Programme

7th International Conference on
integrated Formal Methods
Düsseldorf, Germany, 16 - 19 February, 2009
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

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 Salaïm, 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 Trefler.
     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