Semiconductor Research Corp Recognizes Professors for Advancing Chip Technology

RESEARCH TRIANGLE PARK, N.C. – Aug. 10, 2011 – Semiconductor Research Corporation (SRC), the world's leading university-research consortium for semiconductors and related technologies, today announced awards for professors in SRC-supported, chip-related research for 2011.

Stanford University Professor Robert Dutton is the recipient of this year's SRC Aristotle Award for outstanding teaching and a deep commitment to the educational experience of his students. With SRC support, Dutton's Stanford research team has pioneered the development of a suite of technology computer-aided design (TCAD) tools for simulation and modeling of integrated circuit fabrication processes.

Additionally, University of California, Berkeley Research Engineer Alan Mishchenko and Professor Robert Brayton are the recipients of the SRC Technical Excellence Award for their SRC-funded work advancing the synergy of synthesis and verification steps used in testing and validating semiconductor chips.

Selected by SRC's 12 member companies and the SRC staff, the award-winning faculty and research teams are honored for their exemplary impact on semiconductor productivity through cultivation of technology and talent. The awards will be formally presented during SRC's annual TECHCON technology conference Sept. 12-13 in Austin, Texas, that features next-generation research progress among hundreds of university students, faculty and industry experts.

"Semiconductors are society's technology building blocks, and advanced research has played a critical role over the years in the successful evolution of the semiconductor industry," said Steve Hillenius, SRC executive vice president and executive director of Global Research Collaboration. "The highly valued researchers and teams we are honoring with these awards have been instrumental in achieving technological triumphs and driving the semiconductor industry forward."

Stanford and UC Berkeley Research Fuels Semiconductor Advancements

The scope and impact of Stanford's TCAD research ranges from fundamental electron and atomic-scale process physics contributions at the device- and process-levels to circuit-level "golden standard" simulations that can validate compact device models used in circuit simulations for IC system design.

"SRC has been an instrumental and critical force in making TCAD a reality—both in terms of modeling capability and its ability to provide value to the semiconductor industry," said Dutton. "The intimate partnership between industry and the universities has created an ideal environment in which to share information that has accelerated technical progress, exposes students to important research problems

and provides exciting career paths after graduation."

The UC Berkeley team's research focuses on synthesis for verification because intractable verification problems in semiconductor manufacturing cannot be solved in isolation from synthesis. The research explores several aspects of combinational and sequential verification that benefits from synthesis.

"Recent advances in formal verification and logic synthesis have made these fields increasingly interdependent, with strong sequential optimization methods not being adopted in commercial flows and verification remaining prohibitively difficult for large designs because it is divorced from synthesis," said Mishchenko. "SRC helps provide us with these practical problems to address and deliver industry-strength results."

TECHCON Showcases Industry's Brightest

TECHCON brings together the brightest minds in microelectronics research to exchange news about the progress of new materials and processes created by SRC's network of more than 100 of the top engineering universities. Students and industry leaders discuss basic research that is intended to accelerate advancements for both private and public entities. The presentation of the Aristotle and Technical Excellence awards at TECHCON reflects the purpose of the event, which is to enable future generations of chip technology.

The Aristotle Award is given to SRC-funded university faculty that has profoundly and continuously impacted their students' professional performances in a way that provides long-term benefit to the SRC member companies. The Technical Excellence Award recognizes researchers who have made key contributions to technologies that significantly enhance the productivity of the semiconductor industry

More than 8,000 students have been prepared by SRC programs, professors and mentors for entry into the semiconductor business. These students provide a path for technology transfer and a source of relevantly educated technical talent for the industry.

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