A Novel Dummy bitline Driver for Read Margin Improvement in an eSRAM
M. Yap San MIN, P. MAURINE, M. BASTIAN, M. ROBERT (LIRMM, France)
- A 14-bit 320MSPS Segmented Current-steering D/A Converter for High-speed Application
Shangquan LIANG, Minglun GAO, Yongsheng YIN, Honghui DENG (Hefei University of Technology, China)
- A Multiprocessor System for a Small Size Soccer Robot Control System
Ce LI, Yang JIANG, Zhenyu WU, Takahiro WATANABE (Waseda University, Japan)
- Low Cost Arbitration Method for Arbitrarily Scalable Multiprocessor Systems
Tero VALLIUS, Juha RÖNING (University of Oulu, Finland)
- An Efficient Design of Single Event Transients Tolerance for Logic Circuits
Yantu MO, Suge YUE (Beijing Microelectronic Technology Institute, China)
- Adaptive Diagnostic Pattern Generation for Scan Chain
Fei WANG, Yu HU, Xiaowei LI (ICT, Chinese Academy of Sciences, China)
- Built-In Self-Test for Embedded Voltage Regulator
Jiang SHI, Ricky SMITH (Texas Instruments, USA)

15:30-17:10 SESSION 3 (Lecture Theatres J and K, HKUST)

15:30-17:10 Session 3A: Special Session on High Performance Reconfigurable Computing, venue: Lecture Theatre J, LTJ.

Chairs: Abbas Amira (Brunel University, UK), Oliver Pfaender (UlM University, Germany)

- Recent Trends in FPGA Architectures and Applications (invited talk)
Philip H. W. LEONG (Chinese University of Hong Kong)
- Embedding Smart Buffers for Window Operations in a Stream-Oriented C-to-VHDL Compiler
Fabian DIET, Erik H. D'HOLLANDER, Kristof BEYLS, Harald DEVOS (Ghent University, Belgium)
- Implementation of Hardware Encryption Engine for Wireless Communication on a Reconfigurable Instruction Cell Architecture
Zong WANG, Tughrul ARSLAN, Ahmet ERDOGAN (University of Edinburgh, UK)

- Dynamic slowdown and partial reconfiguration to enhance power and scalability in FPGA based auto-adaptive SoPC
Xun ZHANG, Hassan RABAH, Serge WEBER (Nancy Université, France)
- xDSL Network Upgrade Employing FPGAs
Milos MILOSAVLJEVIC, Faycal BENZAALI, Pandelis KOURTESSIS (University of Hertfordshire, UK)

15:30-17:10 Session 3B: Sensor, Implants and Display, venue: Lecture Theatre K, LTK.

Chairs: Hong Chen (Tsinghua University, China), Farid Boussaid (UWA, Australia)

- Architecture of a Low Storage Digital Pixel Sensor Array with an On-line Block-Based Compression
Milin ZHANG, Amine BERMAK (HKUST, Hong Kong)
- Effects of insulator thickness on the sensing properties of MISiC Schottky-diode hydrogen sensor
W. M. TANG, C. H. LEUNG, P. T. LAI (HKU, Hong Kong)
- High Speed Depth Estimation using Tilted Focal Planes
Hiroshi IKEOKA, Takayuki HAMAMOTO (Tokyo University of Science, Japan)
- Multi-Phase Charge Pump Generating Positive and Negative High Voltages for TFT-LCD Gate Driving
Chi-Hao WU, Chern-Lin CHEN (National Taiwan University, Taiwan)
- Power Issues on Circuit Design for Cochlear Implants (invited talk)
Zhihua WANG, Songping MAI, Chun ZHANG (Tsinghua University, China)

Thursday 24th Jan 2008

08:40-10:00 SESSION 4 (Lecture Theatres J and K, HKUST)

08:40-10:00 Session 4A: Advanced Memory Design, venue: Lecture Theatre J, LTJ.

Chairs: Zhang Feng (ICT, China), Kong Pang Pun (CUHK, Hong Kong)

- Dynamic Co-operative Intelligent Memory
Xiaoyong WEN, Faycal BENZAALI, Reza SOTUDEH (University of Hertfordshire, UK)
- An Accurate and Energy-Efficient Way Determination Technique for Instruction Caches by Using Early Tag Matching
*Eui-Young CHUNG, (Yonsei University, South Korea)
Cheol Hong KIM, (Chonnam National University, South Korea)
Sung Woo CHUNG (Korea University, South Korea)*
- Proposal for a Bidirectional Gate using Pseudo Floating-Gate
O. MIRMOTAHARI, Y. BERG (University of Oslo, Norway)
- Read Stability and Write Ability Trade-off for 6T SRAM Cells in Double-Gate CMOS
Bastien GIRAUD, Amara AMARA (ISEP, France)

08:40-10:00 Session 4B: Signal, Faults and Yield modelling, venue: Lecture Theatre K, LTK.

Chairs: Marcel Jacomet (Bern University of Applied Science, Switzerland),
Xiaowei Li (ICT, China)

- Compact Models for Signal Transient and Crosstalk Noise of Coupled RLC Interconnect Lines with Ramp Inputs
Taehoon KIM, Dongchul KIM, Jung-A LEE, Yungseon EO (Hanyang University, South Korea)
- Improving Diagnosis Resolution without Physical Information
A. ROUSSET, A. BOSIO, P. GIRARD, C. LANDRAULT, S. PRAVOSSOUDOVITCH, A. VIRAZEL (LIRMM, France)
- Predictive Die-Level Reliability-Yield Modelling
*Melanie Po-Leen OOI, Ye Chow KUANG, (Monash University Sunway Campus, Malaysia)
Chris CHAN, (Freescale Semiconductor, Malaysia)
Serge DEMIDENKO (Massey University, New Zealand)*
- Hierarchical Calculation of Malicious Faults for Evaluating the Fault-Tolerance
Raimund UBAR, Sergei DEVADZE, Maksim JENIHHIN, Jaan RAIK, Gert JERVAN, Peeter ELLERVEE (Tallinn Technical University, Estonia)

10:00-10:30 BREAK & POSTERS

10:00-10:30 Poster Session 2, venue: Area outside Lecture Theatre K & J.

Chair: Abbes Amira (Brunel University, UK)

- FPGA implementation of a Single Pass Connected Components Algorithm
Christopher T. JOHNSTON, Donald G. BAILEY (Massey University, New Zealand)
- A low voltage rail-to-rail OPAMP design for biomedical signal filtering applications
Hwang-Cherng CHOW, Pu-Nan WENG
- Workload-Based Dynamic Voltage Scaling with the QoS for Streaming Video
Hong Moon WANG, Hyun Suk CHOI, Jong Tae KIM (Sungkyunkwan University, South Korea)
- Speech Recognition of Isolated Malayalam Words Using Wavelet Features and Artificial Neural Network
Vimal V. R. KRISHNAN, Athulya JAYAKUMAR, P. Babu ANTO (Kannur University, India)
- FPGA based Real Time Solution for Sensitivity Time Control
D. MEENA, L. G. M. PRAKASAM (Electronics and Radar Development Establishment, India)
- A Jittered-Sampling Correction Technique for ADCs
Jamiil TOURABALY, Adam OSSEIRAN (ECU, Australia)
- Robust JPEG2000 Image Transmission over IEEE 802.15.4
*Kyu-Yeul WANG, Seung-Yeul LEE, Byung-Soo KIM, Sang-Seol LEE, Jae-Yeon SONG, Duck-Jin CHUNG (Inha University, South Korea),
Dong-Sun KIM (Korea Electronics Technology Institute, South Korea)*
- New D-Type Flip-Flop Design Using Negative Differential
Dong-Shong LIANG, Kwang-Jow GAN (Kun Shan University, Taiwan)
- Experimental Characterisations of Coupled Transmission Lines
Dongchul KIM, Taehoon KIM, Jung-A LEE, Yungseon EO (Hanyang University, South Korea)
- A Low Power Deterministic Test Pattern Generator for BIST Based on Cellular Automata
Bei CAO, Liyi XIAO, Yongsheng WANG (Harbin Institute of Technology, China)
- A Test Data Compression Method for System-on-a-Chip
Jianhua FENG, Guoliang LI (Peking University, China)

10:30-12:10 SESSION 5 (Lecture Theatres J and K, HKUST)

10:30-12:10 Session 5A: DSP and Processor Design, venue: Lecture Theatre J, LTJ.

Chairs: Donald Bailey (Massey University, New Zealand), Oliver Pfaender (Ulm University, Germany)

- A hybrid of clonal selection algorithm and frequency sampling method for designing a 2-D FIR filter
Te-Jen SU, Chun-Hsiang KUO, Wen-Pin TSAI, Cheng-Chih HOU (National Kaohsiung University of Applied Sciences, Taiwan)
- A Generation Flow for Self-Reconfiguration Controllers Customization
Andrea CUOCCIO, Paolo R. GRASSI, Vincenzo RANA, Marco D. SANTAMBROGIO, Donatella SCIUTO (Politecnico di Milano, Italy)
- Design of High-Speed Floating Point Multiplier
Saroja V. SIDDAMAL, R. M. BANAKAR (BVBCET, India)
B. C. JINAGA (JNTU, India)
- High Performance Elliptic Curve Cryptographic Processor Over $GF(2^{163})$
Hyun Min CHOI, Chun Pyo HONG, Chang Hoon KIM (Daegu University, South Korea)
- A Visual Notation for Processor and Resource Scheduling
Christopher T. JOHNSTON, Paul LYONS, Donald G. BAILEY (Massey University, New Zealand)

10:30-12:10 Session 5B: DfT and BIST, venue: Lecture Theatre K, LTK.

Chairs: Hans Kerkhoff (University of Twente, The Netherlands), Hiromi Hiraishi (Kyoto Sangyo University, Japan)

- Design For Testability of Functional Cores for High Performance Node Architectures
Venkateswaran NAGARAJAN, Karthik CHANDRASEKAR, Shrikanth GANAPATHY (Waran Research Foundation, India)
- Test Response Data Volume and Wire Length Reductions for Extended Compatibilities Scan Tree Construction
Yong-sheng CHENG, Zhi-qiang YOU, Ji-shun KUANG (Hunan University, China)
- AES-based BIST: self-test, test pattern generation and signature analysis
M. DOULCIER, M.-L. FLOTTES, B. ROUZEYRE (LIRMM, France)
- Oscillation-Based Test in Data Converters: On-line Monitoring
Gloria HUERTAS (IMSE-CNM, Spain)
Jose L. HUERTAS (Universidad De Sevilla, Spain)
- A case study on At-Speed Testing of a Gigahertz Microprocessor
Da WANG, Rui LI, Yu HU, Huawei LI, Xiaowei LI (ICT, Chinese Academy of Sciences, China)

12:10-13:20 LUNCH; Chinese Restaurant, G/F, HKUST

13:20-14:40 SESSION 6 (Lecture Theatres J and K, HKUST)

13:20-14:40 Session 6A: Analogue Design 2, venue: Lecture Theatre J, LTJ.

Chairs: Alex Ka Nang Leung (CUHK, Hong Kong), Adam Osseiran (ECU, Australia)

- A charge pump circuit -- cascading high-voltage clock generator
Wen Chang HUANG, Po Chih LIOU (Kun Shan University, Taiwan)
Jin Chang CHENG (Chang Jung Christian University, Taiwan)
- Threshold Voltage Start-up Boost Converter for Sub-mA Applications
Ngok-Man SZE, Wing-Hung KI, Chi-Ying TSUI (HKUST, Hong Kong)

- Design of a Low-Voltage CMOS Charge Pump
Chun Yu CHENG, Ka Nang LEUNG, Yi Ki SUN, Pui Ying OR (The Chinese University of Hong Kong)
- High-Input Impedance Voltage-Mode Universal Biquadratic Filter with One input and Five Outputs using DDCCs
Wei-Yuan CHIU, Jiun-Wei HORNG, Shyuan-Sheng YANG (Chung Yuan Christian University, Taiwan)

13:20-14:40 Session 6B: Energy and Cost Efficient Reconfigurable Systems, venue: Lecture Theatre K, LTK.

Chairs: Hans-Joerg Pflaederer (Ulm University, Germany), Philip Leong (CUHK, Hong Kong)

- Temporal-Spatial Correlation Based Mode Decision Algorithm for H.264/AVC Encoder
Bin ZHAN, Baochun HOU, Reza SOTUDEH (University of Hertfordshire, UK)
- A Software-to-Hardware Self-Mapping Technique to Enhance Program Throughput for Portable Multimedia Workloads
Allen C. CHENG (University of Pittsburgh, USA)
- Improved Policies for Drowsy Caches in Embedded Processors
*Junpei ZUSHI, Gang ZENG, Hiroyuki TOMIYAMA, Hiroaki TAKADA (Nagoya University, Japan)
Koji INOUE (Kyushu University, Japan)*
- Improving cost-effectiveness using a micro-level static architecture for stream applications
Pil Woo CHUN, Jamin ISLAM, Valeri KIRISCHIAN, Lev KIRISCHIAN (Ryerson University, Canada)

14:40-15:20 BREAK & POSTERS

14:40-15:20 Poster Session 3: Special Session on Advanced Biometric and Security Systems, venue: Area outside Lecture Theatre K & J.

Chair: Abbas Amira (Brunel University, UK)

- A compact CMOS Face Detection architecture based on Shunting Inhibitory Convolutional Neural Networks
*Xiaoxiao ZHANG, Amine BERMAK (HKUST, Hong Kong)
Farid BOUSSAID (UWA, Australia)
Abdesselam BOUZERDOUM (Wollongong University, Australia)*
- Temperature Modulation for Tin-Oxide Gas Sensors
Aicha FAR, Bin GUO, Farid FLITTI, Amine BERMAK (HKUST, Hong Kong)
- Eigenspectra Palmprint Recognition
Moussadek LAADJEL, Ahmed BOURIDANE, Fatih KURUGOLLU (Queens University, UK)
- VLSI architecture and FPGA implementation of a hybrid message embedded self-synchronizing stream cipher
*Camel Tanougast, S. WEBER, Gilles MILLERIOUX, J. DAAFOUZ (University Henri Poincaré, France)
Ahmed BOURIDANE (Queens University, UK)*
- DWT/PCA Face Recognition using Automatic Coefficient Selection
*Paul NICHOLL (Queens University, UK)
Abbas AMIRA (Brunel University, UK)*
- A Spiking Neural Network for Gas Discrimination using a Tin Oxide Sensor Array
*Maxime AMBARD, Dominique MARTINEZ (LORIA-INRIA, France)
Bin GUO, Amine BERMAK (HKUST, Hong Kong)*

15:20-16:00 Keynote by Professor Charles Sodini, Massachusetts Institute of Technology, USA, "System Drivers for Mixed Signal Integrated Circuit Design Research"
venue: Lecture Theatre J, LTJ.

17:30-22:00 SOCIAL EVENT & BANQUET: "BOAT CRUISE"

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Friday 25<sup>th</sup> Jan 2008  
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09:00-10:20 SESSION 7 (Lecture Theatres J and K, HKUST)

09:00-10:20 Session 7A: NoC and SoC Design, venue: Lecture Theatre J, LTJ.

Chairs: Stefan Lachowicz (ECU, Australia), Gourab Sen Gupta (Massey University, New Zealand)

- A Hybrid Interconnect Network-on-Chip and a Transaction Level Modeling approach for Reconfigurable Computing
Thomas LENART, Henrik SVENSSON, Viktor ÖWALL (Lund University, Sweden)
- A Requirements-Driven Reconfigurable SoC Communication Infrastructure Design Flow
Alessandro MERONI, Vincenzo RANA, Marco SANTAMBROGIO, Donatella SCIUTO (Politecnico di Milano, Italy)
- High-Speed Priority Queue Architecture for Multiple Out-Links
Sang Gyun KIM, Woo Sik KIM, Seung Ho OK, Byung In MOON (Kyungpook National University, South Korea)
- Integrated Mapping and Scheduling for Circuit-Switched Network-on-Chip Architectures
Hsin-Chou CHI, Chia-Ming WU, Jun-Hui LEE (National Dong Hwa University, Taiwan)

09:00-10:20 Session 7B: Systems and Sensors, venue: Lecture Theatre K, LTK.

Chairs: Jie George Yuan (HKUST, Hong Kong), Achim Rettberg (Universitaet Paderborn, Germany)

- Drift invariant Gas Recognition Technique For Tin Oxide Gas Sensor array
Farid FLITTI, Aicha FAR, Bin GUO, Amine BERMAK (HKUST, Hong Kong)
- On Using Fingerprint-Sensors for PIN-Pad Entry
*Marcel JACOMET, Josef GOETTE (Bern University of Applied Sciences, Switzerland)
Andreas EICHER (AXSionics Inc., Switzerland)*
- FPGA Implementation of a Predictive Vector Quantization image compression algorithm for image sensor applications
*Yan WANG, Amine BERMAK (HKUST, Hong Kong)
Abdeslam BOUZERDOUM (Wollongong University, Australia)
Brian NG (University of Adelaide, Australia)*
- Integrating Dynamic Load Balancing Strategies into the Car-Network
Isabell JAHNICH, Ina PODOLSKI, Achim RETTBERG (Universitaet Paderborn, Germany)

10:20-10:50 BREAK & POSTERS

10:20-10:50 Poster Session 4, venue: Area outside Lecture Theatre K & J.

Chair: Abbas Amira (Brunel University, UK)

- A Design of the Frequency Synthesizer for UWB Application in 0.13 μm RF CMOS process
JinKyung KIM, Sung-Kyu JUNG, Ji-Hoon JUNG, Sang-Kyung SUNG, Kang-Yoon LEE (KonKuk University, South Korea)
Chul NAM (SiliconHarmony, South Korea)
Bong-Hyuk PARK, Sang-sung CHOI (ETRI, South Korea)
- Analog to Digital Converter Specifications for UMTS/FDD Receiver Application
Zulhakimi RAZAK, Tughrul ARSLAN (University of Edinburgh, UK)
- A Design Workflow for the Identification of Area Constraints in Dynamic Reconfigurable Systems
Alessio MONTONE, Marco D. SANTAMBROGIO, Donatella SCIUTO (Politecnico di Milano, Italy)
- Bus Binding, Re-ordering, and Encoding for Crosstalk-producing Switching Activity Minimization during High Level Synthesis
Hariharan SANKARAN, Srinivas KATKOORI (University of South Florida, USA)
- Scalable Montgomery Multiplier for Finite Fields GF(p) and GF(2m)
Tae Ho KIM, Sang Chul KIM, Chang Hoon KIM, Chun Pyo HONG (Daegu University, South Korea)
- Static Crosstalk Noise Analysis with Transition Map
Minjin ZHANG, Huawei LI, Xiaowei LI (ICT, Chinese Academy of Sciences, China)
- Implementation of the Embedded System for Visually-Impaired People
Si-Woo KIM, Jae-Kyun LEE, Boo-Shik RYU, Chae-Wook LEE (Daegu University, South Korea)
- Model-based Gaze Direction Estimation in Office Environment
Do Joon JUNG, Kyung Su KWON, Se Hyun PARK, Jong Bae KIM, Hang Joon KIM (Daegu University, South Korea)
- Fast Evaluation of the Square Root and Other Nonlinear Functions in FPGA
Stefan LACHOWICZ (ECU, Australia)
Hans-Jörg PFLEIDERER (Ulm University, Germany)
- Configurable Blocks for Multi-Precision Multiplication
Oliver A. PFÄNDER, Reinhard NOPPER, Hans-Jörg PFLEIDERER (Ulm University, Germany)
Shun ZHOU, Amine BERMAK (HKUST, Hong Kong)
- High Performance FPGA Implementation of the Mersenne Twister
Shrutisagar CHANDRASEKARAN, Abbas AMIRA (Brunel University, UK)
- Static Crosstalk Noise Analysis with Transition Map
A. BOUHRAOUA, M. E. ELRABAA (KFUPM, Saudi Arabia)

10:50-12:10 SESSION 8 (Lecture Theatres J and K, HKUST)

10:50-12:10 Session 8A: Special Session on Smart Sensors, venue: Lecture Theatre J, LTJ.

Chairs: Amara Amara (ISEP, France), Subhas Mukhopadhyay (Massey University, New Zealand)

- The Fourier Spectrum Analysis of Optical Feedback Self-Mixing Signal under Weak and Moderate Feedback
Xiaojun ZHANG, Jiangtao XI, Yanguang YU, Joe CHICCHARO (University Wollongong, Australia)
- Elimination of Non-linear Luminance Effects for Digital Video Projection Phase Measuring Profilometers

Matthew BAKER, Jiangtao XI, Joe CHICHARO (University Wollongong, Australia)

- Integrated CMOS analog neural network ability to linearise the distorted characteristic of HPA embedded in satellites
Laurent GATET, Francis GIZARD (CNES, France)
Hélène TAP-BETEILLE, Daniel ROVIRAS (ENSEEIH, France)
- Compact Gray-Code Counter/Memory Circuits for Spiking Pixels
Kwan Ting NG, Farid BOUSSAID (UWA, Australia)
Chen SHOUSHUN, Amine BERMAK (HKUST, Hong Kong)

10:50-12:10 Session 8B: Advanced Testing Techniques, venue: Lecture Theatre K, LTK.

Chairs: JoseLuis Huertas (Universidad De Sevilla, Spain), Shiyi Xu (Shanghai Uni. of S&T, China)

- Calibration and Debugging of Multi-Step Analog to Digital Converters
Amir ZAJJO, Jose PINEDA de GYZE (NXP Semiconductors Research, The Netherlands)
- A Convenient Voltage Stress Test Method for High Density Memory
Jongsoo YIM, Gunbae KIM, Sungho KANG (Yonsei University, South Korea)
Incheol NAM, Sangki SON, Jonghyoung LIM, Hwacheol LEE, Sangseok KANG, Byungheon KWAK, Jinseok LEE (Samsung Electronics, South Korea)
- A Scan-based delay test method for reduction of overtesting
Hui LIU, Huawei LI, Yu HU, Xiaowei LI (ICT, Chinese Academy of Sciences, China)
- An Integrated Validation Environment for Differential Power Analysis
Giorgio Di NATALE, Marie-Lise FLOTTES, Bruno ROUZEYRE (LIRMM, France)
- Automated Testing of FlexRay Clusters for System Inconsistencies in Automotive Networks
Paul MILBREDT (AUDI AG, Germany)
Andreas STEININGER (Technische Universitaet Wien, Austria)
Martin HORAUER (University of Applied Sciences Technikum Vienna, Austria)

12:10-13:20 LUNCH, Chinese Restaurant, G/F, HKUST

13:20-14:00 Keynote by Dr Stephen Lai, Solomon Systech, Hong Kong, "Technology Trend of Flat Panel Display Driver Electronics"
venue: Lecture Theatre J, LTJ.

14:00-15:20 SESSION 9 (Lecture Theatres J and K, HKUST)

14:00-15:20 Session 9A: Power Issues in Design, venue: Lecture Theatre J, LTJ.

Chairs: Zhihua Wang (Tsinghua University, China), Patrick Girard (LIRMM, France)

- Early Design Phase Power Performance Trade-offs Using In-situ Macro Models
Charles THANGARAJ, Tom CHEN (Colorado State University, USA)
- Low Voltage Design against Power Analysis Attacks
O. MIRMOTAHARI, Y. BERG (University of Oslo, Norway)
- Electrical Power Monitoring System using Thermochron Sensor and 1-Wire Communication Protocol
Moi-Tin CHEW (Massey University, New Zealand)
Tatt-Huong THAM, Ye-Chow KUANG (Monash University Malaysia Campus, Malaysia)
- Infrastructure for Microelectronics Education, Research and SMEs (*Special Presentation*)
Bernard COURTOIS (CMP, France)

14:00-15:20 Session 9B: VLSI System Design, venue: Lecture Theatre K, LTK.

Chairs: Ton Mouthaan (Twente University, the Netherlands), Igor Lemberski (BIA, Latvia)

- Efficient VLSI layout of Edge Product Networks
Saeedeh BAKHSHI, Hamid SARBAZI-AZAD (Sharif University of Technology, Iran)
- Towards a Petri Net based Approach to Model and Synthesize Dynamic Reconfiguration for FPGAs
Helene SCHILKE, Achim RETTBERG, Florian DITTMANN (Universitaet Paderborn, Germany)
- Arbitrary Waveform Generator Based on Direct Digital Frequency Synthesizer
*Weibo HU, Xin'an WANG (Peking University, China)
Chung Len LEE (National Chiao Tung University, Taiwan)*
- Design of a Data Concentrator Card for the Readout of the Compact Muon Solenoid Electromagnetic Calorimeter
*Jose Carlos Da SILVA, Michal HUJESKO (LIP-Lisbon, Portugal)
Joao VARELA (CERN, Switzerland)*

15:20-15:40 BREAK

15:40-16:40 SESSION 10 (Lecture Theatres J and K, HKUST)

15:40-16:40 Session 10A: Advanced and high-level test methods, venue: Lecture Theatre J, LTJ.

Chairs: Bernard Courtois (CMP, France), Bruno Rouzeyre (LIRMM, France)

- A Novel Approach to High-level Property Checking Using Wu's Method
Zhi YANG, Guangsheng MA, Shu ZHANG (Harbin Engineering University, China)
- Test Set Stripping Limiting the Maximum Number of Specified Bits
Michael A. KOCHTE, Christian G. ZOELLIN, Michael E. IMHOF, Hans-Joachim WUNDERLICH (Universitaet Stuttgart, Germany)
- An Automated Fault Injection Technique Based on VHDL Syntax Analysis and Stratified Sampling
Weiguang SHENG, Liyi XIAO, Zhigang MAO (Harbin Institute of Technology, China)

15:40-16:40 Session 10B: Advanced Applications, venue: Lecture Theatre K, LTK.

Chairs: Serge Demidenko (Massey University, New Zealand), Moi-Tin Chew (Massey University, New Zealand)

- CreaTe: A new programme to attract engineers as design artists
Zsofi RUTTKAY, Ton MOUTHAAAN (University of Twente, The Netherlands)
- High-Performance Pseudorandom Number Generator Using Two-Dimensional Cellular Automata
Byung-Heon KAN, Dong-Ho LEE, Chun-Pyo HONG (Daegu University, South Korea)
- Design Automation of UHF RFID Tag Antenna Using a Genetic Algorithm Linked with MWS CST
Kyounghwan LEE, Youngju KIM, Goojo KIM, You Chung CHUNG (Daegu University, South Korea)

16:40-17:00 CLOSING SESSION –Closing remarks by the conference chairs, Best paper awards