

IEEE Council on EDA Honors Igor Markov with Early Career Award



Award Recognizes Professor Markov's Outstanding Contributions to Algorithms, Methodologies, Software for Physical Design of ICs

Press Release

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NEW YORK--(BUSINESS WIRE)--Professor Igor L. Markov, associate professor of Electrical Engineering and Computer Science from the University of Michigan, has been chosen as the first recipient of the Early Career Award from the [IEEE Council on Electronic Design Automation](#) (CEDA).

Professor Markov will be recognized for his outstanding contributions to algorithms, methodologies and software for the physical design of integrated circuits in the early stages of his career during the International Conference on Computer Aided Design (ICCAD) in November.

"Igor Markov received high praise from numerous individuals supporting his nomination for this new award," remarks John Darringer, president of CEDA. "Each mentioned the vast number of contributions he's made across a wide range of problems, his high level of energy, dedication to his research and his versatility."

Defining his research as "computers that make computers," Professor Markov was nominated for this award by his peers Professors Sachin Sapatnekar from the University of Minnesota and Andrew B. Kahng, currently of the University of California, San Diego, who was also his graduate advisor. They described his varied accomplishments as "essential and lasting contributions to algorithms, methodologies and software for circuit partitioning, placement, floorplanning, routing and physical synthesis."

Professor Markov's Capo fixed-die placer for standard-cell layouts is widely used by electronic design automation (EDA) companies and university researchers. According to Chuck Alpert, manager of the Design Productivity Group at IBM Austin Research Laboratory, Capo did much more than advance the state of the art. "Besides being a high-quality and robust min-cut placer, Capo also set the standard for open access. Capo was not only a wonderful technical contribution to the design automation community, it helped to spawn the next-generation of placement research through its widespread availability."

With source code being publicly available, Capo became a fundamental component of other research efforts, adds Alpert.

"From the time Igor Markov joined Andrew Kahng's group at UCLA, you could tell he was going to make an impact on EDA," says Bill Halpin, principal engineer at Synopsys. "His strong mathematical background, problem-solving skills and energy were immediately evident. While Igor's many contributions in academic research have been well noted, his contributions to industry have also been significant. He has consulted for Intel's EDA team and spent part of his sabbatical at Synplicity, where we used Capo in our Structured ASIC product with very good results. His Capo placer has enabled a number of EDA startup companies to get off the ground."

"Igor Markov has leveraged the Capo platform to train a skilled generation of new researchers in the field of EDA placement," remarks Michael Riepe, senior software engineer at Achronix Semiconductor Corporation. "In the process, he has pushed Capo to a level of completeness and robustness suitable for industrial use. And, he has generously contributed his source code and his time, making Capo available as an experimental platform for others to extend, and providing an excellent role model for other researchers."

Professor Markov received a Master of Arts degree in Mathematics and a Ph.D. in Computer Science from UCLA.

About the IEEE Council on EDA

The [IEEE Council on Electronic Design Automation](#) (CEDA) provides a focal point for EDA activities spread across six IEEE societies (Antennas and Propagation, Circuits and Systems, Computer, Electron Devices, Microwave Theory and Techniques, and Solid State Circuits). The Council sponsors or co-sponsors over a dozen key EDA conferences, including the Design Automation Conference (DAC) and the International Conference on Computer Aided Design (ICCAD), Design Automation and Test in Europe (DATE) and events at Embedded Systems Week (ESWeek). The Council also publishes IEEE Transactions on CAD, as well as the newly launched IEEE Embedded Systems Letters. Since its founding, the Council has expanded its support of emerging areas within EDA such as nanoscale systems, sponsored new initiatives including the Distinguished Speaker Series and is increasing recognition to members of the EDA profession via awards such as the A. Richard Newton and Phil Kaufman Awards. The Council welcomes new volunteers and local chapters. For more information on CEDA, visit: www.c-eda.org.

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