

SLIP 2013 Technical Program June 2nd, 2013. Co-located with DAC in Texas, Austin
www.sliponline.org

7:30am-8:00am Breakfast

8:00am-8:10am Opening Remarks

Session I: Optical Interconnects

8:10am-8:40am "Invited Talk: IBM CMOS Compatible Photonics and Traveling Wave Electro-Optic Modulator Design," Doug Gill – IBM

8:40am-9:00am "Channel Routing for Integrated Optics," Christopher Condrat, Priyank Kalla, and Steve Blair – University of Utah

9:00am-9:20am "Invited Talk: LumiNOC: A Low-latency, High-Bandwidth per Watt, Photonic Network-on-Chip," Mark Browning, Cheng Li, Paul Gratz and Samuel Palermo – Texas A&M University

9:20am-9:35am Post-Session Review Panel

Expert Panelist: Wim Bogaerts – Ghent University

9:35am-9:55am Break

Session II: Technology-Design Interactions

9:55am-10:15am "Toward Quantifying the IC Design Value of Interconnect Technology Improvements," Tuck-Boon Chan, Andrew Kahng, and Jiajia Li – University of California San Diego

10:15am-10:35am "Worst-case Noise Prediction Using Power Network Impedance Profile," Xiang Zhang and Chung-Kuan Cheng – Xidian University and University of California San Diego

10:35am-11:05am "Invited Talk: Electromigration Concerns for On-Chip Power Grids," Malgorzata Marek-Sadowska – University of California Santa Barbara

11:05am-11:25am "Learning-Based Approximation of Interconnect Delay and Slew Modeling in Signoff Timing Tools," Andrew B. Kahng, Seokhyeong Kang, Hyein Lee, Siddhartha Nath, and Jyoti Wadhvani – University of California San Diego

11:25am-11:45am Post-Session Review Panel

Expert Panelists: Baris Taskin, Drexel University
Zhuo Li, IBM

11:45pm-1:00pm Lunch

Session III: Post-CMOS Systems

1:00pm-1:30pm

"Invited Talk: Performance Modeling for Interconnects for Emerging Post-CMOS Switches," Azad Naemi – Georgia Institute of Technology

1:30pm-2:00pm

"Invited Talk: Neuromorphic Computing with Ultra Low Power Spin Devices," Kaushik Roy – Purdue

2:00pm-2:10pm Post-Session Review Panel

Expert Panelist: Dirk Stroobandt – Ghent University

2:00pm-2:20pm Break

Session IV: Models and High-Speed Simulation

2:20pm-2:45pm

“Embedded Tutorial: Chip-Scale Physical Interconnect Models,” Rasit O. Topaloglu – IBM

2:45pm-3:05pm *“High-Dimensional Metamodeling for Prediction of Clock Tree Synthesis Outcomes,”* Andrew B. Kahng, Bill Lin, and Siddhartha Nath – University of California San Diego

3:05pm-3:35pm *“Optimizations in GPU: Smart Compilers and Core-level Reconfiguration,”* Deming Chen – University of Illinois at Urbana-Champaign

3:35pm-3:50pm Post-Session Review Panel

Expert Panelist: Sunil Khatri – Texas A&M University

3:50pm-4:00pm Break

Discussion Panel: Wireless in NOCs

4:00pm-5:00pm Panel Chair: Baris Taskin – Drexel University

Panelists:

Danella Zhao – U. of Louisiana-Lafayette

Partha Pande – Washington State University

Amlan Ganguly – Rochester Institute of Technology

Avinash Kodi – Ohio University

Poster Session and Networking

5:00pm-6:00pm

“Evaluating the Scalability and Performance of 3D Stacked Reconfigurable Nanophotonic Interconnects,” Randy Morris, Avinash Kodi, and Ahmed Louri – Ohio University and The University of Arizona

“Performance Analysis for Interconnections of 3D IC Considering Frequency Dependent Effect of TSVs,” Youngmin Kim, Younghyun Lim, and Ki Jin Han – Ulsan National Institute of Science and Technology

“Multiple Heterogeneous On-Chip Networks Implementing a Java DataFlow Machine (JavaFlow),” Robert Ascott and Earl Swartzlander – University of Texas Austin

“Fast Power Flow Analysis through System Reduction,” Yi Liand and Deming Chen – University of Illinois at Urbana Champaign

Dinner

7:00pm-10:00pm

Dinner Talk on Special Topic: *“Silicon Photonics for Optical Interconnects: Really the Obvious Choice?”* Wim Bogaerts – Ghent University

General Chair

Mustafa Ozdal
Intel, USA

Technical Program Chair

Rasit O. Topaloglu
IBM, USA

Finance Chair

Sung Kyu Lim
Georgia Institute of Technology, USA

Panel Chair

Baris Taskin
Drexel University, USA

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National Cheng Kung University, Taiwan

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IBM Austin Research Lab, USA

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University of California, San Diego, USA

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