

38th DAC Awards

2001 IEEE Fellows

- **Jason Cong** - University of California, Los Angeles, CA - For contributions to the computer-aided design of integrated circuits, especially in physical design automation, interconnect optimization, and synthesis of field-programmable gate-arrays.
- **Massoud Pedram** - University of Southern California, Los Angeles, CA
For contributions to the theory and practice of low-power design and CAD.

CAD Transactions Best Paper Award

Shigeru Yamashita, Hiroshi Sawada - NTT Communication Science Laboratories, Kyoto, Japan

Akira Nagoya - NTT Network Innovation Laboratories, Kanagawa, Japan

For the paper: "*SPFD: A New Method to Express Functional Flexibility*"

IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 19, no. 8, pp. 840-849, August 2000.

VLSI Transactions Best Paper Award

Rajamohana Hegde, Naresh R. Shanbhag - Univ. of Illinois, Urbana, IL

For the paper: "*Toward Achieving Energy Efficiency in Presence of Deep Submicron Noise*"

IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 8, no. 4, pp. 379-391, August 2000.

Outstanding Young Author Award

Manish Pandey - Silicon Access Networks, Inc., San Jose, CA

For the paper: "*Exploiting Symmetry when Verifying Transistor-Level Circuits by Symbolic Trajectory Evaluation*,"

IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 18, no. 7, pp. 918-935, July 1999.

CAS Industrial Pioneer Award

Aart de Geus - Chairman and CEO, Synopsys, Inc., Mountain View, CA - For pioneering logic synthesis.

Marie R. Pistilli Women in EDA Achievement Award

Deirdre Hanford - Senior VP, Business & Market Development, Synopsys, Inc., Mountain View, CA

For her significant contributions in helping women advance in the field of DAC technology.

2001 Best Paper Award

This year, awards are made for the best papers in four categories. Winners were determined from detailed reviews of the accepted papers in the technical sessions. Each award is accompanied by a plaque. The awards are given by ACM/SIGDA (Special Interest Group on Design Automation), IEEE/CAS (Institute of Electrical and Electronics Engineers/Circuits and Systems Society) and EDA Consortium (Electronic Design Automation Consortium).

DESIGN TOOLS

Paper 13.1: *A Practical Methodology for Early Buffer and Wire Resource Allocation*

Author: **Charles J. Alpert**

Jiang Hu, Paul G. Villarrubia

Affiliation: IBM Austin Research Lab., Austin, TX

IBM Corp., Austin, TX

Author: **Sachin S. Sapatnekar**

Affiliation: Univ. of Minnesota, Minneapolis, MN

DESIGN METHODOLOGY

Paper 20.2: *Improving Bus Test via IDDT Testing and Boundary Scan*

Authors: **Chris Papachristou, Massood Tabib-Azar**

Shiyu Yang

Affiliation: Case Western Reserve Univ., Cleveland, OH

Intel Corp., Hillsboro, OR

Paper 47.2: *Analysis of On-Chip Inductance Effects using a Novel Performance Optimization Methodology for Distributed RLC Interconnects*

Author: **Kaustav Banerjee**

Amit Mehrotra

Affiliation: Stanford Univ., Stanford, CA

Univ. of Illinois, Urbana, IL

EMBEDDED SYSTEMS

Paper 49.1: *Energy Efficient Fixed-Priority Scheduling for Real-Time Systems on Variable Voltage Processors*

Authors: **Gang Quan, Sharon Hu**

Affiliation: Univ. of Notre Dame, Notre Dame, IN

The P. O. Pistilli Scholarship

for Advancement in Computer Science and Electrical Engineering Undergraduate Scholarships

The objective of the P. O. Pistilli Scholarship program is to increase the pool of professionals in Electrical Engineering, Computer Engineering and Computer Science from under-represented groups (Women, African American, Hispanic, Native American, and Physically Challenged). In 1989, ACM Special Interest Group on Design Automation (SIGDA) began providing the program. Beginning in 1993, the Design Automation Conference provided the funds for the scholarship and SIGDA continues to administer the program for DAC. DAC normally funds two or more \$4000 scholarships, renewable up to 5 years, to graduating high school seniors. In 1999 the IEEE Circuits and Systems Society also began to sponsor these scholarships. The 2001 winners will be announced at the Conference. The 2000 winners were:

2000 DAC P. O. Pistilli Undergraduate Scholarships

Julian Virgil Dawson, Navarre, FL - attending Georgia Institute of Technology

Nelson Ramirez, Homestead, FL - attending University of Miami

Lillian Jane Chu, Victorville, CA - attending Stanford University

Sarah Briana Solter, Coleta, CA - attending Stanford University

You-Chen Tao, Torrance, CA - attending University of California, Berkeley

For more information about the P. O. Pistilli scholarship, please contact Dr. Cherrice Traver, EE/CS Dept., Union College, Schenectady, NY 12308. email: traverc@union.edu

Design Automation Conference Graduate Scholarships

Each year the Design Automation Conference sponsors several \$24,000 scholarships to support graduate research and study in Design Automation (DA), with emphasis in "design and test automation of electronic and computer systems". Each scholarship is awarded directly to a university for the Faculty Investigator to expend in direct support of one or more DA graduate students.

The criteria for granting such a scholarship expanded in 1996 to include financial need. The criteria are: the academic credentials of the student(s); the quality and applicability of the proposed research; the impact of the award on the DA program at the institution; and financial need. Preference is given to institutions that are trying to establish new DA research programs.

Information on next year's DAC scholarship award program will be available on the DAC web page at: <http://www.dac.com>.

The Association for Computing Machinery/Special Interest Group on Design Automation (ACM/SIGDA) presents its Distinguished Service Award

Robert Grafton - National Science Foundation,

For contributions to the EDA profession through his many years as the Program Director of NSF's Design, Tools, and Test Program of the Computer, Information Sciences & Engineering Directorate. In this position, he provided supervision, mentorship, and guidance to several generation of EDA tool designers and builders funded by grants from the National Science Foundation.

DAC 2001 Student Design Contest Winners

Operational Category:

1st Place *A True Single-Phase 8-bit Adiabatic Multiplier* (session 44.5)

Suhwan Kim, Conrad H. Ziesler, Marios C. Papaefthymiou - University of Michigan, Ann Arbor, MI

2nd Place (tie) *Design of Half-Rate Clock and Data Recovery Circuits for Optical Communication* (session 9.1)

Jafar Savoj, Behzad Razavi - University of California, Los Angeles, CA

2nd Place (tie) *Optimal Design of a Low Power, Low Noise 3.4 GHz CMOS Downconverter*

Peter J Vancorenland, Geert Van der Plas, Michiel Steyaert, Willy Sansen - KU Leuven, Belgium

Conceptual Category:

1st Place *Two-Dimensional Position Detection System with MEMS Accelerometer for MOUSE*

Best Paper Applications (session 50.2)

Seungbae Lee, Gijoon Nam, Junseok Chae, Hanseup Kim, Alan J Drake - University of Michigan, Ann Arbor, MI

2nd Place *A Configurable, Algorithm-Specific Processor for Real-Time Wavelet-Based Video*

Li Ding, Yi Li, Richard B. Brown - University of Michigan, Ann Arbor, MI

3rd Place *VLSI Implementation of Binaural Spatializer Using FIR Head-Related Transfer Function (HRTF)*

NamSung Kim, Jiyoun Kim, Mingyu Cho, TaeYoung Choi, Trevor Mudge - University of Michigan, Ann Arbor, MI

Honorable Mention:

A 1.8 GHz CMOS Cellular Transceiver Front-End: From Integrated Circuit to Integrated System Design

Michiel Steyaert, Bram De Muer, Johan Janssens, Marc Borremans - KU Leuven, Belgium

HiPAR-DSP 16: VLSI-Design of a Second Generation Programmable Parallel Multimedia-DSP

Willm Hinrichs, Jens Peter Wittenburg, Hanno Lieske, Helge Kloos, Lars Friebe, Peter Pirsch -

University of Hannover, Germany