SPECIAL SESSIONS

Special Sessions can take the form of (1) Panels, discussing visionary and controversial issues, (2) Hot-Topic Sessions, dealing with the introduction and discussion of new R&D problems, and (3) 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 2017 technical program and exhibition campus focus: smart wearable electronics – including ultra-low power design, and energy harvesting/storing for autonomous things – cloud computing, Internet of Things (IoT), and autonomous cyber-systems – namely robots and drones.

Special Session proposals must consist of an extended summary of up to 1,500 words as PDF file, describing the topic, the authors/speakers, and the format, and must be submitted via the DATE website by **September 17, 2016**.

The submitter of a submitted Special Session proposal will be notified of acceptance or rejection of his/her proposal by November 11, 2016. In case of acceptance, contributors of accepted Special Sessions will be asked to submit final texts or statements of panelists, as appropriate, for publication in the Proceedings as final, camera-ready manuscripts by **November 30, 2016**. 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 **November 30, 2016** 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, specify whether it covers foundational topics or cutting-edge ones, describe the target audience (expected type of attendees? expected number? match with typical DATE audience?), the reason for a tutorial (why a tutorial, why now). Moreover, the proposal should include a brief abstract with a list of learning objectives, and a clear planning hereto (organization in sessions, possible speakers, what will be done to attract the audience), and the DATE Topic it is more closely related to. A tutorial proposal example is available on the DATE website. Proposals should be submitted before **September 11, 2016**, via the DATE submission 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 **October 14, 2016**. For further information, please contact:

Cecilia Metra
phd-forum@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.

DATE Event Secretariat
date@kitdresden.de

INFORMATION

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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 can find the submission details at https://www.date-conference.com/exhibition/u-booth. Submission deadline is **January 16, 2017**. If you have questions please contact:

Elena Ioana Vatajelu and Andreas Vörg
university-booth@date-conference.com

EUROPEAN PROJECTS

This year too, 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 from the project; papers will be peer-reviewed and selected based on innovation and originality; in particular, we would like to give visibility to papers addressing DATE topics. European Projects papers should be submitted before **14 Oct. 2016** via the DATE website. For more information, please contact:

Lorena Anghel
european-projects@date-conference.com

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 booth rental and room reservations, please contact the Event Secretariat K.I.T. Group.

EXHIBITION THEATRE

An open discussion forum in the midst of Europe's leading 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, with a special emphasis on career opportunities for graduates and on supporting experienced professionals with information on how to shape the future of our industry

Submissions are invited from industry consortia, technology groups, standards bodies and any company or organization setting future industry trends by **October 23, 2016**. For more information, please contact:

Jürgen Haase and Marisa López Vallejo
exhibition-theatre@date-conference.com

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 program 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 **September 11, 2016**, via the DATE website. For more information, please contact:

Francisco J. Cazorla and Gabriela Nicolescu
fridayworkshops@date-conference.com

CALL FOR PAPERS

www.date-conference.com

DATE 17

Design,
Automation
and Test
in Europe

CONFERENCE & EXHIBITION
March 27 - 31, 2017, Lausanne, Switzerland

The 20th **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 Era: 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 Wearable Electronics and Smart Medical Devices: 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 vivid accompanying exhibition 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. Furthermore, it states the perfect venue for industries to meet University Professors to foster their University Programme and especially for PhD Students to meet their future employers.

A full programme in the Exhibition Theatre will again combine presentations by exhibiting companies, best-practice reports by industry leaders on their latest design projects and selected conference special sessions.

The full list of participating exhibitors and sponsors including their company profiles can always be found online:
http://www.date-conference.com/exhibitors-sponsors

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, and MEMS
D6: Power Modeling, Optimization, and Low-Power Design
D7: Network on Chip
D8: Architectural and Microarchitectural Design
D9: Temperature and Variability Aware Design and Optimization
D10: Reconfigurable Computing
D11: Logical and Physical Analysis and Design
D12: Emerging Technologies for Future Computing
D13: Emerging Technologies for Future Memories

Track A: Application Design, is devoted to the presentation and discussion of design experiences with a high degree of industrial relevance, as well as applications of specific design and test methodologies. 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 A8, 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: Healthcare, Wellness and Assistive Technology
A5: Secure Systems
A6: Reliable and Reconfigurable Systems
A7: Applications of Emerging Technologies
A8: 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: Modeling and Mitigation of Defects, Faults, Variability, and Reliability
T2: Test Generation, Simulation and Diagnosis
T3: Design-for-Test, Test Infrastructures, Test Standards
T4: System-Level Reliability Design, Analysis and On-line Test
DT5: Design and Test for Analog and Mixed-Signal Circuits and Systems, and MEMS

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: Software architectures for 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 Era** and **Designing Wearable Electronics and Smart Medical Devices.**

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 Electronic System Design Alliance, the IEEE Council on EDA, ECSI, ACM – SIGDA, and RAS.
In cooperation with IEEE Computer Society test technology technical Council (tttC), IEEE Solid-State Circuits Society (SSCS), International Federation for Information Processing (iFiP).

SUBMISSION KEY DATES

D, A, T, and E Papers	Deadline: September 11, 2016
Tutorial Proposals	Deadline: September 11, 2016
Friday Workshop Proposals	Deadline: September 11, 2016
Special Session Proposals	Deadline: September 17, 2016
PhD Forum	Deadline: October 14, 2016
European Projects	Deadline: October 14, 2016
Exhibition Theatre	Deadline: October 23, 2016
Notification of Acceptance	Deadline: November 11, 2016
Camera-Ready Paper Due Date	Deadline: November 30, 2016
University Booth Proposals	Deadline: January 16, 2017

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 poster 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). In case of no attendance/presentation in person on-site, the paper will be deleted from the proceedings afterwards, despite of full payment at the speaker rate.**

☞ **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.**