

# **2014 15th International Symposium on Quality Electronic Design**

**(ISQED 2014)**

**Santa Clara, California, USA  
3-5 March 2014**



**IEEE Catalog Number: CFP14250-POD  
ISBN: 978-1-4799-3947-3**

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Co-Chair: Saibal Mukhopadhyay, Georgia Tech

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Chair: Paul Tong, Pericom

Co-Chair: Bao Liu, University of Texas, San Antonio

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Co-Chair: Anand Iyer, AMD

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Chair: Paul Tong, Pericom

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| <b>An Efficient Semi-Analytical Current Source Model for FinFET Devices in Near/Sub-Threshold Regime Considering Multiple Input Switching and Stack Effect</b> ..... | <b>5, 5</b> |
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| ..... University of Southern California  |             |

## SESSION 5B: Assertion and Formal Verification Technologies

Chair: Srivatsa Vasudevan, Synopsys

Co-Chair: Abhilash Goyal, Oracle

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| <b>Formal Verification of Safety of Polymorphic Heterogeneous Multi-Core Architectures</b> .....            | <b>6&amp;1</b> |
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| <b>Simulation and Satisfiability Guided Counter-example Triage for RTL Design Debugging</b> .....           | <b>6&amp;8</b> |
| Zissis Poulos <sup>1</sup> , Yu-Shen Yang <sup>2</sup> , Andreas Veneris <sup>1</sup> , Bao Le <sup>1</sup> |                |
| ..... <sup>1</sup> University Of Toronto, <sup>2</sup> Advanced Micro Devices, Inc                          |                |

## SESSION 5C: Thermal and Energy Considerations in Systems

Chair: Hai Li, University of Pittsburg

Co-Chair: Duo Liu, Chongqing University

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| Abhishek Sinkar, Hao Wang, Nam Sung Kim..... University of Wisconsin-Madison   |             |
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| <b>Thermal Hotspot Reduction in mm-Wave Wireless NoC Architectures</b> .....   | <b>6) 5</b> |
| Jacob Murray, Paul Wettin, Ryan Kim, Xinmin Yu, Partha Pande, Behrooz Shirazi, Deukhyoun Heo..... Washington State University  |             |
| <b>Energy-Aware Scratch-Pad Memory Partitioning for Embedded Systems</b> .....   | <b>6* 3</b> |
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| ..... <sup>1</sup> American University in Cairo, <sup>2</sup> Fermilab, <sup>3</sup> Microsoft, Inc., <sup>4</sup> American International Radio, Inc.                    |             |
| <b>Energy Efficient Job Scheduling in Single-ISA Heterogeneous Chip-Multiprocessors</b> .....  | <b>6+0</b>  |
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| ..... <sup>1</sup> Louisiana State University, <sup>2</sup> AMD Corporation  |             |



## SESSION 6A: Advanced Circuit and System Methodologies

Chair: Charles Augustine, Intel

Co-Chair: Saibal Mukhopadhyay, Georgia Tech

- ULSNAP: An Ultra-Low Power Event-Driven Microcontroller for Sensor Network Nodes** ..... 6+7  
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- An Energy-Efficient Mobile PAM Memory Interface for Future 3D Stacked Mobile DRAMs** ..... 6, 5  
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- Rapid Prototype and Implementation of a High-Throughput and Flexible FFT  
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.....<sup>1</sup>National University of Defense Technology, <sup>2</sup>Aachen University of Technology

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## SESSION 6B: Power Grid Analysis and Issues

Chair: Rajan Beera, Pall Corporation

Co-Chair: Kamesh Gadepally, Texas Instruments

- Statistical Analysis of Process Variation Induced SRAM Electromigration Degradation** ..... 7%0  
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.....<sup>1</sup>University of California, Santa Barbara, <sup>2</sup>IBM Corp.
- Estimating True Worst Currents for Power Grid Electromigration Analysis** ..... 7%8  
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.....<sup>1</sup>University of Massachusetts, Amherst, <sup>2</sup>Advanced Micro Devices

## SESSION 6C: Smart Sensors Design Technology

Chair: Daniela De Venuto, Polytechnic of Bari, Italy

Co-Chair: Phil Mather, Maxim

- Design of a CMOS Readout Circuit for Wide-Temperature Range Capacitive MEMS Sensors** ..... 7( 8  
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- Topology Optimization of a Passive Thermal Actuator** ..... 7) 3  
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.....<sup>1</sup>Danube University Krems, <sup>2</sup>Vienna University of Technology
- Thermal Flow Sensors Based on Printed Circuit Board Technology** ..... 7) 8  
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Jiyuan Luan and Michael DiVita ..... Texas Instruments