Foreword

Dear Colleague,

We proudly present to you the Advance Programme of **DATE 2016**. DATE combines the world's favorite electronic systems design and test conference with an international exhibition for electronic design, automation and test, from system-level hardware and software implementation right down to integrated circuit design.

Out of a total of 829 paper submissions received, a large share (42%) is coming from authors in Europe, 29% of submissions are from Asia, 25% from North America, and 4% from the rest of the world. This clearly demonstrates DATE's international character, its global reach and impact.

For the 19th successive year DATE is preparing an exciting technical programme. With the help of 327 members of the Technical Program Committee who carried out more than 3000 reviews (about four per submission), finally 199 papers (24%) were selected for regular presentation and 81 additional ones (10%) for interactive presentation.

The DATE conference will be held at the International Congress Centre Dresden, Germany, from March 14 to 18, 2016.

As in the previous years, the conference will start on Monday, with **10 in-depth technical tutorials** offered from experts of the industrial and academic worlds on innovative as well as foundational topics related to design solutions, power efficiency, the internet of things, secure systems and testing and diagnosis.

The **plenary keynote speakers on Tuesday** are Luc Van den hove, President and Chief Executive Officer imec, who will present a talk on **"From the happy few to the happy many: towards an intuitive internet of things."**, and Antun Domic, Executive Vice President and General Manager, Design Group, Synopsys, to talk about **"Design will make everything different"**. On the same day, the **Executive Track** offers a series of business panels discussing hot topics. Executive speakers from companies leading the design and automation industry will address some of the complexity issues in electronics design and discuss about the advanced technology challenges and opportunities.

The main conference programme from Tuesday to Thursday includes 77 technical sessions organized in parallel tracks from the four areas
D – Design Methods and Tools
A – Application Design
T – Test and Robustness
E – Embedded Systems Software
and several special sessions on Hot Topics such as 3D ICs, In-Memory Computing, Heterogeneous Computing, New Transistor for Hardware Security, Embedded Tutorials on Analog-/Mixed Signal Verification Methods and on the Dark Silicon Problem as well as two sessions on selected EU Projects. In addition, the exciting program of DATE 2016 will include a panel on past and future challenges in EDA.

Two Special Days in the programme will focus on areas bringing new challenges to the system design community: **Automotive Systems** and **Secure Systems**. Each of the Special Days will have a full programme of keynotes, panels, tutorials and technical presentations by leading experts from academia and industry.

During the Special Day on **Wednesday** on Automotive Systems, **a keynote** is given by Patrick Leteinturier, Fellow Automotive Systems, Infineon Technologies to talk about **"The Car of the future will reinvent personal mobility"**. In addition, the Automotive Special Day will feature a number of technical talks covering areas such as advanced driver assistance systems, formal methods for automotive software, and various aspects of in-vehicle as well as long-range automotive communications. Further, a panel with speakers from Infineon, Bosch, Mentor, Yogitech and ETAS will discuss various EDA solutions for the automotive domain and ways to go forward.

On **Thursday, a keynote** in the frame of the Special Day on Secure Systems will be given by Walden C. Rhines, Chief Executive Officer and Chairman of the Board of Directors, Mentor Graphics on **"Secure silicon: enabler for the internet of things"**. The Secure Systems day starts with an embedded tutorial focusing on low level software attacks, followed by technical papers addressing HW/SW embedded platform modifications for security, and technical papers discussing novel metrics and methods to support design for security and trust. The industrial relevance is illustrated with a special session addressing security challenges from Smart Grid, Industry4.0 and automotive.

Additionally, there are numerous **Interactive Presentations** which are organized into five IP sessions.

The conference is complemented by an **exhibition** which runs for three days (Tuesday – Thursday), offering a comprehensive overview of commercial design and verification tools including vendor seminars and abundant networking possibilities with fringe meetings. This year, there are dedicated campus booths with focus on major trends shaping the future of microelectronics such as **IoT and secure systems, Ultra-Low power technologies (FDSOI), 5G wireless networks, 3D-IC integration and automotive systems**. On the campus booths major international industrial players and research institutions will jointly share their vision on those trends. With this setup the exhibition provides a unique networking opportunity and states the perfect venue for industries to meet University Professors to foster University Programme and especially for PhD Students to meet future employees.

On Friday, the last day of the DATE week, **8 full-day workshops** cover a large number of hot topics related to the design and test of electronic systems. This year, DATE will present a new edition of the successful tutorials targeting the manufacturing and utilization of secure devices, the techniques for model implementation fidelity, and the optical/photonic interconnects for computing systems. Additionally, some brand new workshops will take place on advanced MPSoC architectures and resource-awareness, emerging memory solutions novel paradigms in heterogeneous computing, and modeling techniques for aging and variability.

We wish you a successful and exciting DATE 2016, fruitful discussions in the accompanying exhibition and a memorable DATE party on Wednesday evening.

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