



INFORMATION

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www.date-conference.com

Chairs
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Friedrich-Alexander-Universität
Erlangen-Nürnberg, Erlangen, Germany
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SPECIAL SESSIONS

Special Sessions can take the form of (i) **Panels**, discussing visionary and controversial issues, (ii) **Hot-Topic Sessions**, dealing with the introduction and discussion of new R&D problems, and (iii) **Embedded Tutorial Sessions**, addressing trends in the technical domains that are of interest to the conference participants. **Special attention and consideration will be given to Special Sessions proposals matching DATE 2016 technical programme and exhibition campus focus: 5G wireless networks, 3D-IC integration, automotive systems, FD-SOI, IoT, and systems security.**

Special Session proposals must consist of an extended summary of up to 1,500 words, describing the topic, the authors/speakers, and the format, and must be submitted via the DATE website by **Sept. 13, 2015**.

Contributors of accepted Special Sessions will be asked to submit final texts or statements of panelists, as appropriate, for publication in the Proceedings as camera-ready manuscripts by **Nov. 27, 2015**. Panel sessions are entitled to one (1) page per panelist in the Proceedings, Hot-Topic Sessions are allocated a maximum of six (6) pages per speaker, whereas Embedded Tutorials are allocated one single paper for the entire session which should not exceed ten (10) pages.

For the accepted special sessions, it is the responsibility of the Special Session organizer(s) to ensure that the **Nov. 27, 2015** deadline is met, and all the camera-ready manuscripts from their respective Special Sessions are technically sound, and meet the editorial standards of the DATE Proceedings. The Special Session Co-Chairs may decline the publication of the final manuscripts in the DATE Proceedings if the above responsibility is not fulfilled. For more information, please contact:

Giovanni De Micheli and Marco Casale-Rossi
specialsessions@date-conference.com

TUTORIALS

On the first day, half-day technical tutorials on selected topics will be given by leading experts in their respective fields. The proposal should motivate the topic and its relevance for both academia and industry, describe the target audience (who? how many? match with typical DATE audience?), the reason for a tutorial (why a tutorial, why now), tutorial objectives, and a clear planning hereto (tutorial outline and speakers, what will be done to attract the audience). Proposals should be submitted before **Sept. 13, 2015** via the DATE website. For more information, please contact:

Christiana Bolchini
tutorials@date-conference.com

PHD FORUM

The PhD Forum is a poster session hosted by the European Design and Automation Association (EDAA), ACM-SIGDA, and CEDA for PhD students to present and discuss their research work with people in the design automation and system design community. It represents a good opportunity for students to get feedback on their research and for the industry to see academic work in progress. Proposals can be submitted via the DATE website by **Oct. 18, 2015**. For further information, please contact:

Rolf Drechsler
drechsler@uni-bremen.de

UNIVERSITY BOOTH

The University Booth fosters the transfer of academic work to industry. The University Booth is part of the DATE exhibition and is free of charge for presenters and their visitors. Research institutes and universities interested in demonstrating their mature prototypes and pre-commercial results should contact by **Jan. 18, 2016**:

Jens Lienig and Andreas Vörg
university-booth@date-conference.com

EUROPEAN PROJECTS

NEW for this year: DATE will have an extra section of the Proceedings dedicated to European Projects. EU Project Coordinators are invited to submit a paper (up to six pages) presenting preliminary ideas, work in progress or lessons learned; papers will be peer-reviewed and selected based on innovation and originality. European Projects papers should be submitted before **18 Oct., 2015** via the DATE website. For more information, please contact:

Roberto Giorgi
giorgi@unisi.it

Moreover, like in previous editions, DATE offers the opportunity to rent a booth and/or meeting room for presenting project material or demos making DATE an ideal venue to meet your community. For more information, please contact the Event Secretariat K.I.T. Group.

EXHIBITION THEATRE

An open discussion forum in the midst of Europe's largest electronic system design exhibition: The programme combines expert panel sessions, customers' testimonials and tutorials given by industry leaders. The aim is to offer exhibition visitors up-to-date information and fresh views on the key industrial and business issues in the electronic systems design market. Submissions are invited from industry consortia, technology groups, standards bodies and any company or organization setting future industry trends by **Oct. 18, 2015**. For more information, please contact:

Jürgen Haase
haase@edacentrum.de

FRIDAY WORKSHOPS

Proposals for Friday Workshops on emerging research and application topics are invited. Particularly suitable topics are those not directly covered in the technical programme and which have the potential to impact on future DATE technical areas in design and test of microelectronic systems. For information and detailed descriptions on how to propose a workshop, please refer to the website. Proposals should be submitted before **Sept. 13, 2015** via the DATE website. For more information, please contact:

José L. Ayala and Oliver Bringmann
fridayworkshops@date-conference.com

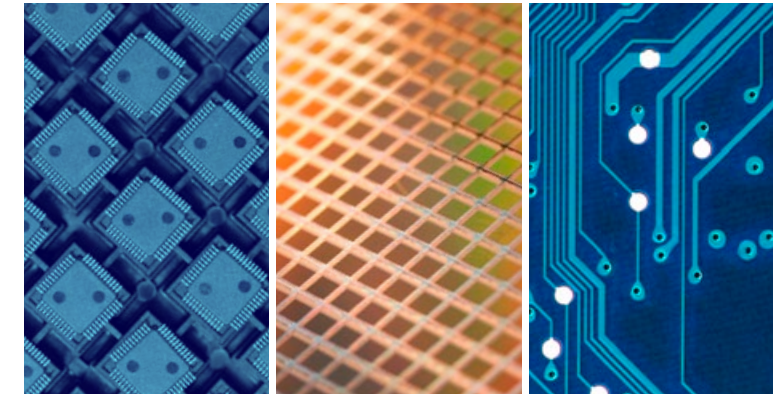
FRINGE MEETINGS

A limited number of rooms is available for the organisation of fringe meetings (birds of a feather sessions) open to all DATE attendees, as well as for appropriate on-site closed meetings. Requests for commercial meetings will incur the standard room charges. Requests are considered in the order of their arrival, and should be directed to the Event Secretariat K.I.T. Group.

Franziska Kremling
date@kitdresden.de

CALL FOR PAPERS

www.date-conference.com



Design,
Automation
and Test
in Europe

CONFERENCE & EXHIBITION
March 14 – 18, 2016, Dresden, Germany

The 19th **DATE conference and exhibition** is the main European event bringing together designers and design automation users, researchers and vendors, as well as specialists in the hardware and software design, test and manufacturing of electronic circuits and systems. It puts strong emphasis on ICs/SoCs, reconfigurable hardware and embedded systems, including embedded software.

The five-day event consists of a conference with plenary invited papers, regular papers, panels, hot-topic sessions, tutorials and workshops, two special focus days and a track for executives. The scientific conference is complemented by a commercial exhibition showing the state-of-the-art in design and test tools, methodologies, IP and design services, reconfigurable and other hardware platforms, embedded software, and (industrial) design experiences from different application domains, e.g. automotive, wireless, telecom and multimedia applications. The organisation of user group meetings, fringe meetings, a university booth, a PhD forum, vendor presentations and social events offers a wide variety of extra opportunities to meet and exchange information on relevant issues for the design and test community. Special space will also be allocated for EU-funded projects to show their results.

THE CONFERENCE

The **conference** addresses all aspects of research into technologies for electronic and (embedded) systems engineering. It covers the design process, test, and tools for design automation of electronic products ranging from integrated circuits to distributed large-scale systems. This includes both hardware and embedded software design issues. The conference scope also includes the elaboration of design requirements and new architectures for challenging application fields such as telecom, wireless communications, multimedia, healthcare and automotive systems. Persons involved in innovative industrial designs are particularly encouraged to submit papers to foster the feedback from design to research. Panels, hot-topic sessions and embedded tutorials highlight and inform about emerging topics.

Special Days in the programme will focus on two areas bringing new challenges to the system design community:

Automotive Systems: High-end cars today have more than 100 ECUs connected by various communication buses like CAN, FlexRay and Ethernet, that are used to run several millions of lines of software code spanning across safety critical, driver assistance and comfort related application domains. Designing, verifying and upgrading such a complex hardware/software system poses several challenges for EDA engineers, computer architects, and embedded systems and software designers. Further, most of the innovation in the automotive domain is now in electronics and software, as can be seen in the form of various new driver assistance systems and functionalities. Hence, there are many interesting opportunities for the EDA and the embedded systems community in the automotive domain, which the automotive special day at DATE 2016 will seek to explore in the form of various technical sessions and discussion panels.

Secure Systems: Security is essential to create a safe and trustworthy Information and Communications Technology infrastructure. Electronics are becoming more and more integrated into the environment: the Internet of Things, Cyber-Physical Systems, Smart Cities are all novel phenomena. Data is stored in and travels from implanted medical devices to the cloud over wireless links and through optical fibers. None of this revolution will be sustainable without adding security. During this special day, several aspects of making systems secure will be addressed. We plan to look at secure HW and SW platforms, address different application domains: automotive, smart grid, or smart factory. We address security versus other functional requirements as dependability and testability, and we investigate design practices for security.

On the first day of the DATE event, half-day in-depth technical **tutorials** are given by leading experts in their respective fields. The tutorials are well suited for researchers, tool developers and system designers.

Friday Workshops concentrate on specialised and novel topics.

THE EXHIBITION

The conference is accompanied by a comprehensive **exhibition**, which states a unique networking opportunity for vendors of tools and services for hardware and embedded software for the design, development and test of Systems-on-Chip, IPs, Embedded Systems, ASICs, FPGAs and PCBs including a broad range of design reuse technologies and services.

To inform attendees on commercial and design related topics, there will be a full programme in the Exhibition Theatre which will combine presentations by exhibiting companies, best-practice reports by industry leaders on their latest design projects and selected conference special sessions.

TOPIC AREAS FOR SUBMISSION

Within the scope of the conference, the main areas of interest are organized in the following tracks. Submissions can be made to any of the track topics. *For detailed descriptions of the track topics, please refer to the DATE website.*

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

This track is organised in the following topics:

- D1:** System Specification and Modeling
- D2:** System Design, High-Level Synthesis and Optimization
- D3:** System Simulation and Validation
- D4:** Formal Methods and System Verification
- D5:** Design and Test for Analog and Mixed-Signal Circuits and Systems
- D6:** Emerging Technologies and Systems
- D7:** Power Modeling, Optimization and Low-Power Design
- D8:** Network on Chip
- D9:** Architectural and Microarchitectural Design
- D10:** Temperature and Variability Aware Design and Optimization
- D11:** Reconfigurable Computing
- D12:** Logical and Physical Analysis and Design

Track A: Application Design, is devoted to the presentation and discussion of design experiences with a high degree of industrial relevance, as well as innovative design and test methodologies, and applications of specific design and test technologies. Contributions should illustrate state-of-the-art or record-breaking designs, which will provide viable solutions in tomorrow's silicon and embedded systems. In topic A7, there is the opportunity to submit short, 2-page papers that relate to industrial research and practice.

This track is organised in the following topics:

- A1:** Green Computing Systems
- A2:** Communication, Consumer and Multimedia Systems
- A3:** Automotive Systems and Smart Energy Systems
- A4:** Ambient Intelligence and Low-Power Systems for Healthcare, Wellness and Assistive Technology
- A5:** Secure Systems
- A6:** Reliable and Reconfigurable Systems
- A7:** Industrial Experiences Brief Papers

Track T: Test and Robustness, covering all test, design-for-test, reliability and design-for-robustness issues, at system-, chip-, circuit-, and device-level for both analog and digital electronics. Including also diagnosis, failure mode analysis, debug and post-silicon validation challenges.

This track is organised in the following topics:

- T1:** Defects, Faults, Variability and Reliability Analysis and Modeling
- T2:** Test Generation, Simulation and Diagnosis
- T3:** Design-for-Test, Test Compression and Access
- T4:** On-line Test, Fault Tolerance and Robust Systems
- DT5:** Design and Test for Analog and Mixed-Signal Circuits and Systems

Track E: Embedded Systems Software, is devoted to modelling, analysis, design and deployment of embedded software. Areas of interest include methods, tools, methodologies and development environments. Emphasis will also be on model-based design and verification, embedded software platforms, software compilation and integration, real-time systems, cyber-physical systems, networked, and dependable systems.

This track is organised in the following topics:

- E1:** Real-time, Networked, and Dependable Systems
- E2:** Compilers and Software Synthesis for Embedded Systems
- E3:** Model-based Design and Verification for Embedded Systems
- E4:** Embedded Software Architectures
- E5:** Cyber-Physical Systems

In addition to the above conference tracks, we welcome proposals for **Special Sessions, Tutorials**, and **Friday Workshops**, and submissions for the Special Days on **Automotive Systems** and **Secure Systems**.

COMMITTEES

A full list of the executive and programme committee members is available on the DATE website: www.date-conference.com

SPONSORS

The event is sponsored by the European Design and Automation Association, the EDA Consortium, the IEEE Council on EDA, ECSI, ACM – SIGDA, and RAS. In cooperation with IEEE Computer Society test technology technical Council (ttc), IEEE Solid-State Circuits Society (SSCS), International Federation for Information Processing (iFIP).

SUBMISSION KEY DATES


D, A, T, and E Papers	Deadline: September 13, 2015
Special Session Proposals	Deadline: September 13, 2015
Tutorial Proposals	Deadline: September 13, 2015
Friday Workshop Proposals	Deadline: September 13, 2015
Exhibition Theatre	Deadline: October 18, 2015
European Projects	Deadline: October 18, 2015
PhD Forum	Deadline: October 18, 2015
Notification of Acceptance	Deadline: November 06, 2015
Camera-Ready Paper Due Date	Deadline: November 27, 2015
University Booth Proposals	Deadline: January 18, 2016

SUBMISSION INSTRUCTIONS

All manuscripts for any technical topic of the D, A, T, and E tracks must be submitted for review electronically, following the instructions on the conference website: www.date-conference.com


The accepted file format is PDF. Any other format and manuscripts received in hard-copy form will not be processed.


Papers can be submitted for either formal oral presentation or for interactive presentation. Oral presentations require novel and complete research work supported by experimental results. Interactive presentations are expected to articulate emerging and future design, verification and test problems including work in progress and identify open problems that merit innovative future research. These presentations are given on a laptop in a face-to-face discussion area.

 **Submissions should not exceed 6 pages in length for oral-presentation papers and 4 pages in length for interactive-presentation papers. Submission of two-page papers in topic A7 (Industrial Experiences Brief Papers) will also be considered.**

All papers should be formatted as close as possible to the final format: A4 or letter sheets, double column, single spaced, Times or equivalent font of minimum 10pt (templates are available on the DATE website for your convenience). *To permit blind review, submissions should not include the author names.* Any submission not in line with the above rules will be discarded.

All papers will be evaluated with regard to their suitability for the conference, originality, and technical soundness. The Programme Committee reserves the right to reorient oral-presentation papers to interactive-presentation and vice versa, to obtain the most suitable presentation format. Submissions simultaneously under review or accepted by another conference, symposium, or journal will be rejected. The DATE conference will work cooperatively with others to check for double-submissions.

 **It is mandatory that at least one author of each accepted paper attends the conference to present the work. Please note that each paper shall be accompanied by at least one different full conference registration at the speaker rate (i.e., two speaker registrations are needed for two accepted papers, e.g. from the main author or a co-author of the paper).**

 **WARNING: you are not allowed to modify the list of authors after the submission deadline. It is extremely important that you put the full list (in the correct order) when submitting the paper online. If your paper will be accepted, you will not be able to modify it later on.**