

final call for papers

Design,
Automation &
Test in
Europe

DATE 09

Acropolis, Nice, France
April 20-24, 2009

www.date-conference.com

The 12th **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

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 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:

SoC Development Strategies – This special day will focus on the new challenges, trends and development strategies in SoC design. Experts from IDMs and fabless companies, suppliers like EDA, IP, design services, test, and packaging product and service providers will join together and share their experience and contributions on several hot topics: SoC development trade-offs, concurrent SoC development and end-to-end planning, vertical integration vs disaggregation, multisourcing and the role of standardisation.

Multicore Applications – Multicore concept is expected to be a serious alternative to ASIC design to continue the race toward integration of more and more sophisticated applications at lower design cost, lower power consumption and higher computation power and performances thanks to combination of distributed control and software reconfiguration. It additionally enables an easier mapping of different applications on the same IC. The success of these new ICs depends on the availability of new programming and software methodologies and skills that are required to achieve acceptable design quality and productivity. This special day brings together key actors from academia and industry in the areas of Multicore HW and SW architecture to build a vision of the next step in application design. Speakers will provide insights on Multicore platforms for application domains like multimedia, high-end computing and wireless.

On the first day of the DATE event, half- and full-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 exhibition**

The conference is complemented by the largest **exhibition** in Europe 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, the Exhibition Programme combines the Solutions Workshops and the Exhibition Theatre.

TOPIC AREAS **topic areas for submission**

Within the scope of the conference, the main areas of interest are organised 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 Web site.

Track D: Design Methods, Tools, Algorithms and Languages, addressing design automation and design tools for electronic and embedded systems. Emphasis is on methods and tools related to the use of computers in designing products. This includes designer feedback on existing design methods and tools as well as to initiate discussions on requirements of future system architectures, design flows and environments.

This track is organised in the following topics:

- D1 System Specification and Modelling
- D2 MPSoC and System Design Methods
- D3 System Synthesis and Optimisation
- D4 Simulation and Validation
- D5 Design of Low Power Systems
- D6 Power Estimation and Optimisation
- D7 Emerging Technologies, Systems and Applications
- D8 Formal Methods and Verification
- D9 Network on Chip
- D10 Architectural and Microarchitectural Design
- D11 Architectural Synthesis
- D12 Reconfigurable Computing
- D13 Logic and Technology Dependent Synthesis for Deep-Submicron Circuits
- D14 Physical Design and Verification
- D15 Analogue and Mixed-Technology Circuits and Systems
- D16 CAD for Analogue and Mixed-Signal Design
- D17 Interconnect, EMC and Packaging Modelling

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 methodologies and applications of specific design technologies in an industrial context. Contributions should illustrate state-of-the-art designs, which will provide viable solutions in tomorrow's silicon systems.

Designs that achieve a specific record in terms of performance, power management or any other concrete advantage compared to the state-of-the-art for a given application domain should also be submitted to this track.

This track is organised in the following topics:

- A1 Media and Signal Processing
- A2 Wireless Communication and Networking
- A3 Automotive
- A4 Secure Embedded Implementations
- A5 Military, Space and Avionics Systems
- A6 Application of Reconfigurable and Adaptive Systems
- A7 Technologies and Applications for Healthcare
- A8 Multi-core Platforms
- A9 MEMS and Mixed-Signal System Implementations

Track T: Test Methods, Tools and Innovative Experiences, addressing design-oriented embedded test solutions as well as defect analysis, modelling, test generation and silicon debugging. Emphasis is on both system- and chip-level test.

This track is organised in the following topics:

- T1 System and Industrial Test
- T2 Design for Test and BIST
- T3 Test Generation, Simulation and Diagnosis
- T4 On-Line Testing and Fault Tolerance
- T5 Test for Variability, Reliability and Defects
- T6 Mixed-Signal/RF/MEMS Test and DFX Engineering

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 embedded software platforms, software integration, adaptive real-time systems, and dependable systems.

This track is organised in the following topics:

- E1 Real-time, Networked and Dependable Systems – principles and practice
- E2 Compilers and Code Generation for Embedded Systems
- E3 Model-based Design for Embedded Systems
- E4 Software Architectures and Principles for Embedded MPSoC and Multi-core Systems
- E5 Embedded Software Applications: Architectures, Tools and Methodologies

In addition to the above conference tracks, we welcome proposals for **Special Sessions, Tutorials and Friday Workshops**,

COMMITTEES committees

A full list of the executive and programme committee members is available on the DATE Web site.

SPONSORS sponsors

The event is sponsored by the European Design and Automation Association, the EDA Consortium, the IEEE Computer Society (TTTC), the IEEE Computer Society (CEDA) ECSI, ACM - SIGDA, and RAS. In cooperation with ACM - SIGBED, IEEE Solid-State Circuits Society (SSCS) IFIP, The Institution of Engineering and Technology (IET) and SAME.

INFORMATION information

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To add your name to the mailing list go to the Web site:
www.date-conference.com.

KEY DATES **submission key dates**

D, A, T and E papers
Deadline is Sunday, September 7, 2008

Special Session proposals
Deadline is Sunday, September 7, 2008

Tutorial proposals
Deadline is Sunday, September 7, 2008

Friday Workshop proposals
Deadline is Sunday, September 7, 2008

Exhibition Theatre
Deadline is Sunday, October 8, 2008

PhD Forum
Deadline is Wednesday, November 15, 2008

Notification of acceptance
Deadline is Friday, November 17, 2008

Camera-ready paper due date
Deadline is Friday, December 12, 2008

University Booth proposals
Deadline is Friday, January 18, 2009

INSTRUCTIONS **submission instructions**

All manuscripts for any of the D, A, T and E technical topics must be submitted for review electronically, following the instructions on the conference Web page:

www.date-conference.com

Accepted file formats are PDF and Postscript. 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 and 4 pages in length for interactive-presentation papers, and 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. DATE conference will work co-operatively with others to check for double submissions. It is mandatory authors of accepted papers to attend and present their work at the conference.

SPECIAL SESSIONS

Special Sessions can take the form of **Panels**, where visionary and/or controversial issues are discussed, **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, and must be submitted via the Web site by Sept. 7, 2008.

Contributors of accepted special sessions will be asked to submit final texts or statements of panellists, as appropriate, for publication in the Proceedings (deadline Dec. 12, 2008). Panel sessions are entitled to one page in the Proceedings, whereas Embedded Tutorials and Hot Topic sessions are allocated a maximum of 6 pages per session. For more information, please contact:

Pol Marchal
Tel: +32 16 28 82 21

marchal@imec.be
Fax: +32 16 28 15 15

TUTORIALS

On the first day, half- and full-day technical tutorials on selected topics will be given by leading experts in their respective fields. Proposals should be sent by Sept. 7, 2008 to:

Alex Yakovlev
Tel: +44 191 222 8184

Alex.Yakovlev@ncl.ac.uk
Fax: +44 191 222 8180

UNIVERSITY BOOTH

A University Booth will be organised in order to help the transfer of technology to industry. Research institutes and universities interested in demonstrating their pre-commercial results should contact by Jan. 18, 2009:

Gilles Jacquemod
Tel: + 33 492 38 85 55

gilles.jacquemod@unice.fr
Fax: +33 492 38 85 01

Jean-Pierre Damiano
Tel: +33 4 92 94 28 18

Jean-Pierre.DAMIANO@unice.fr
Fax: +33 4 92 94 28 12

PHD FORUM

The PhD Forum is a poster session hosted by the European Design and Automation Association (EDAA) 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. Submissions should be sent by Nov. 15, 2008 to:

Peter Marwedel
Tel: +49 231 755 6111

peter.marwedel@tu-dortmund.de
Fax: +49 231 755 6116

EXHIBITION THEATRE

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, research projects, or any person with opinions on future industry trends by Oct. 8, 2008 to:

Juergen Haase
Tel: +49 511 762 19698

haase@edacentrum.de
Fax: +49 511 762 19695

FRIDAY WORKSHOPS

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 sent by Sept. 7, 2008 to:

Peter Cheung
Tel: +44 207 594 6263

p.cheung@imperial.ac.uk
Fax: +44 207 581 4419

FRINGE MEETINGS

fringe meetings

There are a limited number of rooms 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:

Sue Menzies
Tel: +44 131 225 2892

sue.menzies@ec.u-net.com
Fax: +44 131 225 2925

Requests for commercial meetings will incur the standard room charges.

TRAVEL

travel assistance

Limited travel assistance is available for worthy individuals. Priority is given to students and conference contributors. See the Web site for more information.