



Forum on specification & Design Languages



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- **Location**

The symposium will take place at the Faculty Club of the TUM Institute for Advanced Study (Conference Venue). Further information: <http://www.ias.tum.de>

- **Welcome Reception**

We kindly invite all participants to the Welcome Reception at the Faculty Club of the TUM Institute for Advanced Study (Conference Venue).

- **Social Event**

On Tuesday, September 11th at 17:15, we will board a bus at the conference venue at the TUM Institute for Advanced Study and then have a sight-seeing tour through Munich with an English-speaking guide. After the tour, at 19:00, we will have a Bavarian dinner at the Augustiner Keller: <https://www.augustinerkeller.de>



IFIP WORKING GROUP 10.5
Design and Engineering of Electronic Systems



IEEE



IEEE Council on Electronic Design Automation



UNIVERSITÀ
di VERONA
Dipartimento
di INFORMATICA



10.09 11.09 12.09
MONDAY **TUESDAY** **WEDNESDAY**

8:30	Registration	Keynote 2	Keynote 3
9:00	Tutorial 1a	Session 2	Tutorial 2
9:30			
10:00	Coffee Break	Coffee Break	Coffee Break
10:30	Tutorial 1b	Panel FMI	Session 5
11:00			
11:30	Lunch	Lunch	Lunch
12:00			
12:30	Lunch	Lunch	Lunch
13:00			
13:30	Opening Remarks	Session 3	Session 6
14:00	Keynote 1		
14:30	Coffee Break	Coffee Break	Coffee Break
15:00			
15:30	Session 1	Session 4	Session 7
16:00			
16:30	Panel Industry 4.0	Transfer to Social Event	Closing Remarks
17:00			
17:30	Welcome Reception	Social Event	
18:00			
18:30			

- **Hands-on tutorials:**

1. Heterogeneous System Level Modelling Techniques for Fast Virtual Prototypes
2. FPGA Design with Clash



September 10-12, 2018
Munich, Germany

Final
Program





Forum on specification & Design Languages

September 10-12 | Munich, Germany

Monday 10

- 08:30 - 09:00 **Registration**
- 09:00 - 10:30 **Hands-on Tutorial 1a**
 - *Heterogeneous System Level Modelling Techniques for Fast Virtual Prototypes (Part 1)*
 - (Speakers: Karsten Einwich and Thomas Arndt, COSEDA)
- 10:30 - 11:00 **Coffee break**
- 11:00 - 12:30 **Hands-on Tutorial 1b**
 - *Heterogeneous System Level Modelling Techniques for Fast Virtual Prototypes (Part 2)*
 - (Speakers: Karsten Einwich and Thomas Arndt, COSEDA)
- 12:30 - 13:30 **Lunch**
- 13:30 - 14:00 **Opening remarks**
- 14:00 - 15:00 **Keynote 1**
 - *On the Limits of Standard-compliant Parallel Simulation of the IEEE SystemC Language*
 - (Speaker: Rainer Doerner, University of California, Irvine)
- 15:00 - 15:30 **Coffee break**
- 15:30 - 17:00 **Session 1**
 - *Automatic Design of Microfluidic Devices*
 - (Chair: Michael Wandler)
 - 1.1 Automatic Design of Microfluidic Devices: An Overview of Platforms and Corresponding Design Tasks
 - Robert Wile, Bing Li, Rolf Drechsler and Ulf Schlichtmann
- 17:00 - 18:00 **Panel 1**
 - *Panel Industry 4.0: Challenges and the Future*
 - (Moderator: Samarjit Chakraborty, TUM)
 - Birgit Vogel-Heuser, TUM
 - Matthias Althoff, TUM
 - Majid Zamani, TUM
 - Robert Diemer, ASC Sensors
 - Oscar Gaete, Terratrace

- ## Tuesday 11
- 08:30 - 09:30 **Keynote 2**
 - *Blech - a safe synchronous language for embedded real-time programming*
 - (Speaker: Franz-Josef Grosch, Robert Bosch GmbH)
 - 09:30 - 11:00 **Session 2**
 - *Logic and Mathematics behind Design Automation*
 - (Chair: Daniel Grosse)
 - 2.1 Blech, imperative synchronous programming!
 - Friedrich Gretz and Franz-Josef Grosch
 - 2.2 Scade 6: from a Kahn Semantics to a Kahn Implementation for Multicore
 - Jean-Louis Colajo, Bruno Pagano, Cedric Pasteur and Marc Pouzet
 - 2.3 Preserving functional correctness of cyber-physical system controllers: from model to code
 - Guillaume Davy, Christophe Ganton, Pierre-Loic Garoche, Pierre Roux and Xavier Thiroux
 - 11:00 - 11:30 **Coffee break**
 - 11:30 - 12:30 **Panel 2**
 - *Panel/FMI*
 - (Moderator: Franco Fummi, UNIVR)
 - Andreas Jungmann, QTRonic
 - David Broman, KTH
 - Peter Schneider, Fraunhofer
 - 12:30 - 13:30 **Lunch**
 - 13:30 - 15:00 **Session 3**
 - *Modeling and Testing of CPS*
 - (Chair: Reinhard von Hanxleden)
 - 3.1 Cyber-Physical System for industrial control automation based on the holonic approach and the IEC 61499 standard
 - Luis Alberto Cruz Salazar, Jaime H. Garrajal, Oscar A. Rojas A. and Edgar Charon
 - 3.2 Sequential Behavioral Modeling for Scalable IoT Devices and Systems*
 - Ege Korkan, Sebastian Käbisch, Mathias Kovatsch and Sebastian Steinhorst
 - 3.3 Automated Testing for Cyber-physical Systems: From Scenarios to Executable Tests
 - Martial Chabot, Laurence Pierre and Alexandre Nabais-Moreno

- ## Wednesday 12
- 08:30 - 09:30 **Keynote 3**
 - *Refinement types for system design*
 - (Speaker: Jean-Pierre Talpin, INRIA, France)
 - 09:30 - 11:00 **Hands-on Tutorial 2**
 - *FPGA Design with CLASH*
 - (Speaker: Martin Bastiaan, QBayLogic)
 - 11:00 - 11:30 **Coffee break**
 - 11:30 - 13:00 **Session 5**
 - *Verification and Robustness Methodologies*
 - (Chair: Martin Radezki)
 - 5.1 Dynamic Inside-Out Verification Using Inverse Transactions in TLM
 - Tobias Strauch
 - 5.2 Symbolic Simulation of SystemC AMS -- Without Yet Another Compiler
 - Camra Zivkovic and Christoph Grimm
 - 5.3 A New Ageing-Aware Approach via Path Isolation
 - Yue Lu, Shengyu Duan and Tom Kazmierksi
 - 13:00 - 14:00 **Lunch**
 - 14:00 - 15:30 **Session 6**
 - *Embedded Software for the IoT*
 - (Chair: Rainer Doerner)
 - 6.1 Automated Redirection of Hardware Accesses for Host-Compiled Software Simulation
 - Rafael Stahl, Daniel Mueller-Gritschneider and Ulf Schlichtmann
 - 6.2 Extensible and Configurable RISC-V based Virtual Prototype
 - Vladimir Herdt, Daniel Grosse, Hoang M. Le and Rolf Drechsler
 - 6.3 HW/SW Co-Equivalence Checking for Firmware Optimization
 - Michael Schwarz, Dominik Stoffel, Wolfgang Kunz
 - 6.4 Using SysML for Modelling and Code Generation for Smart Sensor ASICs
 - Aljoshka Kirchner, Jan-Hendrik Oetjens and Oliver Bringmann
 - 15:30 - 16:00 **Coffee break**
 - 16:00 - 17:30 **Session 7**
 - *Cross-layer System Design and Verification*
 - (Chair: Christoph Grimm)
 - 7.1 Simulation-based Holistic Functional Safety Assessment for Networked Cyber-Physical Systems
 - Enrico Fraccaroli, Davide Quaglia and Franco Fummi
 - 7.2 Transaction-level Functional Mockup Units for Cyber-Physical Virtual Platforms*
 - Stefano Centomo, Michèle Lara and Franco Fummi
 - 7.3 SmaCoNat: Smart Contracts in Natural Language
 - Emanuel Regnath and Sebastian Steinhorst
 - 17:30 - 18:00 **Closing remarks**



Most up-to-date information
<http://www.fdl-conference.org>

WIFI SSID: @BayernWLAN

(please click "Verbinden/Connect" on browser access page)

- 15:00 - 15:30 **Coffee break**
- 15:30 - 17:00 **Session 4**
 - *Event-driven Modeling and Simulation*
 - (Chair: Daniel Mueller-Gritschneider)
 - 4.1 Time in SCharts*
 - Alexander Schulz-Rosengarten, Reinhard von Hanxleden, Frédéric Mallet, Robert de Simone and Julien Deanton
 - 4.2 SystemC Coding Guideline for Faster Out-of-order Parallel Discrete Event Simulation
 - Zhongqi Cheng, Tim Schmidt and Rainer Doerner
 - 4.3 From Low-Power to No-Power: Adaptive Clocking for Event-Driven Systems
 - Georg Glaeser, Benjamin Saft, Dominik Wrana, Athanasios Gatzastras and Eckhard Hennig
- 17:00 - 22:00 **Social Event**

- 15:30 - 16:00 **Coffee break**
- 16:00 - 17:30 **Session 7**
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* Best paper award nomination