SPECIAL SESSIONS

Special Sessions can take the form of **Panels** discussing visionary and/or controversial issues, **Hot-Topic Sessions**, dealing with the introduction and discussion of new R&D problems, and **Embedded Tutorial Sessions**, addressing trends in the technical domains that are of interest to the conference participants.

Special Session proposals consist of an extended summary of up to 1500 words describing the session content and format, speakers/panellists, and title of their presentation. Proposals must be submitted via the DATE website by **Sep. 14, 2014**.

Contributors of accepted special sessions will be asked to submit final texts or statements of panellists, as appropriate, for publication in the Proceedings (deadline **Nov. 28, 2014**). Panel sessions are entitled to one page per panellist in the Proceedings, whereas Embedded Tutorials and Hot Topic sessions are allocated a maximum of 6 pages per speaker. For more information, please contact:

Marco Casale-Rossi and Marco Platzner
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 **Sep. 14, 2014** via the DATE website. For more information, please contact:

Franco Fummi
tutorials@date-conference.com

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, 2015:**

Laurent Fesquet and Andreas Vörg
university-booth@date-conference.com

PhD FORUM

The PhD Forum is a poster session hosted by the European Design and Automation Association (EDAA) and ACM-SIGDA 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. 31, 2014**. For further information, please contact:

Rolf Drechsler
drechsler@uni-bremen.de

EXHIBITION THEATRE

An open discussion forum in the midst of Europe's largest electronic system design exhibition: The programme combines expert panel sessions and customers' testimonials. The aim is to offer exhibition visitors a fresh view on the key industrial and business issues in the electronic systems design market. Submissions are invited from industry consortia, technology groups, standards bodies, or any person with opinions on future industry trends by **Oct. 19, 2014:**

Juergen 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 Web site. Proposals should be submitted before **Sep. 14, 2014** via the DATE website. For more information, please contact:

José L. Ayala and Cristiana Bolchini
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 are considered in the order of their arrival, and should be directed to:

Franziska Kremling   kremling@kitdresden.de
K.I.T. Group GmbH   Tel: + 49 351 4967 541
Münzgasse 2   Fax: + 49 351 4956 116
01067 Dresden, Germany

Requests for commercial meetings will incur the standard room charges.

INFORMATION

Event Secretariat
c/o K.I.T. Group GmbH Dresden, Muenzgasse 2, 01067 Dresden, Germany
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Email: conference-management@date-conference.com

Chairs
General Chair: Wolfgang Nebel, OFFIS, Oldenburg, Germany wolfgang.nebel@offis.de
Programme Chair: David Atienza, EPFL, Lausanne, Switzerland david.atienza@epfl.ch

To add your name to the mailing list, please visit the website:
www.date-conference.com

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DATE 15

Design, Automation and Test in Europe

CONFERENCE & EXHIBITION
March 9–13, 2015, Grenoble, France

The 18th **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:

Designing Electronics for the Internet of Things: Our society is evolving to a point where objects and people will be almost permanently connected and exchanging information. This scenario, called the Internet of Things (IoT), is the result of the convergence in the evolution and integration of communication, computing, storage and sensing technologies. While the potential influence of IoT in our daily life is enormous, 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 investigates how the progress in technologies and applications of IoT can be nurtured and cultivated 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(s) vital body parameters in an unobtrusive way during daily life. However, the inherent resource-constrained nature of these systems, coupled with 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 towards alternative architectures, technologies and design paradigms for low cost, low power, miniaturized devices such as smart wireless sensor nodes.

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
DT5: 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: Logic and Physical Synthesis, Timing Analysis and Verification
D13: On-Chip and Off-Chip Parasitic Extraction, Model Order Reduction and Signal Integrity

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 Ultra-Low Power Systems for Healthcare and Wellness
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 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 **Designing Electronics for the Internet of Things** and **Designing Electronics for Medical Applications.**

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: ACM – SIGBED, IEEE Computer Society test technology technical Council (tttC), IEEE Solid-State Circuits Society (SSCS), International Federation for information Processing (IFIP) and IET.

SUBMISSION KEY DATES

D, A, T and E papers	Deadline: September 14, 2014
Special Session proposals	Deadline: September 14, 2014
Tutorial proposals	Deadline: September 14, 2014
Friday Workshop proposals	Deadline: September 14, 2014
Exhibition Theatre	Deadline: October 19, 2014
PhD Forum	Deadline: October 31, 2014
Notification of acceptance	Deadline: November 7, 2014
Camera-ready paper due date	Deadline: November 28, 2014
University Booth proposals	Deadline: January 18, 2015

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 Web site 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.**