

November 2018

*Currents*



IEEE Council on Electronic Design Automation

### *CEEDA at Embedded Systems Week 2018*

CEEDA had a strong presence in this year's Embedded System Week, which took place between September 30 and October 5 in Turin, Italy. The President of CEEDA attended the plenary session where he delivered a brief speech to the delegates about CEEDA. Prof Atienza also presented the CEEDA Outstanding Service Award plaque to Prof. Lothar Thiele for his valuable contribution as the General Chair of ESWEEK in 2017.

### *DAC 2019 – Call For Contributions*

The 56<sup>th</sup> version of the Design Automation Conference solicits papers across an exciting set of topic areas including: Design, EDA, Embedded Systems and Software, Autonomous Systems, Machine Learning/AI, Intellectual Property, and Security/Privacy. Specifically, the Technical Program Committee for DAC 2019, under the leadership of the 56th General Chair, Rob Aitkin, Arm Fellow, is soliciting high-quality submissions on design research, design practices and design automation for the research track, designer track, IP track, special sessions, panels, tutorials and workshops in all of these topics. All submission information and topic details can be found [here](#).

### *ETS 2019 – Call for Contributions*

The IEEE European Test Symposium (ETS) is Europe's premier forum dedicated to presenting and discussing scientific results, emerging ideas, applications, hot topics and new trends in the area of electronic-based circuits and system testing, reliability, security and validation. In 2019, ETS will take place in the Congress Center in Baden-Baden. It is organized by the Karlsruhe Institute of Technology (KIT), which co-sponsors the event jointly with the IEEE Council on Electronic Design Automation (CEEDA). In addition to scientific paper submissions, this year ETS also offers an embedded workshop track dedicated to work in progress and case studies as well as a PhD forum. The special track on Emerging Test Strategies (ETS2) will again focus on upcoming problems and ideas in an industrial context. A Test Spring School will be organized in conjunction with ETS'19.

### *Embedded System Letters Invites Perspective Papers*

IEEE Embedded Systems Letters (ESL) is inviting perspective papers in the broad domain of embedded systems and software, cyber-physical systems, and Internet of Things. A perspective paper could present a grand challenge problem in the field that needs to be addressed, charter a new direction of research, express a contradictory viewpoint, or promote an interdisciplinary research area. The journal hopes that the perspective papers will be of lasting value to the community, and of the highest quality.

The perspective papers will go through the same rigorous peer-review process as the regular papers. However, the prospective authors may choose to first submit (at most) one-page title and abstract to the ESL Deputy Editor-in-Chief Tulika Mitra at [tulika@comp.nus.edu.sg](mailto:tulika@comp.nus.edu.sg) for quick feedback on the suitability of the proposal as a perspective paper. Given a positive assessment, the author may then proceed to expound upon the topic and submit the full perspective paper [here](#).

Note that the first step is not mandatory and is only meant to guide the authors. A positive assessment of the abstract does not imply acceptance of the paper. The full perspective paper will be evaluated by an Associate Editor of the journal and selected peer reviewers just like regular papers. There is no specific deadline for the submission of perspective papers. Each paper will be evaluated as and when it is submitted. Please direct any question or query regarding this call to the Deputy Editor-in-Chief Tulika Mitra at [tulika@comp.nus.edu.sg](mailto:tulika@comp.nus.edu.sg).

### *DAC Exhibit welcomes Academics*

DAC offers exhibitors a menu of opportunities to leverage and extend your brand message beyond your exhibit space and throughout the convention center. DAC encourages academics to showcase their achievements to a large group of prominent researchers, engineers, and industry professionals. Demo and silicon results are only some of the example cases for exhibiting at DAC. Here is what Prof. Ozgur Sinanoglu from NYU has to say about his experience during last year's DAC Exhibit:

“DAC Booth was a unique experience for our team. We had a chance to showcase our research products, such as demos on the chips we designed (<http://sites.nyuad.nyu.edu/dfx/first-chip-resilient-to-untrusted-fab-and-end-users/>)

— things we normally cannot easily share with our community through regular conference participation where focus is presenting papers or posters. A permanent physical location at the conference gave us the flexibility to arrange our demos and presentations in ways we saw fit. We were able to adjust the timing, pace, and content of our presentations based on the background and the interest level of the visitors of our booth. Most importantly, we had a chance to engage in conversations with people who are truly interested in the type of work we do; I have never experienced such levels of interest and engagement in conferences that I have attended before.”

More info on how to become an exhibitor at DAC can be found [here](#).

### **COINS – New Conference in the Area of IoT**

COINS is the premier conference devoted to omni-layer techniques for smart IoT systems, by identifying new perspectives and highlighting impending research issues and challenges. Topics of interest include, but are not limited to, the following: Internet of Things: From Device, to Edge, and Cloud, Omni-Layer Security, Privacy, and Trust, Omni-layer Reliability in IoT Era, VLSI, EDA, Embedded Systems, and Computer Architecture, Real-time Systems, Alternative and Approximate Computing, Cloud Computing, Programming Language and Software Engineering, Big Data, Artificial Intelligence, Machine Learning, Cognitive Computing, and Advanced Analytics, Computer Vision, Image Processing and Pattern Recognition, Automation Systems, Automotive Systems, Intelligent IoT eHealth, Enterprise Architecture.

[COINS](#) is sponsored by IEEE Council on Electronic Design Automation (CEDA). The proceedings will be published in ACM. Accepted papers are allowed six

pages in the conference proceedings free of charge. The submission deadline for regular papers is December 1, 2018.

### **Papers in IEEE Embedded Systems Letters**

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

- “[Partitioning Real-Time Tasks With Replications on Multiprocessor Embedded Systems](#),” by J. D. Lin, A. M. K. Cheng, and G. Gercek
- “[Multipliers With Approximate 4–2 Compressors and Error Recovery Modules](#),” by M. Ha and S. Lee
- “[A Novel Heterogeneous Approximate Multiplier for Low Power and High Performance](#),” by I. Alouani, H. Ahangari, O. Ozturk, and S. Niar
- “[A Taxonomy of General Purpose Approximate Computing Techniques](#),” by T. Moreau *et al.*,
- “[Tactics to Directly Map CNN Graphs on Embedded FPGAs](#),” by K. Abdelouahab, M. Pelcat, J. Sérot, C. Bourrasset, and F. Berry

### **Papers in IEEE Design & Test Magazine**

The top-five accessed articles from *IEEE Design & Test Magazine* in September 2018 were as follows:

- “[Approximate Computing: A Survey](#),” by Q. Xu, T. Mytkowicz, and N. S. Kim
- “[Security and Privacy in Cyber-Physical Systems: A Survey of Surveys](#),” by J. Giraldo *et al*
- “[Automotive Cyber-Physical Systems: A Tutorial Introduction](#),” by S. Chakraborty, M. A. Al Faruque, W. Chang, D. Goswami, M. Wolf, and Q. Zhu
- “[ZeNA: Zero-Aware Neural Network Accelerator](#),” by D. Kim, J. Ahn, and S. Yoo
- “[Challenges and Trends in Modern SoC Design Verification](#),” by W. Chen, S. Ray, J. Bhadra, M. Abadir, and L.-C. Wang

Find us online at [ieee-ceda.org](http://ieee-ceda.org).

*IEEE Embedded Systems Letters* is open for submissions.  
Visit [ieee-ceda.org/publication/csl-publication/author-guidelines](http://ieee-ceda.org/publication/csl-publication/author-guidelines).

*IEEE Design & Test* is open for submissions.  
Visit [ieee-ceda.org/publication/ieee-design-test-dt/paper-submission-instructions](http://ieee-ceda.org/publication/ieee-design-test-dt/paper-submission-instructions).



### **IEEE COUNCIL ON ELECTRONIC DESIGN AUTOMATION**

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