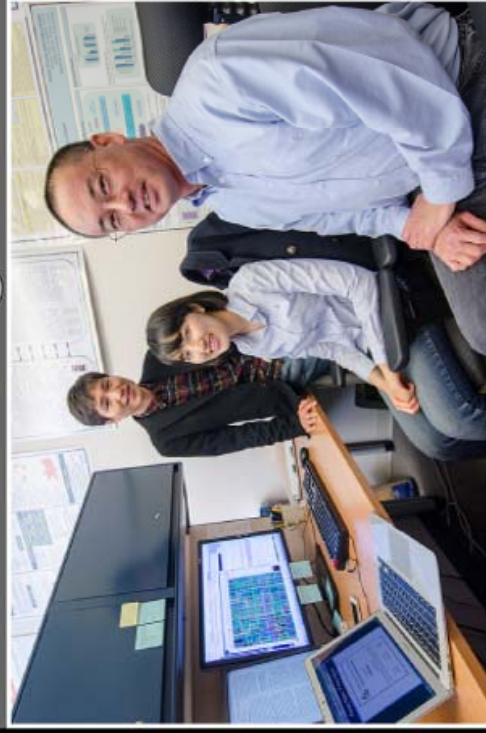


FRIDAY, APRIL 26, 2013

## Andrew Kahng advises students to take lead in Circuit Design Contest



A team composed of students from the University of California, San Diego and the University of Michigan won more prize money than any other entry in the 2013 Discrete Gate Sizing Contest at the ACM International Symposium on Physical Design (ISPD). The gate-sizing contest judged the teams in two categories. The "primary" category looked at circuit-power quality only; the "secondary" category looked at how well each entry did with the tradeoff between circuit-power quality and runtime optimization. (Runtime is the wall clock time from the beginning to the end of the execution of the submitted binary code program.) UCSD-Michigan's Team Triton took first place in the "secondary" metric that encouraged

contestants to strike the best tradeoff. The team also won cash for their second-place finish in the "primary" category. So while Team South Brazil, hailing from two Brazilian universities, edged them out for first place in the primary metric, the team from two Brazilian universities finished the money in the secondary category. The overall result: Team Triton won the most cash. A UCSD team advised by Prof. Kahng, an academic participant in Calif2's Qualcomm Institute, also won the very first ISPD contest in 2005. The contest challenges teams from around the world to advance the state of the art in semiconductor design, first on faster circuits and more compact layouts, but in 2013, the focus was on discrete gate-sizing for lower-power operation. The contest was sponsored with support from Intel, Cadence, and Synopsys (which makes the industry-standard software that the contest used to evaluate circuit timing). This year's contest encouraged the use of smarter algorithms for circuits to use less power. "The goal of the contest was to develop a 'near-industry-strength' gate-sizing tool to achieve minimum leakage power while satisfying electrical and timing constraints," said Kahng, a computer-engineering professor with dual appointments in the ECE and Computer Science and Engineering (CSE) departments. "They had to develop optimization algorithms for sizing, and an accurate timing estimator." Read more about this by going to this Calif2 link. <http://www.calit2.net/newsroom/release.php?id=2146>

## Russell Impagliazzo and Mohan Paturi win the 2013 Nerode Prize



The EATCS--IPEC Nerode Prize is a theoretical computer science prize given awarded for outstanding papers in the area of multivariate algorithmics. It is awarded by the European Association for Theoretical Computer Science and the International Symposium on Parameterized and Exact Computation. CSE Professors, Russell Impagliazzo and Mohan Paturi, along with PhD alum Chris Calabro and Postdoc alumnus, Valentine Kabanets; were all involved in their series of papers on ways to develop (tight) lower bounds for NP-hard problems, a subject that is now a required reading in multivariate algorithmics. Congratulations and great job to all!

# Faculty GPS



**Gary Cottrell**

will be traveling on tomorrow  
04/27 to Irvine, CA for  
the California Forum.



**Rajesh Gupta**

will be traveling on 05/13 thru  
05/15 to Washington, DC for an  
Expeditions meeting.

