Program for the 6th IEEE Dallas/CAS Workshop (DCAS-07)

System-on-Chip (SoC): Applications, Integration, Implementation and Software

THURSDAY NOVEMBER 15, 2007

7:30-8:30 AM	*Poster Setup*
8:30 AM	**Opening Remarks**

8:40 AM

Keynote Address:
Si Technology Roadmap For Ubiquitous Computing, Sensing, and Perception
Dr. Dennis Buss
Texas Instruments, Dallas, TX, U.S.A.

10:10 AM   *BREAK*

10:30 AM   *Invited Talk 1*:   **Making Better Use of Time in Mixed-Signal Circuits**
Prof. Michael Perrott
Massachusetts Institute of Technology (MIT), U.S.A.

12:00 PM   *LUNCH*

1:30 AM   *Invited Talk 2*:   **Reconfigurable ADC**
Dr. Kush Gulati
Bitwave Semiconductor, U.S.A.

3:00PM
Linearization of Highly-Efficient Monolithic Class E SiGe Power Amplifiers with Envelope-Tracking (ET)
Donald Y.C. Lie, J.D. Popp, F. Wang*, D. Kimball*, and L.E. Larson**
Texas Tech University, *University of California, San Diego (UCSD), U.S.A.

3:20 PM
Architecture Optimization of a Finite Impulse Response Filter Using Toggle-based Power Estimation
Albina Cristian, Günther Hackl
GME mbH, Germany

3:40 PM   *BREAK*

THURSDAY POSTERS

3:40 PM
On-Chip RLC Interconnection effects on High Speed Transceivers
Albina Cristian, Günther Hackl
GME mbH, Germany

"Flying-Adder" PLL Based Synchronization Mechanism for Data Packet Transport
Liming Xiu,Steve Clynes, Srikanth Gurrapu, Towfique Haider, Feng Ying, Wahed Mohammed
Texas Instruments Inc., U.S.A.

SYSTEM-ON-CHIP POWER CONSUMPTION REFINEMENT AND ANALYSIS
David Feinstein, Mitch Thornton, Fatih Kocan
Southern Methodist University, U.S.A.

A High-Performance Multi-Match Priority Encoder for TCAM-Based Packet Classifiers
Mehrdad Nourani
University of Texas at Dallas, U.S.A.

An Efficient Implementation of Scalable Architecture for Discrete Wavelet Transform On FPGA
Hassan,RABAH, Michael Guarisco, Xun Zhang, Serge Weber
Nancy University, France

A New Fast Slew Buffering Algorithm Without Input Slew Assumptions
Shiyan Hu, Jiang Hu
Texas A&M University, U.S.A.

Closed form Equations for Inter-modulation Distortion Parameters in WCDMA Receiver Validated Through Measurements

*Mohammed Saif Khan and Naveen K. Yanduru**
Texas Instruments, Bangalore, India. *Texas Instruments, Dallas, TX, USA.

A CMOS Wideband LNA Using Multiple Phase Matched Frequency Staggered Resonators
Diptendu Ghosh, Ranjit Gharpurey
University of Texas, Austin, U.S.A.

5:00 PM   *Poster Removal*

5:00 PM   *Refreshments*

FRIDAY, NOVEMBER 16, 2007

7:30-8:50 AM   *Poster Setup*

8:50AM   *Invited Talk 3*:   **Verification of Complex Analog Integrated Circuits**
Dr. Ken Kundert
Designers-Guide Consulting, U.S.A.

10:20AM   **BREAK**

10:40AM   **Analysis of Third-order Intermodulation in Receiver Down-converter with Multiband Feedback**
Junghwan Han and Ranjit Gharpurey
University of Texas, Austin, U.S.A.

11:00 AM   **Enhancement of Coexistence Performance in a DRP Based Multi-Radio Environment of a Mobile**
Yossi Tsfati, Oren Eliezer, Ran Katz, Yaniv Tzoref, and Ofer Friedman
Texas Instruments Inc., Wireless Terminals Business Unit, Raanana, Israel.

11:20 AM   **Waveform Analysis and Delay Prediction in Simultaneously Switching CMOS Gate Driven Inductively and Capacitively Coupled On-Chip Interconnects**
B.K.Kaushik, S.Sarkar*, R.P.Agarwal and R.C.Joshi
Indian Institute of Technology-Roorkee, *MITS-Sikar, INDIA

11:40 AM   **Design of a Multi-Context FPVLSI based on an Asynchronous Bit-Serial Architecture**
Waidyasooriya Hasitha Muthumala, Masanori Hariyama and Michitaka Kameyama
Tohoku University, Japan

12:00pm   *LUNCH*

1:30 PM   *Invited Talk 4:* **Cognitive Radio**
Prof. Bora Nikolic
University of California, Berkeley, U.S.A.

3:00PM   **A Practical Step Forward Toward Software-Defined Radio Transmitters**
Essam Atalla , Imran Bashir*, Poras Balsara , Kamran Kiasaleh , Robert Bogdan Staszewski*,
University of Texas at Dallas, *Texas Instruments Inc., U.S.A.

3:20PM   **Dual-Threshold Voltage Technique for Asynchronous PCFB Linear-Pipelines**
Behnam Ghavami, Hossein Pedram
Amirkabir University of Technology, Tehran, Iran

3:40PM   **BREAK**
FRIDAY POSTERS

2:30PM   **A Technique to Extend Tuning Range of High Frequency Quadrature VCO**
Diptendu Ghosh, Ranjit Gharpurey
University of Texas, Austin, U.S.A.

Top-Down Simulation Methodology of a Mixed-Signal Read Channel Using Standard VHDL
Robert Staszewski
Texas Instruments, Dallas, U.S.A.

Modeling of an Electronic Noise and Media in a Magnetic Recording Read Channel Using VHDL
Robert Staszewski
Texas Instruments, Dallas, U.S.A.

PID-CONTROLLED PLL FOR FAST FREQUENCY-HOPPED SYSTEMS
Nil Tarim, Hayri Uyanik
Istanbul Technical University, Turkey

Optimum Designing of the Cascaded Digital Filters in Wide-band Wireless Transmitters using Genetic Algorithm
Viral Parikh, Sankalp Modi , Poras Balsara
University of Texas at Dallas, U.S.A.

A 400MHz-2.4Ghz Radiation-Tolerant Self-Biased Phase-Locked Loop
P. Zhu, P. Gui, W. Chen, A.Xiang, D. Gong, A.Liu, R. Stroynowski,J.Ye,Y.Fan*, H.Huang*, M. Mor
Southern Methodist University, *Texas Instruments Inc. U.S.A.

A Speed- and Accuracy-Enhanced On-Chip Current Sensor with Local Shunt Feedback
Hoi Lee, Mengmeng Du
University of Texas at Dallas, U.S.A.

4:30 PM   *Poster Removal*