

# Programme



7th International Conference on  
**integrated Formal Methods**  
Düsseldorf, Germany, 16 - 19 February, 2009  
[www.formal-methods.de/ifm2009](http://www.formal-methods.de/ifm2009)

## Monday, 16. February

08:30 - 9:30 Registration

9:00 - 10:30 **Tutorial** on Contract Specification and Checking

Shuvendu Lahiri and Francesco Logozzo, Microsoft Research

9:30 - 10:30 Session 1 **FMSOA**: SOA and Fault-Tolerance

- REST: SOA without Contracts? Stefan Tilkov, innoQ
- Formal Modelling and Analysis of SOA-based Business Information Applications with Fault Tolerant Middleware John Fitzgerald/Jeremy Bryans, Newcastle

9:30 - 10:30 Session 1 **IMFMT** : EventB, Tools and Integration 1

- FromBPEL to Event-B, Idir Ait-Sadoune and Yamine Ait-Ameur, FR
- Semantic Embedding of Petri Nets into Event-B, Christian Attiogbé, FR

10:30 - 11:00: Coffee

11:00 - 12:30 **Tutorial** on Contract Specification and Checking

11:00 -12:30 Session 2 **FMSOA**: Reo and Pi-Calculus

- From compliant business process specifications to code Natallia Kokash, CWI
- Using Reo for Composition of Web Services Farhad Arbab, CWI
- Dependable Composition of Web Services and pi-calculus Manuel Mazzara, University of Newcastle

11:00 -12:30 Session 2 **IMFMT**: EventB, Tools and Integration

- Automatic Generation of C from Event-B, Stephen Wright, UK
- Abstraction Aided Model-Checking for Validation of Event-B, Shin nakajima, Hironobu Kuruma, Japan

- AltaRica and Event-B Models for Operational Safety Analysis; Jean-Charles Chaudemar, Eric Bensana, Charles Castel, and Christel Seguin, FR

12:30-14:00 Lunch

14:00 - 15:30 **Tutorial** on Contract Specification and Checking

14:00 - 15:00 Session 3 **FMSOA**: Alternate Approaches

- ProTest - property based testing for Erlang John Derrick, University of Sheffield
- Verification and Certification using rewriting logic Santiago Escobar, University of Valencia

14:00 - 15:30 Session 3 **IMFMT**: EventB, Refinement and Integration

- Pattern Based Integration of Time applied to the 2-Slots Simpson Algorithm Joris Rehm, FR
- Class and State machine Refinement in UML-B, Mar Yah Said, Michael Butler, Colin Snook, UK
- A Refinement Approach for Proving Distributed Algorithms: Examples of Spanning Tree Problems, M. Tounsi, A. Hadj Kacem, M. Mosbah and D. Mery

15:00 - 16:00: Coffee

15:30 - 17:00 **Tutorial** on Contract Specification and Checking

15:30 - 17:00 Session 4 **FMSOA**: Event-B

- Formal Modeling for Service-based Process Integration Andreas Roth, SAP
- Specification, Partitioning, and Composition Techniques for Web Application in the Context of Event-B Abdolbaghi Rezazadeh, Univ. Southampton
- Adding domain-specific constructs to (Event) B for developing and reasoning about grid applications Pontus Bostrom, University of Abo

17:00 - Discussion, Panel

20:00 - PC Dinner at FFFZ

## Tuesday, 17. February

09:00: Opening

09:00-10:00: Invited speaker (Session chair: Martin Fränzle)

Byron Cook: Taming the unbounded for hardware synthesis

10:00-10:30: Coffee

10:30 -12:00: Verification I (Session chair: Martin Fränzle)

- Zijiang Yang, Bashar Al-Rawi, Karem Sakallah, Xiaowan Huang, Scott Smolka, Radu Grosu.  
Dynamic Path Reduction for Software Model Checking
- Nikola Benes, Lubos Brim, Ivana Cerna, Jiri Sochor, Pavlina Varekova, Barbora Zimmerova.  
Partial Order Reduction for State/Event LTL
- Astrid Rakow.  
Decompositional Petri Net Reductions

12:00-14:00 Lunch

14:00-15:30: Time & Probability (Session chair: Stephan Merz)

- Jan Stöcker, Frederic Lang, Hubert Garavel.  
Parallel Processes with Real-Time and Data: The ATLANTIF Intermediate Format
- Sebastian Voss, Maria Sorea.  
SAL-Based Symbolic Scheduling in Time-Triggered Networks
- Osman Hasan, Naeem Abbasi, Sofiene Tahar.  
Formal Probabilistic Analysis of Stuck-at Faults in Reconfigurable Memory Arrays

15:30 - 16:00: Coffee

16:00-17:30: Process Algebras (Session chair: Kenji Taguchi)

- Peter Wong, Jeremy Gibbons.  
Property Specifications for Workflow Modelling
- Gwen Salaün, Tevfik Bultan.  
Realizability of Choreographies using Process Algebra Encodings
- Robert Colvin, Ian Hayes.  
CSP with Hierarchical State

18:00 - 19:30 Bus tour through Düsseldorf

19:30-22:30: Conference Dinner at the Rheinturm

22:30- Bus to FFFZ

## Wednesday, 18. February

09:00-10:00: Invited speaker (Session chair: John Derrick)

Michael Butler: Decomposition structures for Event-B

10:00-10:30: Coffee

10:30-12:00: Refinement (Session chair: Stefan Hallerstede)

- Steve Schneider, Helen Treharne.  
A new refinement strategy for CSP||B: changing system interfaces consistently
- Eerke Boiten, John Derrick.  
Modelling divergence in Relational Concurrent Refinement
- Frank Zeyda, Ana Cavalcanti.  
Mechanised Translation of Control Law Diagrams into Circus

12:00-14:00: Lunch

14:00-15:30: Verification II (Session chair: Dominique Mery)

- Abigail Parisaca Vargas, Ana G. Garis, S. Lizeth Tapia Tarifa, Chris George.  
Model checking LTL formulae in RAISE with FDR
- Thang Bui, Albert Nymeyer.  
Formal Verification Based on Guided Random Walks
- Benjamin Weiss.  
Predicate Abstraction in a Program Logic Calculus

15:30 - 16:00: Coffee

16:00 - 17:30: Verification III (Session chair: Helen Treharne)

- Ralf Laemmel, Vadim Zaytsev.  
An Introduction to Grammar Convergence
- Zarrin Langari, Richard Treffer.  
Application of Graph Transformation in Verification of Dynamic Systems
- Jeremy Milhau, Benoit Fraikin, Marc Frappier.  
Automatic Generation of Error Messages for the Symbolic Execution of EB3 Process Expressions

19:00-: Evening excursion to Aquazoo

## Thursday, 19. February

09:00-10:00: Invited speaker (Session chair: Michael Leuschel)

David Basin: Developing Topology Discovery in Event-B

10:00-10:30: Coffee

10:30-12:00: Contracts & Inheritance (Session chair: Heike Wehrheim)

- Gordon Pace, Gerardo Schneider.  
Challenges in the Specification of Full Contracts
- Jordi Cabot, Robert Claris, Daniel Riera.  
Verifying UML/OCL Operation Contracts
- Johan Dovland, Einar Broch Johnsen, Olaf Owe, Martin Steffen.  
Incremental Reasoning for Multiple Inheritance

12:00: Closing Session

12:15-14:00: Lunch