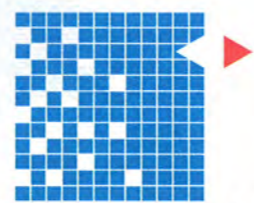


edaWorkshop13 and CATRENE DTC

www.edacentrum.de/edaworkshop

CATRENE
Design Technology Conference

jointly organized



edaWorkshop 13

Dresden (Germany), May 14 – 16, 2013



This year's edaWorkshop will take place in Dresden, Germany, from May 14 to 16, 2013. In this article we introduce the event and show parts of the program, which has been send out recently. You will have plenty of opportunity to bring your topics and results to the edaWorkshop. We are looking forward to welcome you in Dresden!

About edaWorkshop

The edaWorkshop is the premier German EDA event for the publication and discussion of application-oriented EDA research findings. The mix of representatives from industry and academic research creates ideal opportunities for a professional exchange of ideas on a scientific basis. The dialog can pave the way for industry to benefit from research results.

The edaWorkshop is also the primary platform for presenting and exchanging solution approaches and results of EDA projects funded by the BMBF (Federal Ministry of Education and Research). It promotes communication between EDA experts and public authorities, and supports the dissemination of the results of publicly-funded projects. The edaWorkshop is organized jointly by the edacentrum and BMBF and the GI/GMM/ITG RSS Steering Group for "Computer-aided Circuit and System Design".

Like in 2011, the edaWorkshop will co-locate and share a common day – including keynotes, sessions and the social event –with the annual CATRENE Design Technology Conference (CATRENE DTC), successor of the MEDEA+ DAC. The CATRENE DTC is the meeting point of Europe's scientists and experts in application-oriented design. Leading research and development in design automation has been supported by CATRENE and EUREKA member states during the past ten years. Both events are attracting European experts in industry and academia and consequently the organizers decided to co-locate the workshop and the conference.

The three days event is a balanced combination of information and communication. It not only offers a wide range of discussions on specialized subjects and EDA research projects, but also provides several net-

working opportunities. This is supported by a comprehensive poster exhibition, where demonstrations and prototypes will also be presented.

edaWorkshop and CATRENE DTC – Catalyst of EDA Research

The design of integrated circuits and systems places enormous demands on R&D engineers and design methods and tools that they use. It requires the efficient and manufacturing-aware development of safe, economical, robust and reliable systems of high complexity with very small structures (<32 nm), and the design of analog and mixed-signal circuits.

In order to stimulate EDA research activities to cope with these challenges the BMBF (Federal Ministry for Education and Research) has established a special R&D program. It is dedicated to design platforms for complex applied systems and circuits and is embedded into the BMBF research program for information and communication technology (IKT 2020). In IKT 2020 EDA-projects industry and academia join forces with the public authorities to support those areas that are vital for the competitiveness of the German industry. There are five application fields with a potentially high added value, and with considerable potential for job creation: automotive/mobility, mechanical engineering/automation, health/medicine, logistics/services and energy/environment. In many cases projects on these application fields include European-wide collaboration, they are contributing to the research program of CATRENE. IKT 2020 and CATRENE complement each other and offer a lot of synergies.

This event is a central platform for exchanging information concerning the approaches and results of projects from IKT 2020 and CATRENE as well. People involved



Maurizio Zuffada (ST Microelectronics)



Gerold Schröpfer (Coventor)



Ulrich Abelein (AUDI)



Alex Ramirez (University of Barcelona)



Raúl Camposano (Nimbic)

in the projects will be invited to present their results by means of talks and posters. At the heart of these presentations will be the relevance of the applications to topics affecting society. As a second essential part of the event, project presentations will be supplemented by a selection of peer-reviewed scientific papers on R&D results. This year the edaWorkshop is jointly organized with the annually CATRENE Design Technology Conference (DTC). Hence it provides a comprehensive overview of latest algorithms and tools,

Tuesday Keynote: Maurizio Zuffada (ST Microelectronics)

"The Industrial Deployment of the Silicon Photonics Technology"

Tuesday Keynote: Gerold Schröpfer (Coventor)

"Virtual Fabrication for Advanced CMOS"

Tuesday Keynote: Hans-Jürgen Brand (Globalfoundries)

"Design Challenges for Advanced CMOS"

Among the participants of the concluding panel discussion of the first day on „Closing the Gap Between Technology and Application Needs " are R. Camposano (Nimbic), T. Hötzel (ELMOS), W. Nebel (OFFIS) M. Barnasconi (NXP), A. Graupner (ZMDi) and D. Valtchev (ProSyst).

emerging technologies, key CATRENE and IKT 2020 projects, and advanced research in application-oriented SoC design automation in Europe. The joint event will be organized with a CATRENE DTC day (May 14), an edaWorkshop day (May 16), and a joint day common to both (May 15).

The event features 11 sessions with a number of different topics and more than 30 presentations including the six keynotes on the right.

Wednesday Keynote: Ulrich Abelein (AUDI),

"Quality and Innovation – Drivers for Modern Automotive Electronics"

Wednesday Keynote: Alex Ramirez (University of Barcelona)

"Building Supercomputers from Mobile Processors"

Thursday Keynote: Raúl Camposano (Nimbic)

"Electromagnetic Simulation for Electronic Systems"

Registration

More information especially on the registration is available at www.edacentrum.de/edaworkshop/. Registration deadline is on May 6, 2013.

System Level and Hardware/Software Design of Embedded Systems

- Specification- and Model-based Design
- Architectural Synthesis and Optimization
- Advanced Architectures
- Transaction Level Modeling and Simulation
- Development and Optimization of Hardware-dependent Software

- 3D Design, Packaging and SiP
- Design for Integration of Multi-Domain components
- Energy Efficient Design
- Analysis and Optimization of Performance and Power
- Cyber-Physical Systems
- Design for New Technologies
- Design for Specific Applications

More than Moore

- Design Automation for Analog Circuits
- Synthesis, Simulation and Verification
- RF Circuits, Smart Power Circuits
- Model Generation
- Parasitics and Interconnects
- Signal Integrity and EMC

Analog- and Mixed-Signal Design

Design and Verification

- Formal Verification
- Statistical Timing Analysis and Variability
- Low Power Design, Analysis and Optimization
- Logic- and Technology-dependent Synthesis for Nanometer Circuits
- Physical Design and Verification
- Simulation Acceleration and Rapid Prototyping
- Productivity and Efficiency of Design

- Design for Reliability and Robustness
- Modeling of Aging Effects
- Design Centering and Yield Optimization
- Fault-tolerant and Self-healing System Design
- System Test and Production Test
- Delay Test and Defect-oriented Test
- BIST and Design for Testability
- Test Generation, Diagnosis and Fault Modeling
- Test of Regular Structures

Reliability, Robustness and Test

Figure 3.18: edaWorkshop13 and CATRENE DTC Topics

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