Currents

CEDA
IEEE Council on Electronic Design Automation

A Word from the President: A New Term Has Started!

Dear Members of our Academic and Industrial Community:

The IEEE Council on Electronic Design Automation (CEDA) is now more than 12 years old and is already recognized as a very relevant organizational unit within IEEE and worldwide for its high-quality standards in the fields of EDA and embedded systems.

In January 2018 a new two-year term began, so I would first like to thank the outgoing CEDA leadership team for their great effort and dedication to the success of CEDA up to this point. Next, even as I write these words, the new Executive Committee (EC) officers are already fully active developing new activities for our CEDA community, so I would like to provide all with an overview of our goals for the new CEDA term.

For this new CEDA EC term, our target is to develop new services for our community as a whole, especially supporting students and young professionals. In particular, we will focus on further development of our local chapters, maintaining CEDA Luncheon Keynotes at our major conferences and events, and consolidating our new CEDA Distinguished Lecturers Program (DLP). Therefore, I strongly encourage our brilliant members in the CEDA community to answer and share our upcoming calls for the CEDA DLP, as we truly believe in the value of networking and mentoring from our IEEE Fellow and Senior members to the young talents in our field.

In addition, we have established new standing committees for this term in the topics of Initiatives and Standards, which will carry out (in cooperation with the already existing EC committees) the core of CEDA's work in the new areas of Internet of Things (IoT), bio-electronic systems design, and new methodologies to conceive nano-technology based devices. All of these areas are key for the progress and growth of CEDA in this new term. Therefore, I encourage everybody in our CEDA community interested in these topics to contact the EC members to become volunteers, contributing their valuable time and input to the development of these areas within CEDA.

Last, but not least, in this new term we will further strengthen our efforts to recognize our key scientists with the status of IEEE Fellow and other prestigious awards sponsored by CEDA, as well as extending support for students and young professionals in our community. Thus, we will soon establish a brand new Travel Grants Program for eligible individuals that will provide sponsorship for participation in our key conferences in relevant fields. Please keep an eye on our announcements on the CEDA website, our CEDA emails, and the CEDA *Currents*.

Finally, please let me congratulate the new CEDA EC on the start of their service, and wish everyone in our CEDA community great success for the 2018-2019 term!

David Atienza, IEEE CEDA President

CEDA and ESDA honor Dr. Rob Rutenbar

IEEE CEDA and ESDA joined hands to honor Dr. Rob Rutenbar, the recipient of 2017 Kaufman Award. Dr. Rob Rutenbar is currently the Senior Vice Chancellor for Research at the University of Pittsburgh. The event was celebrated with a gala dinner on Feb 8, 2018, in San Jose, CA.

The Phil Kaufman Award honors an individual who has had a demonstrable impact on the field of electronic system design. The nominee should have an impact on any or a combination of the following categories:

- Business
- Industry direction and promotion
- Technology and engineering
- Educational and mentoring

Dr. Martin Wong, Executive Associate Dean of the College of Engineering at the University of Illinois, introduced Dr. Rutenbar and highlighted the EDA courses he developed. He cited Dr. Rutenbar's work at CMU and the role he played in expanding the reach of VLSI CAD by offering VLSI CAD as a massive, open online course (MOOC). To date, the course has connected with over 50,000 registered learners from more than 150 countries. In addition, Dr. Rutenbar's work to develop tools for analog designers via his startup Neolinear (acquired by Cadence) has been a key into automating many tasks for analog designers. Dr. Rutenbar through his work has had a

significant impact to both industry and academia and richly deserves this award.

CAD Contest at ICCAD 2018

The CAD Contest at ICCAD is a challenging, multi-month, research and development competition, focusing on advanced, real-world problems in the field of Electronic Design Automation (EDA). Contestants can participate in one or more problems provided by EDA/IC industry. The winners will be awarded at an ICCAD special session dedicated to this contest.

Since its inaugural year of 2012, the CAD Contest at ICCAD has been attracting hundred teams per year, fostering productive industry-academia collaborations, and leading to hundreds of publications in top-tier conferences and journals. The contest undoubtedly boosts EDA research and keeps enhancing its impact.

This year's contest contains three exciting problems: *Smart EC: Building Program for Name Mapping, Obstacle-Aware On-Track Bus Routing*, and *Timing-Aware Fill Insertion*. The top-3 winners of each contest problem will receive monetary awards (for students only) and certificates (for both students and advisors). For more info and to participate, visit the link.

SMACD 2018 goes to Prague

The 15th International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD 2018) will be held from the 2nd to the 5th of July 2018 in Prague, Czech Republic at the FNSPE, Czech Technical University in Prague. SMACD is sponsored by IEEE, IEEE CEDA, IEEE CAS, as well as companies and academic institutions.

To enter the competition, all participants must submit a paper by **March 2nd**, 2018 with a description of the methodology and/or tool, the design problem of their choice and the solution provided by their methodology and/or tool. It is a requirement that the first author of the submission and presenter at the conference be a MSc or a PhD student.

Following previous editions of SMACD conference, a $1,000 prize, sponsored by CEDA, will be granted to the winner of the competition. For more info and to partici-pate, visit the link.

Papers in IEEE Embedded Systems Letters

The top-five accessed articles from *IEEE Embedded Systems Letters* in January 2018 were as follows:

- "Energy Efficient Outdoor Light Monitoring and Control Architecture Using Embedded System," by Z. Kaleem, T. M. Yoon, C. Lee

- "Testing Autonomous Vehicle Software in the Virtual Prototyping Environment," by B. Kim. Y. Kashiba, S. Dai, S. Shiraishi

- "Tactics to Directly Map CNN Graphs on Embedded FPGAs," by K. Abdelouahab, M. Pelcat, J. Sérot, C. Bourrasset, F. Berry

- "Mobile Application to Detect Induction Motor Faults," by Arunava Naha et al.

- "Public Key Authentication and Key Agreement in IoT Devices With Minimal Airtime Consumption," by S. Sciancalepore, G. Piro, G. Boggia, G. Bianchi

Upcoming 2018 Conferences (Luca Fanucci, conferences@ieee-ceda.com)	
LATS	São Paulo, Brazil March 12 - 16
DATE	Dresden, Germany March 19 - 23

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IEEE Design & Test **is open for submissions.**
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