Currents

CEDA

IEEE Council on Electronic Design Automation

Nvidia's Chris Malachowsky Addresses "Watts Next" During CEDA Luncheon

Chris Malachowsky, Nvidia fellow and senior vice president of research, discussed "Watts Next …" during a luncheon hosted by CEDA on Tuesday, 8 November 2011, at the IEEE/ACM International Conference on Computer-Aided Design (ICCAD) in San Jose, California. This talk was open to all full ICCAD conference and Tuesday conference-only registrants.

Malachowsky cofounded Nvidia in 1993 and has more than 30 years of industry experience. He is currently responsible for Nvidia's research organization, chartered with developing strategic technologies that will help drive the company's future growth and success.

In his presentation, he explained why making the most economical and efficient use of power for a processor is essential. He discussed power efficiency as it applies across Nvidia's broad range of processor offerings, from supercomputers to cell phones.

Malachowsky has been instrumental in managing, defining, and driving Nvidia's core technologies as it has grown from a startup to the global leader in visual and parallel computing. As an executive at Nvidia, his roles have been diverse, heading numerous functions, including IT, operations, and all facets of Nvidia's products.

Malachowsky has also held engineering and technical leadership positions at Hewlett-Packard and Sun Microsystems. A recognized authority on IC design and methodology, he has authored close to 40 patents.

He has a BS in electrical engineering from the University of Florida and an MS in computer science from Santa Clara University. Both schools have honored him with Distinguished Alumnus awards.

For more information, please visit http://www.c-eda.org and http://iccad.com.

Report on 2011 VLSI-SoC

The 19th IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC) took place on 3-5 October 2011 in Hong Kong.

VLSI-SoC explores the state of the art and new developments in the field of very large-scale integration and SoCs. The conference travels between Europe, North America, Asia and the South Pacific, and Latin America.

This year, the conference received 179 submissions, including 151 regular scientific papers, from which the Technical Program Committee selected 45 papers for oral presentation and 24 posters.

The program included three outstanding keynotes:

- "Rigorous System Design," by Joseph Sifakis (Verimag Laboratory and National Center for Scientific Research - University of Grenoble, France);

- "Design and Optimization of Thousand-Core Systems," by Radu Marculescu (Carnegie Mellon University); and

- "The Evolution of the Fabless IC Industry in China: Past, Present, and Future," by Ping K. Ko (Silicon Federation International, China) and Patrick Yue (University of California, Santa Barbara).

There were four special sessions devoted to hot topics such as biomedical sensors, energy harvesting, 3D integration, and networks on chips (NoCs). In addition, a panel was devoted to SoCs for biomedical applications, trends, and challenges.

The program also included a PhD Forum for students from underdeveloped and emerging countries, sponsored by the International Federation for Information Processing (IFIP).

Xin Ming, Ze-Kun Zhou, and Bo Zhang (University of Electronic Science and Technology of China) won a Best Paper Award with a modest endowment for their work, "A Low-Power Ultra-Fast Capacitor-Less LDO with Advanced Dynamic Push-Pull Techniques."

VLSI-SoC 2012 will take place on 7-9 October in Santa Cruz, California. See http://vlsisoc2012.soe.ucsc.edu.

Salvador Mir (Program Chair, salvador.mir@imag.fr) and Chi-Ying Tsui (General Chair, eetsui@ee.ust.hk).

Melvin Breuer Receives TTTC Medal

Melvin Breuer, former chair of the Department of Electrical Engineering-Systems at the University of Southern California, received the Lifetime Contribution Medal from the IEEE Test Technology Technical Council (TTTC) during the 2011 International Test Conference, held on 18-23 September in Anaheim, California.

The award recognizes outstanding technical contributions that have made a fundamental impact on test technology. In presenting the award to Mel Breuer, the TTTC cited his decades of major contributions in areas such as EDA, DFT, and BIST.

Breuer's achievements include fundamental work and innovation on digital-design flows, delay and crosstalk faults, partial-scan methodologies, and error tolerance. His earlier work in EDA included the min-cut placement process and the forced-vector placement model.

Breuer has authored or coauthored seminal books, including *Design Automation of Digital Systems: Theory and Techniques* and *Diagnosis and Reliable Design of Digital Systems.*

Always just beyond the boundary of orthodoxy in fault definition and test theory, Breuer's work has broken paths that have become mainstream approaches in dealing with deep-submicron faults. Additionally, many in the industry cite him as a personal mentor.

Earlier in the year, Breuer was awarded the 2011 European Design and Automation Association (EDAA) Lifetime Achievement Award, and the 2011 John J. Guarrera Engineering Educator of the Year Award.

Papers in IEEE Embedded Systems Letters

The top-five accessed articles from *IEEE Embedded Systems Letters* in October 2011 were as follows:

- "Island-Based Adaptable Embedded System Design," by I. Beretta et al.

- "Custom Microcoded Dynamic Memory Management for Distributed On-Chip Memory Organizations," by I. Anagnostopoulos et al.

- "A Novel Soft Error Detection and Correction Circuit for Embedded Reconfigurable Systems," by Q. Zhao et al.

- "Scalable Many-Domain Power Gating in Coarse-Grained Reconfigurable Processor Arrays," by D. Kissler et al.

- "Lossless Hyperspectral Image Compression System-Based on HW/SW Codesign," by Y.-T. Hwang et al.

Upcoming Conferences (David Atienza, david.atienza@epfl.ch)	
DATE	Dresden, Germany, 12-16 March 2012
GLSVLSI	Salt Lake City, 3-4 May 2012
NOCS	Lyngby, Denmark, 9-11 May 2012
DAC	San Francisco, 3-7 June 2012
VLSI-SoC	Santa Cruz, Calif., 7-10 October 2012

IEEE Embedded Systems Letters *is open for submissions. Visit mc.manuscriptcentral.com/les-ieee*