



IEEE Council on Electronic Design Automation

DAC 2014 Awards

At the 51st Design Automation Conference ([DAC 2014](#)), CEDA honored the winners of the A. Richard Newton Technical Impact Award in Electronic Design Automation and the *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)* Donald O. Pederson Best Paper Award.

The A. Richard Newton Technical Impact Award went to Subhasish Mitra and Kee Sup Kim for their paper, “X-Compact: An Efficient Response Compaction Technique for Test Cost Reduction,” which was published in the 2002 IEEE International Test Conference proceedings.

The *TCAD* Donald O. Pederson Best Paper Award went to Zheng Zhang, Tarek A. El-Moselhy, Ibrahim M. Elfadel, and Luca Daniel for “Stochastic Testing Method for Transistor-Level Uncertainty Quantification Based on Generalized Polynomial Chaos,” which appeared in the October 2013 issue (vol. 32, no. 10, pp. 1533-1545).

DATE 2015 Call for Papers

The 18th Design, Automation and Test Conference and Exhibition ([DATE 2015](#)) will be held 9-15 March 2015 in Grenoble, France. DATE brings together designers, design automation users, researchers, vendors, and specialists in hardware and software design, test, and manufacturing of electronic circuits and systems. DATE focuses on ICs and SoCs, reconfigurable hardware, and embedded systems, including embedded software.

This five-day event will include a conference with plenary invited papers, regular papers, panels, hot-topic sessions, tutorials, and workshops, as well as two special focus days and a track for executives.

The scientific conference will be complemented by a commercial exhibition featuring state-of-the-art design and test tools, methodologies, IP and design services, reconfigurable and other hardware platforms, embedded software, and (industrial) design experiences from different application domains (such as automotive, wireless, telecommunications, and multimedia applications).

Topic Areas for Submission

There are four main topic areas for paper submissions, designated as Tracks D, A, T, and E.

Track D, on design methods and tools, addresses design automation, design tools, and hardware architectures for electronic and embedded systems. The emphasis is on methods, algorithms, and tools related to the use of computers in the design of complete systems. This includes significant improvements in existing design methods and tools, as well as forward-looking approaches to model and design future system architectures, design flows, and environments.

Track A centers on application design. This track is devoted to design experiences with a high degree of industrial relevance, innovative design and test methodologies, and applications of specific design and test technologies. Contributions should illustrate state-of-the-art or record-breaking designs expected to provide viable solutions in tomorrow’s silicon and embedded systems. In topic A7 (Industrial Experiences Brief Papers), there is an opportunity to submit short, two-page papers that relate to industrial research and practice.

Track T, on test and robustness, encompasses all test, DFT, reliability, and design-for-robustness issues, at the system, chip, circuit, and device levels for both analog and digital electronics. This track also includes diagnosis, failure mode analysis, debugging, and post-silicon validation challenges.

Track E, on embedded-systems software, is devoted to modeling, analysis, design, and deployment of embedded software. Areas of interest include methods, tools, methodologies, and development environments. Also emphasized is model-based design and verification, embedded-software platforms, software compilation and integration, real-time systems, cyber-physical systems, and networked and dependable systems.

Key Dates for DATE 2015

Mark your calendars with the following important dates:

- **Tracks D, A, T, and E papers:** 14 September 2014
- **Special session proposals:** 14 September 2014

- **Tutorial proposals:** 14 September 2014
- **Friday workshop proposals:** 14 September 2014
- **Exhibition Theatre:** 19 October 2014
- **PhD Forum:** 31 October 2014
- **Notification of acceptance:** 7 November 2014
- **Camera-ready papers due:** 28 November 2014
- **University booth proposals:** 18 January 2015

Designing Electronics for the Internet of Things

DATE 2015 will devote two special days to areas that are bringing new challenges to the system design community. Each of these days will have a full program of keynotes, panels, tutorials, and technical presentations.

One of these special days will focus on what is known as the Internet of Things (IoT). Our society is evolving to the point at which people and objects will be almost permanently connected and exchanging information. This scenario, the IoT, is the result of the convergence in the evolution and integration of communication, computing, storage, and sensing technologies.

The potential influence of the IoT in our daily lives is enormous, and there are major challenges related to microelectronics design, novel paradigms for data acquisition and fusion, as well as analysis and storage of the large volume of collected information.

This special day at DATE will investigate how to cultivate progress in technologies and applications of the Internet of Things for the benefit of society.

Designing Electronics for Medical Applications

Progress in microelectronics has enabled the miniaturization of data-processing elements, radio transceivers, and sensors for a large set of physiological phenomena. Autonomous sensor nodes can monitor vital body parameters in an unobtrusive way during daily life. However, the inherent resource-constrained nature of these

systems, the specific operating conditions, the stringent autonomy requirements, and the need for automated analysis for complex biological signals pose important design challenges.

This special day will cover the latest trends toward alternative architectures, technologies, and design paradigms for low-cost, low-power, miniaturized devices, such as smart wireless sensor nodes.

Papers in IEEE Embedded Systems Letters

The top-five accessed articles from *IEEE Embedded Systems Letters* in April 2014 were as follows:

- “[An FPGA-Based Plant-on-Chip Platform for Cyber-Physical System Analysis](#),” by S. Vyas et al.
- “[Verilog-A Based Effective Complementary Resistive Switch Model for Simulations and Analysis](#),” by Y. Yang et al.
- “[A Security Layer for Smartphone-to-Vehicle Communication over Bluetooth](#),” by A. Dardanelli et al.
- “[Introducing New Localization and Positioning System for Aerial Vehicles](#),” by E. Mazidi
- “[HLC-PCP: A Resource Synchronization Protocol for Certifiable Mixed Criticality Scheduling](#),” by Q. Zhao, Z. Gu, and H. Zeng

Upcoming Conferences (David Atienza, david.atienza@epfl.ch)	
PATMOS	Palma, Spain, 29 Sept. - 1 Oct. 2014
ESWEEK	New Delhi, India, 12-17 Oct. 2014
MEMOCODE	Lausanne, Switzerland, 19-21 Oct. 2014
FMCAD	Lausanne, Switzerland, 21-24 Oct. 2014
ICCAD	San Jose, CA, 3-6 Nov. 2014

IEEE Embedded Systems Letters is open for submissions. Visit mc.manuscriptcentral.com/les-ieee

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