ETAPS 2006

March 25 – April 2, Vienna, Austria

European Joint Conferences on
Theory And Practice of Software
2006

Main Conferences
CC ESOP FASE
FOSSACS TACAS

Tutorials

Workshops
ACCAT AVIS CMCS COCV DCC
EAAI FESCA FRCSS GT-VMT
LDTA MBT QAPL SC SLAP
SPIN TERMGRAPH WITS WRLA

Programme Guide

9th European Joint Conferences on Theory and Practice of Software

http://www.complang.tuwien.ac.at/etaps06/

Contents

Welcome

Welcome to ETAPS 2006

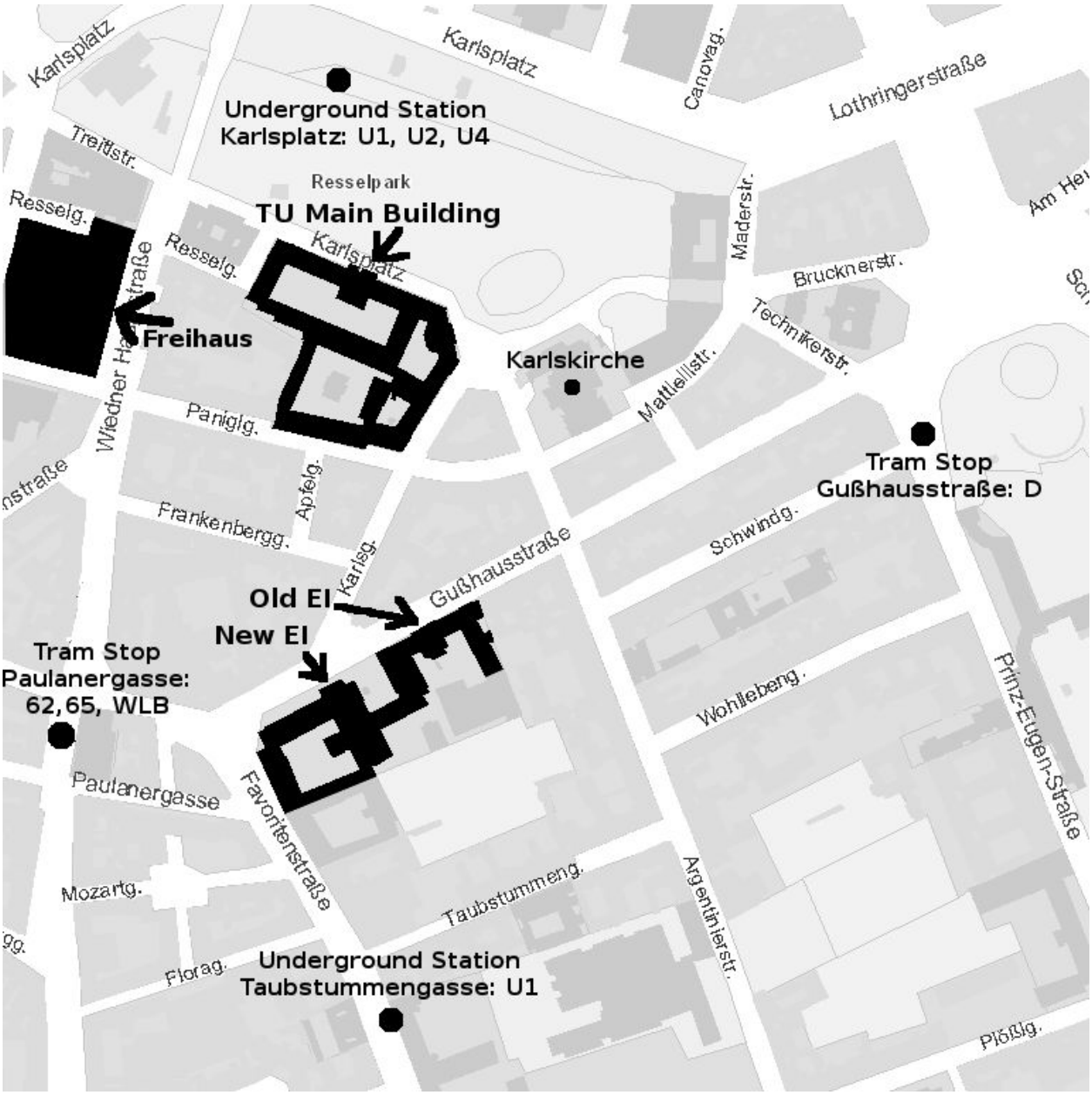
The European Joint Conferences on Theory and Practice of Software (ETAPS) is the primary European forum for academic and industrial researchers working on topics relating to Software Science. ETAPS, established in 1998, is a confederation of five main annual conferences, accompanied by satellite workshops and other events. ETAPS 2006 is the ninth event in the series.

Welcome to Vienna

Vienna is one of the most beautiful cities in Europe. For many centuries, it has been the capital of the Austrian-Hungarian empire, giving us jewels like the Hofburg and the Schönbrunn and Belvedere palaces. Vienna is also the music capital of the world. More famous composers have lived here than in any other city. Vienna offers exciting concerts, fantastic musicals, and impressive exhibitions. Enjoy the delights of Viennese cuisine, typical Viennese “Gemütlichkeit” at cafés and Heurigens, and green Vienna in the city’s many parks.

Locations

ETAPS 2006 will be held at the Vienna University of Technology (TU) in the 4th district of Vienna close to the city center.

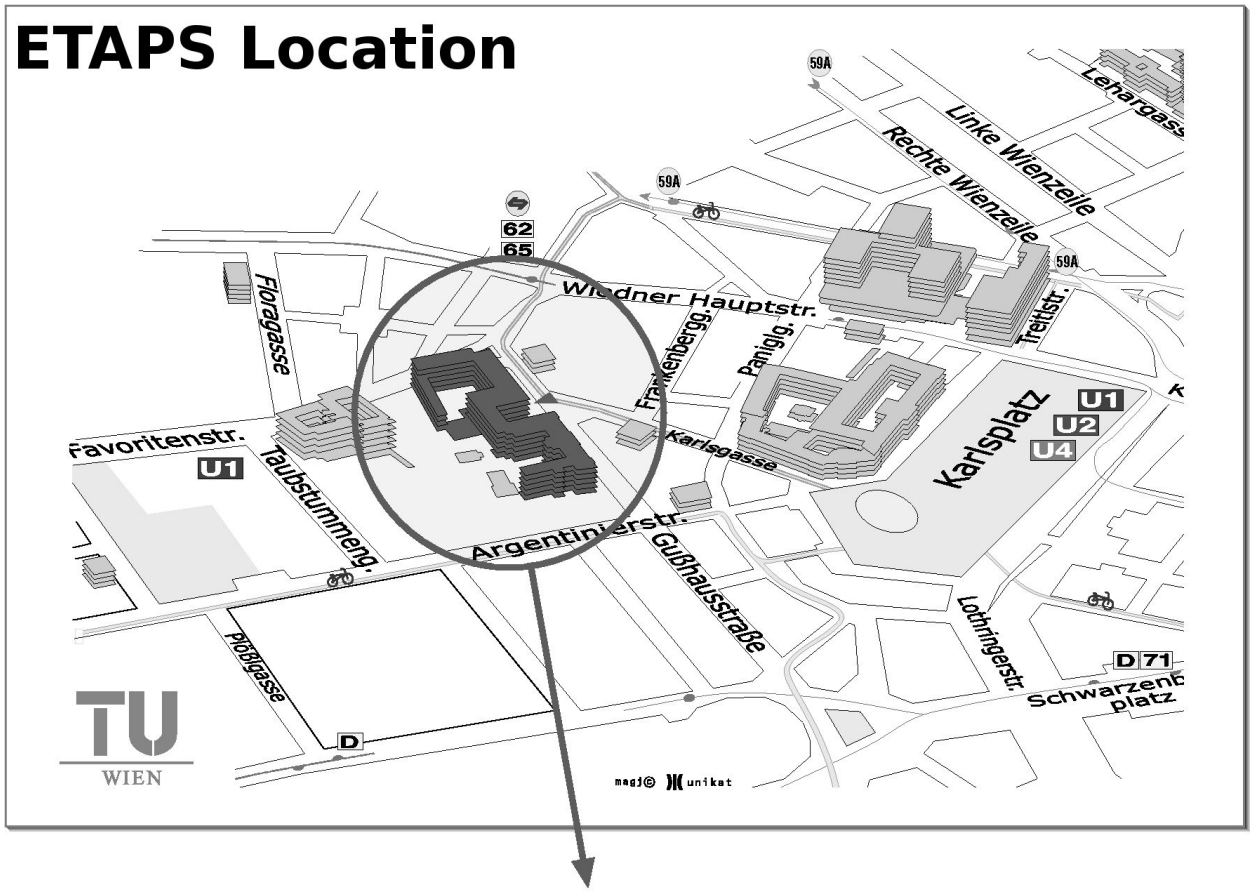


Lecture Rooms and Registration Desk

All sessions of the main conferences, workshops, and tutorials are held in the “Elektrotechnisches Institut” (EI), Gußhausstraße 27–29, 1040 Vienna. The EI consists of two buildings, an old and a new one standing side by side.

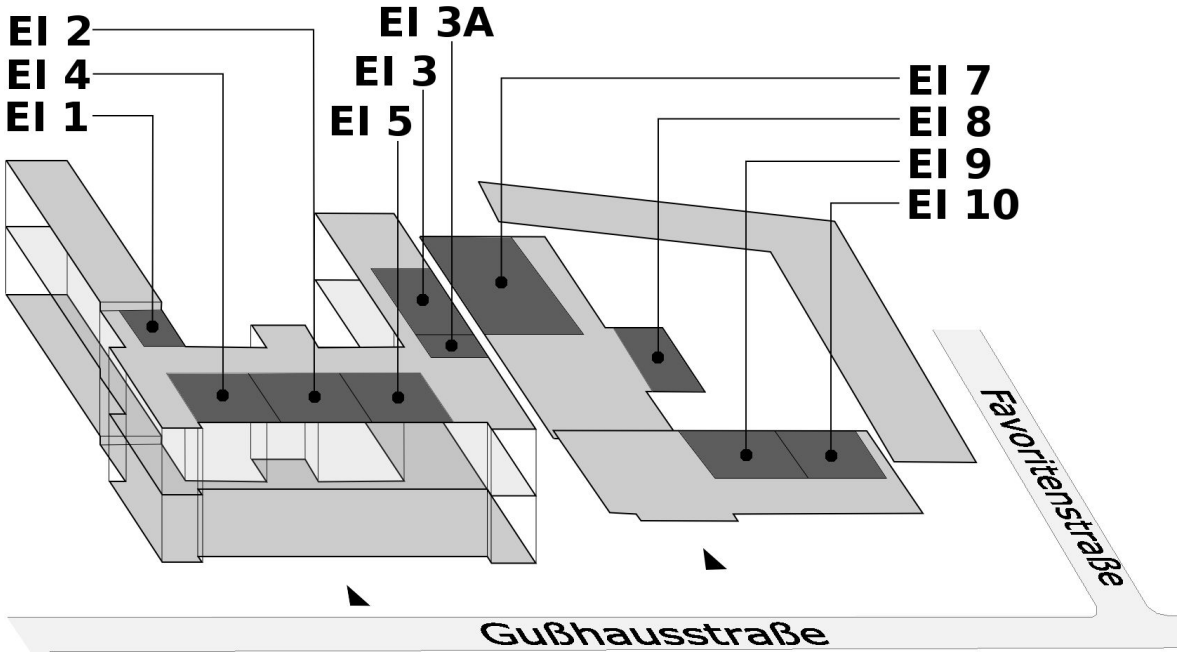
From Monday to Friday we use the lecture rooms EI 7 to EI 10 located at the ground floor of the New EI and the “Kontaktraum” at the uppermost floor. Invited talks of the main conferences are given in the EI 7. At the weekends we additionally use the rooms EI 1 to EI 5 at the second upper floor in the Old EI for workshops and tutorials.

You can find the *registration desk* and *coffee area* in front of the EI 7 in the New EI. Registration is possible every day of ETAPS 2006 (March 25 to April 2) starting 8 am.



Old EI
2nd Upper Floor

New EI
Ground Floor



Lunch

On Saturday and Sunday (both weekends) lunch is in the Mensa at the 1st upper floor in the Freihaus building (Wiedner Hauptstraße 8–10, 1040 Wien), red area. The buffet will be open from 12:30 to 14:00.

Lunch is not provided from Monday to Friday since there are many restaurants in the area. See page 61 for a brief restaurant guide.

WLAN and Internet Access

The conference venue is covered by a wireless local area network. You get information about network settings and the needed user name and password at the registration desk. Furthermore, you can use computer terminals in the rooms F 0308 / 0313 / 0317 (also known as GH1, GH2, and GH3) at the 3rd upper floor in the Old EI.

Public Transport in Vienna

The ETAPS location is conveniently close to the underground stations Karlsplatz (U1, U2, and U4) and Taubstummengasse (U1) giving fast connections to most places. Close tram stops are Paulanergasse (lines 62, 65, and Badner Bahn) and Gußhausstraße (line D).

A single ticket is valid for travelling one way in one zone, where the whole city is a single zone. You can change to different lines in the course, but you must not interrupt your journey. Single tickets can be purchased at a price of 1.50 Euro at ticket machines in underground stations or at points of advance sale. You can purchase tickets on board of busses and trams at an increased rate of two Euro. Tickets must be validated at the begin of a journey. To validate your ticket stamp the ticket at the blue machines located at the entrance of underground stations as well as on buses and trams. Tickets bought directly from the tram or bus driver (and some tickets from ticket machines in underground stations) are automatically validated and need not be stamped. Apart from single tickets there are passes for longer periods of time. Passes are available for 24 hours and 72 hours (beginning at the time when stamped), or as weekly, monthly or annual passes.

From and To the Airport

The Vienna International Airport (VIE) in Schwechat is about 20 km away in the south-east of Vienna. Train lines S7 and S2 connect the city center with the airport. You need a single ticket for two zones (3 Euro) between the airport and any place in the city. To go from the airport to the ETAPS location you may change at Landstraße/Wien Mitte to U4 (direction Hütteldorf) until Karlsplatz. The City Airport Train (CAT) is a more comfortable line connecting the airport with Wien Mitte (8 to 10 Euro one way). Furthermore, there are bus services to and from several places in the city. A taxi fare is at around 25 Euro.

Parking

At the ETAPS location (and everywhere around the city center) long-term parking is difficult. The entire area is a short-term parking zone from Monday to Friday from 9 am to 8 pm. You must fill in a prepaid parking voucher (Parkschein) for a maximum duration of 1.5 hours. On weekends and during the night parking is free in many streets. There are convenient Park & Ride facilities in the outer districts of Vienna.

Main Conferences

CC 2006 – International Conference on Compiler Construction

CC is concerned with processing of programs in the most general sense: analyzing or transforming input which represents some form of description of how a system operates, and including traditional compiler construction as a special case.

Topics of interest include, but are not limited to:

- Compilation and interpretation techniques, including program representation and analysis, code generation and code optimization
- Run-time techniques, including memory management and dynamic and just-in-time compilation
- Programming tools, from refactoring editors to checkers to compilers to virtual machines to debuggers
- Techniques for specific domains, such as secure, distributed, embedded, mobile, or low power code; or hardware
- Design of novel language constructs and their implementation
- Any analogue of such above items in a system not traditionally viewed as compiler/interpreter/debugger

Programme Committee: Koen de Bosschere (B), Radhia Cousot (F), Arie van Deursen (NL), Michael Ernst (USA), Sergei Gorlatch (D), Chris Hankin (UK), Jens Knoop (A), Shriram Krishnamurthi (USA), K. Rustan M. Leino (USA), Oege de Moor (UK), Greg Morrisett (USA), Alan Mycroft (UK), co-chair, Morten Rhiger (DK), Barbara Ryder (USA), Frank Tip (USA), Des Watson (UK), Kwangkeun Yi (ROK), Andreas Zeller (D), co-chair.

Invited Speaker: George Necula, University of California, Berkeley, USA

ESOP 2006 – European Symposium on Programming

ESOP is an annual conference devoted to fundamental issues in the specification, analysis, and implementation of programming languages and systems. This includes:

- Design of programming languages and calculi and their formal properties
- Techniques, methods, and tools for their implementation
- Exploitation of programming styles within different programming paradigms
- Automatic and manual methods for generating and reasoning about programs
- The design and invention of systems and tools to assist in exploitation of the languages

Contributions bridging the gap between theory and practice are particularly welcome. Topics traditionally covered by ESOP include programming paradigms and their integration, semantics, calculi of computation, security and privacy, advanced type systems, program analysis, program transformation, and practical algorithms based on theoretical developments.

Programme Committee: Anindya Banerjee (USA), Anton Ertl (A), David Warren (USA), Didier Rémy (F), Erik Meijer (USA), Eugenio Moggi (I), German Vidal (E), Giuseppe Castagna (F), Joe Wells (UK), Konstantin Sagonas (S), Michele Bugliesi (I), Mooly Sagiv (IL), Nick Benton (UK), Peter O'Hearn (UK), Peter Sestoft (DK), chair, Peter Stuckey (AUS), Peter Thiemann (D), Pieter Hartel (NL), Reinhard Wilhelm (D), Stephanie Weirich (USA), Susan Eisenbach (UK), Todd Veldhuizen (S), Ulrik Pagh Schultz (DK).

Invited Speaker: Sophia Drossopoulou, Imperial College London, UK

FASE 2006 – Fundamental Approaches to Software Engineering

The information society is increasingly reliant on software at all levels. Hence, the ability to produce software of high quality at low cost is crucial to technological and social progresses. An intrinsic characteristic of software addressing real-world applications is the need to evolve in order to adjust to new or changing requirements. Maintaining quality while embracing change is one of the main challenges of software engineering.

Software engineers have at their disposal theories, languages, methods, and tools that derive from both systematic research of the academic community and the experience of practitioners. It is one of the roles of software engineering as a scientific discipline to create a feedback cycle between academia and industry by proposing new solutions and identifying those that work in practical contexts.

Submissions may address both academic research and industrial experiences, but they must clearly identify the problem and the envisaged solution. Particularly, contributions are encouraged that aim at a combination of conceptual and methodological aspects with their formal foundation and tool support.

A non-exclusive list of topics of interest is given below.

- Requirements engineering: capture, consistency, and change management of requirements towards software
- Software architectures: description and analysis of the architecture of individual systems or classes of applications
- Implementation concepts and technologies: distributed, mobile, and embedded applications, service-oriented architectures and Web Services
- Software processes: support for iterative, agile, and open source development
- Model-driven development: design and semantics of semi-formal visual languages, consistency and transformation of models
- Software evolution: refactoring, reverse and re-engineering, configuration management and architectural change, or aspect-orientation
- Software quality: validation and verification of software using theorem proving, testing, analysis, metrics or visualization techniques
- Application of formal methods to software development

Programme Committee: Jan Øyvind Aagedal (N), Luciano Baresi (I), co-chair, Jean Bezivin (F), Victor Braberman (RA), Maura Cerioli (I), Matt Dwyer (USA), Anthony Finkelstein (UK), Harald Gall (CH), Alan Hartman (IL), Reiko Heckel (UK), co-chair, Mehdi Jazayeri (A), Antonia Lopes (P), Sandro Morasca (I), András Pataricza (H), Mauro Pezzè (I), Arend Rensink (NL), Leila Ribeiro (BR), Andy Schürr (D), Gabi Täntzer (D), Tetsuo Tamai (J), Sebastian Uchitel (UK), Heike Wehrheim (D), Michel Wermelinger (UK), Alex Wolf (USA), Michal Young (USA).

Invited Speaker: Francisco Curbera, IBM, USA

FOSSACS 2006 – Foundations of Software Science and Computation Structures

FOSSACS seeks original papers on foundational research with a clear significance for software science. The conference invites submissions on theories and methods to support the analysis, integration, synthesis, transformation, and verification of programs and software systems.

Topics covered include, but are not limited to:

- Algebraic models
- Automata and language theory
- Behavioural equivalences
- Categorical models
- Computation processes over discrete and continuous data
- Infinite state systems
- Computation structures
- Logics of programs
- Modal, spatial, and temporal logics
- Models of concurrent, reactive, distributed, and mobile systems
- Process algebras and calculi
- Semantics of programming languages
- Software specification and refinement
- Type systems and type theory

Programme Committee: Luca Aceto (IS and DK), co-chair, Roberto Amadio (F), Bruno Blanchet (F), Gerard Boudol (F), Nadia Busi (I), Luca Cardelli (UK), Flavio Corradini (I), Luca de Alfaro (USA), Zoltán Ésik (H), Tom Henzinger (CH), Anna Ingólfsdóttir (IS and DK), co-chair, Bengt Jonsson (S), Dexter Kozen (USA), Antonin Kucera (CZ), Orna Kupferman (IL), Marta Kwiatkowska (UK), Catuscia Palamidessi (F), Erik Poll (NL), Alban Ponse (NL), Edmund Robinson (UK), Vladimiro Sassone (UK), Steve Schneider (UK), Igor Walukiewicz (F), Thomas Wilke (D).

Invited Speaker: Wan Fokkink, Vrije Universiteit Amsterdam, NL

TACAS 2006 – Tools and Algorithms for the Construction and Analysis of Systems

TACAS is a forum for researchers, developers and users interested in rigorously based tools for the construction and analysis of systems. The conference serves to bridge the gaps between different communities — including but not limited to those devoted to formal methods, software and hardware verification, static analysis, programming languages, software engineering, real-time systems, and communications protocols — that share common interests in, and techniques for, tool development. In particular, by providing a venue for the discussion of common problems, heuristics, algorithms, data structures and methodologies, TACAS aims to support researchers in their quest to improve the utility, reliability, flexibility and efficiency of tools for building systems.

Tool descriptions and case studies with a conceptual message and theoretical papers with a clear link to tool construction are all encouraged. The specific topics covered by the conference include, but are not limited to, the following:

- Specification and verification techniques for finite and infinite state systems
- Software and hardware verification
- Theorem-proving and model-checking
- System construction and transformation techniques
- Static and run-time analysis
- Abstract interpretation
- Compositional and refinement-based methodologies
- Testing and test-case generation
- Analytical techniques for secure, real-time, hybrid, safety-critical or dependable systems
- Integration of formal methods and static analysis in high-level hardware design
- Tool environments and tool architectures
- Applications and case studies

As TACAS addresses a heterogeneous audience, potential authors are strongly encouraged to write about their ideas in general and jargon-independent, rather than application- and domain-specific, terms. Authors reporting on tools or case studies are strongly encouraged to indicate how their experimental results can be reproduced and confirmed independently.

Programme Committee: Armin Biere (A), Ed Brinksma (NL), Gianfranco Ciardo (USA), Alessandro Cimatti (I), Rance Cleaveland (USA), Hubert Garavel (F), Andy Gordon (UK), Orna Grumberg (IL), Klaus Havelund (USA), Holger Hermanns (D), co-chair, Thierry Jeron (F), tool chair, Kim Larsen (DK), Ken McMillan (USA), Peter Niebert (F), Jens Palsberg (USA), co-chair, Anna Phillipou (CY), Jaco van de Pol (NL), John Rushby (USA), David Sands (S), Helmut Seidl (D), Bernhard Steffen (D), Martin Steffen (D), Zhendong Su (USA), Wang Yi (S), Lenore Zuck (USA).

Invited Speaker: Somesh Jha, University of Wisconsin, Madison, USA

Main Conferences Programme

Programme of Monday, March 27

08:45 – 10:00 SESSION 1

Welcome

ESOP — Invited Talk (chair: Peter Sestoft) EI 7

Types for Hierarchic Shapes
Sophia Drossopoulou (Imperial College London, UK)

10:00 – 10:30 COFFEE

10:30 – 12:00 SESSION 2

ESOP — Types for Implementations (chair: Peter Sestoft) EI 7

Linear Regions Are All You Need
Matthew Fluet (Cornell Univ., USA), Greg Morrisett, and Amal Ahmed (Harvard Univ., USA)

Type-Based Amortised Heap-Space Analysis
Martin Hofmann (LMU München, D) and Steffen Jost (Univ. of St. Andrews, UK)

Haskell is Not Not ML
Ben Rudiak-Gould, Alan Mycroft (Univ. of Cambridge, UK), and Simon Peyton Jones (Microsoft Research, UK)

FASE — Distributed Systems (chair: Reiko Heckel) EI 9

GPSL: A Programming Language for Service Implementation
Dominic Cooney, Marlon Dumas, and Paul Roe (Queensland Univ. of Technology, AUS)

A Formal Approach to Event-Based Architectures
José Luiz Fiadeiro (Univ. of Leicester, UK) and Antónia Lopes (Univ. of Lisbon, P)

Engineering Self-protection for Autonomous Systems
Manuel Koch and Karl Pauls (Freie Univ. Berlin, D)

12:00 – 14:00 LUNCH

14:00 – 16:00 SESSION 3

ESOP — Proofs and Types (chair: Didier Rémy) EI 10

Coinductive Big-Step Operational Semantics
Xavier Leroy (INRIA Rocquencourt, F)

Step-Indexed Syntactic Logical Relations for Recursive and Quantified Types
Amal Ahmed (Harvard Univ., USA)

Approaches to Polymorphism in Classical Sequent Calculus
Alexander J. Summers and Steffen van Bakel (Imperial College London, UK)

Pure Pattern Calculus
Barry Jay (Univ. of Technology Sydney, AUS) and Delia Kesner (PPS, CNRS and Univ. of Paris, F)

FASE — Orthogonal Process Activities (chair: Tetsuo Tamai) EI 8

A Graph-based Approach to Transform XML Documents
Gabriele Taentzer (Technische Univ. Berlin, D) and Giovanni Toffetti Carughi (Politecnico di Milano, I)

OMake: Designing a Scalable Build Process
Jason Hickey and Aleksey Nogin (California Institute of Technology, USA)

Automatic Generation of Tutorial Systems from Development Specification
Hajime Iwata (Waseda Univ., J), Junko Shirogane (Tokyo Woman's Christian Univ., J), and Yoshiaki Fukazawa (Waseda Univ., J)

A Software Implementation Progress Model
Dwayne Towell (Abilene Christian Univ., USA) and Jason Denton (Texas Tech Univ., USA)

TACAS — Parametrization and Slicing (chair: Holger Hermanns) EI 7

Automatic Verification of Parameterized Data Structures
Jyotirmoy Deshmukh, E. Allen Emerson, and Prateek Gupta (The Univ. of Texas at Austin, USA)

Parameterized Verification of Pi-Calculus Systems
Ping Yang (SUNY at Stony Brook, USA), Samik Basu, and C.R. Ramakrishnan (Iowa State Univ., USA)

Easy Parameterized Verification of Biphase Mark and 8N1 Decoders
Geoffrey M. Brown (Indiana Univ., Bloomington, USA) and Lee Pike (Galois Connections, Inc.)

Evaluating the Effectiveness of Program Slicing for Model Reduction of Concurrent Object-Oriented Programs.
Matthew B. Dwyer (Univ. of Nebraska, USA), John Hatcliff, Matthew Hoosier, Venkatesh Ranganath, Robby, and Todd Wallentine (Kansas State Univ., USA)

16:00 – 16:30 COFFEE

16:30 – 18:00 SESSION 4

ESOP — Verification and Reasoning (chair: Peter O'Hearn) EI 10

Verification Methodology for Model Fields
K. Rustan M. Leino (Microsoft Research, USA), and Peter Müller (ETH Zürich, CH)

ILC: A Foundation for Automated Reasoning About Pointer Programs
Limin Jia and David Walker (Princeton Univ., USA)

Bisimulations for Untyped Imperative Objects
Vasileios Koutavas and Mitchell Wand (Northeastern Univ., USA)

FASE — Behavioral Models and State Machines (chair: Alan Hartman) EI 8

Regular Inference for State Machines with Parameters
Therese Berg, Bengt Jonsson (Uppsala Univ., S), and Harald Raffelt (Univ. of Dortmund, D)

Automated Support for Building Behavioral Models of Event-Driven Systems
Benet Devereux and Marsha Chechik (Univ. of Toronto, CDN)

A Behavioral Model for Software Containers
Nigamanth Sridhar (Cleveland State Univ., USA) and Jason O. Hallstrom (Clemson Univ., USA)

TACAS — Symbolic Techniques (chair: Jaco van de Pol) EI 7

New Metrics for Static Variable Ordering in Decision Diagrams
Radu I. Siminiceanu (National Institute of Aerospace, Hampton, USA) and Gianfranco Ciardo (Univ. of California, Riverside, USA)

Widening ROBDDs with Prime Implicants
Neil Kettle, Andy King (Univ. of Kent, Canterbury, UK), and Tadeusz Strzemecki (Fordham Univ., New York, USA)

Efficient Guided Symbolic Reachability using Reachability Expressions
Dina Thomas, Supratik Chakraborty (Indian Institute of Technology, Bombay, IND), and Paritosh Pandya (Tata Institute of Fundamental Research, IND)

19:30 RECEPTION IN THE VIENNA CITY HALL
The *Bürgermeister der Bundeshauptstadt Wien* invites all ETAPS participants

Programme of Tuesday, March 28

08:30 – 09:30 SESSION 1

FASE — Invited Talk (chair: Luciano Baresi) EI 7

A Programming Model for Service Oriented Applications
Francisco Curbera (IBM T.J. Watson, USA)

09:30 – 10:00 COFFEE

10:00 – 12:00 SESSION 2

ESOP — Security and Distribution (chair: Erik Meijer) EI 10

A Typed Assembly Language for Confidentiality
Dachuan Yu and Nayeem Islam (DoCoMo Communications Laboratories, USA)

Flow Locks: Towards a Core Calculus for Dynamic Flow Policies
Niklas Broberg and David Sands (Chalmers Univ. of Technology and Göteborg Univ., S)

A Basic Contract Language for Web Services
Samuele Carpineti and Cosimo Laneve (Univ. of Bologna, I)

Types for Dynamic Reconfiguration
João Costa Seco and Luís Caires (Univ. Nova de Lisboa, P)

FASE — Empirical Studies (chair: Maura Cerioli) EI 8

An Empirical Study of the Impact of Asynchronous Discussions on Remote Synchronous Requirements Meetings
Daniela Damian (Univ. of Victoria, CDN), Filippo Lanubile, and Teresa Mallardo (Univ. of Bari, I)

Evaluation of Expected Software Quality: A Customer's Viewpoint
Krzysztof Sacha (Warsaw Univ. of Technology, PL)

Using Design Metrics for Predicting System Flexibility
Robby, Scott A. DeLoach, Valeriy A. Kolesnikov (Kansas State Univ., USA)

TACAS — Satisfiability (chair: Gianfranco Ciardo) EI 7

SDSAT: Tight Integration of Small Domain Encoding and Lazy Approaches in a Separation Logic Solver

Malay K Ganai (NEC LABS America, Princeton, USA), Murallidhar Talupur (Carnegie Mellon Univ., USA), and Aarti Gupta (NEC LABS America, Princeton, USA)

SAT-based Software Certification.
Sagar Chaki (Carnegie Mellon Software Engineering Institute, USA)

Expressiveness + Automation + Soundness: Towards Combining SMT Solvers and Interactive Proof Assistants
Pascal Fontaine, Jean-Yves Marion, Stephan Merz, Leonor Prensa Nieto, and Alwen Tiu (LORIA, INRIA Lorraine / Univ. de Nancy, F)

Exploration of the Constraint Programming Technique Capabilities in the Software Verification Process
Hélène Collavizza and Michel Rueher (Univ. de Nice, Sophia-Antipolis, F)

12:00 – 14:00 LUNCH

14:00 – 16:00 SESSION 3

ESOP — Analysis and Verification (chair: Rocco de Nicola) EI 10

Size-Change Termination Analysis in k-Bits
Michael Codish (Ben-Gurion Univ., Israel), Vitaly Lagoon, Peter Schachte, and Peter J. Stuckey (Univ. of Melbourne and NICTA, AUS)

Path Optimization in Programs and Its Application to Debugging
Akash Lal, Junghee Lim, Marina Polishchuk, and Ben Liblit (Univ. of Wisconsin-Madison, USA)

Inference of User-Defined Type Qualifiers and Qualifier Rules
Brian Chin, Shane Markstrum, Todd Millstein, and Jens Palsberg (Univ. of California, Los Angeles, USA)

Assertion Checking over Combined Abstraction of Linear Arithmetic and Uninterpreted Functions
Sumit Gulwani (Microsoft Research, USA) and Ashish Tiwari (SRI International, USA)

FASE — Requirements and Design (chair: Heike Wehrheim) EI 8

Combining Problem Frames and UML in the Description of Software Requirements
Luigi Lavazza (Univ. dell'Insubria and CEFRIEL, I) and Vieri Del Bianco (CEFRIEL, I)

Amplifying the Benefits of Design Patterns: From Specification Through Implementation
Jason O. Hallstrom (Clemson Univ., USA), Neelam Soundarajan, and Benjamin Tyler (Ohio State Univ., USA)

The Good, the Bad and the Ugly: Well-formedness of Live Sequence Charts
Bernd Westphal and Tobe Toben (Carl von Ossietzky Univ. Oldenburg, D)

Concerned about Separation
Hafedh Mili (Univ. du Québec à Montréal, CDN), Houari Sahraoui (Univ. de Montréal, CDN), Hakim Lounis, Hamid Mcheick, Amel Elkharraz (Univ. du Québec à Montréal, CDN)

TACAS — Abstraction (chair: David Sands) EI 7

Counterexample-guided Abstraction Refinement for the Analysis of Graph Transformation Systems
Barbara König and Vitali Kozioura (Univ. of Stuttgart, D)

Why Waste a Perfectly Good Abstraction?
Arnie Gurfinkel and Marsha Chechik (Univ. of Toronto, CDN)

Efficient Abstraction Refinement in Interpolation-Based Unbounded Model Checking
Bing Li and Fabio Somenzi (Univ. of Colorado at Boulder, USA)

Approximating Predicate Images for Bit-Vector Logic
Daniel Kröning (ETH Zürich, CH) and Natasha Shrygina (Univ. of Lugano, CH)

16:00 – 16:30 COFFEE

16:30 – 18:00 SESSION 4

ESOP — Applied Language Design and Interoperability (chair: Anton Ertl) EI 10

Embedding Dynamic Dataflow in a Call-by-Value Language
Gregory H. Cooper and Shriram Krishnamurthi (Brown Univ., USA)

Polymorphic Type Inference for the JNI
Michael Furr and Jeffrey S. Foster (Univ. of Maryland, USA):

Type Safety of Generics for the .NET Common Language Runtime
Nicu Georgian Fruja (ETH Zürich, CH)

FASE — Model-Based Development (chair: Antónia Lopes) EI 8

Algebraic Specification of a Model Transformation Engine
Artur Boronat, Jose Á. Carsí, Isidro Ramos (Polytechnic Univ. of Valencia, E)

Fundamentals of Debugging using a Resolution Calculus
Daniel Köb and Franz Wotawa (Technische Univ. Graz, A)

A Technique to Represent and Generate Components in MDA/PIM for Automation
Hyun Gi Min and Soo Dong Kim (Soongsil Univ., ROK)

TACAS — Model Checking Algorithms (chair: Kenneth McMillan) EI 7

Finitary Winning in ω-Regular Games
Krishnendu Chatterjee (Univ. of California, Berkeley, USA) and Thomas A. Henzinger (Univ. of California, Berkeley, USA, and EPFL, CH)

Efficient Model Checking for LTL with Partial Order Snapshots
Peter Niebert (Laboratoire d'Informatique Fondamentale de Marseille, F) and Doron Peled (Univ. of Warwick, UK)

A Local Shape Analysis based on Separation Logic
Dino Distefano, Peter W. O'Hearn (Queen Mary, Univ. of London, UK), and Hongseok Yang (Seoul National Univ., ROK)

19:30 MAIN CONFERENCE BANQUET IN THE ORANGERY OF SCHÖNBRUNN PALACE
Tickets needed

Programme of Wednesday, March 29

08:30 – 09:30 SESSION 1

Unifying Invited Talk (chair: Perdita Stevens)

Software Engineering: Emerging Goals and Lasting Problems
Carlo Ghezzi (Politecnico di Milano, I)

09:30 – 10:00 COFFEE

10:00 – 12:00 SESSION 2

FASE — Validation and Verification (chair: Luigi Lavazza) EI 8

Argus: Online Statistical Bug Detection
Long Fei, Kyungwoo Lee, Fei Li, and Samuel P. Midkiff (Purdue Univ., USA)

From Faults via Test Purposes to Test Cases: on the Fault-based Testing of Concurrent Systems
Bernhard Aichernig and Carlo Corrales Delgado (United Nations Univ., Macau SAR China)

Automated Systematic Testing of Open Distributed Programs
Koushik Sen and Gul Agha (Univ. of Illinois at Urbana-Champaign, USA)

Formal Simulation and Analysis of the CASH Scheduling Algorithm in Real-Time
Maude Peter Csaba Olveczky (Univ. of Illinois at Urbana-Champaign, USA, and Univ. of Oslo, N) and Marco Caccamo (Univ. of Illinois at Urbana-Champaign, USA)

FOSSACS — Mobile Processes (chair: Rocco De Nicola) EI 10

A Theory for Observational Fault Tolerance
Adrian Francalanza (Univ. of Malta, M) and Matthew Hennessy (Univ. of Sussex, UK)

Smooth Orchestrators
Cosimo Laneve and Luca Padovani (Univ. di Bologna, I)

On the Relative Expressive Power of Asynchronous Communication Primitives
Daniele Gorla (Univ. di Roma “La Sapienza”, I)

More on Bisimulations for Higher Order pi-Calculus
Zining Cao (Nanjing Univ., CN)

TACAS — Program Verification (chair: Lenore Zuck) EI 7

Compositional Model Extraction for Higher-Order Concurrent Programs
Dan Ghica (Univ. of Birmingham, UK) and Andrzej Murawski (Oxford Univ. Computing Laboratory, UK)

A Region Graph Based Approach to Termination Proofs
Stefan Leue and Wei Wei (Univ. of Konstanz, D)

Verifying Concurrent Message-Passing C Programs with Recursive Calls
Sagar Chaki, Edmund Clarke (Carnegie Mellon Univ., USA), Nicholas Kidd, Thomas Reps (Univ. of Wisconsin, USA), and Tayssir Touili (LIAFA, CNRS and Univ. Paris 7, F)

Automata-based Verification of Programs with Tree Updates
Peter Habermehl (LIAFA / Univ. Paris 7, F), Radu Iosif (VERIMAG/CNRS, F), and Tomas Vojnar (Brno Univ. of Technology, CZ)

12:00 – 14:00 LUNCH

14:00 – 15:00 SESSION 3A

Unifying Invited Talk (chair: Jens Knoop)

The Weird World of Bi-Directional Programming
Benjamin Pierce (Univ. of Pennsylvania, USA)

15:00 – 15:15 BREAK

15:15 – 16:15 SESSION 3B

FASE — Tool Demonstrations (chair: Arend Rensink) EI 8

JAG: JML Annotation Generation for Verifying Temporal Properties
Alain Giorgetti and Julien Groslambert (Univ. of Franche-Comté, F)

LearnLib: A Library for Automata Learning and Experimentation
Harald Raffelt and Bernhard Steffen (Univ. of Dortmund, D)

FOSSACS — Software Science (chair: Jens Knoop) EI 10

Register Allocation after Classical SSA Elimination is NP-complete
Fernando Magno Quintão Pereira and Jens Palsberg (UCLA, Univ. of California, Los Angeles, USA)

A Logic of Reachable Patterns in Linked Data-Structures
Greta Yorsh, Alexander Rabinovich, Mooly Sagiv (Tel Aviv Univ., IL), Antoine Meyer, and Ahmed Bouajjani (LIAFA, Univ. Paris VII, F)

TACAS — Runtime Diagnostics (chair: Rance Cleaveland) EI 7

An Experimental Comparison of the Effectiveness of Control flow Based Testing Approaches on Seeded Faults
Atul Gupta and Pankaj Jalote (Indian Institute of Technolgoy, Kanpur, IND)

Exploiting Traces in Program Analysis
Alex Groce and Rajeev Joshi (California Institute of Technology, Pasadena, USA)

16:15 – 16:45 COFFEE

16:45 – 18:15 SESSION 4

FASE — Software Evolution (chair: José Fiadeiro) EI 8

Trace-Based Memory Aliasing Across Program Versions
Murali Krishna Ramanathan, Suresh Jagannathan, and Ananth Grama (Purdue Univ., USA)

The Pervasiveness of Global Data in Evolving Software Systems
Jason Selby and Fraser P. Ruffell (Univ. of Waterloo, CDN)

Relation of Code Clones and Change Couplings
Reto Geiger, Beat Fluri, Harald C. Gall, and Martin Pinzger (Univ. of Zurich, CH)

FOSSACS — Distributed Computation (chair: Walter Vogler) EI 10

Dynamic Policy Discovery with Remote Attestation
Corin Pitcher and James Riely (CTI, De Paul Univ., USA)

Distributed Unfolding of Petri Nets
Paolo Baldan (Univ. Ca Foscari di Venezia, I), Stefan Haar (INRIA Rennes, F), and Barbara König (Univ. Stuttgart, D)

On the mu-Calculus Augmented with Sabotage
Philipp Rohde (RWTH Aachen, D)

TACAS — Quantitative Techniques (chair: Kim G. Larsen) EI 7

Model-Checking Markov Chains in the presence of Uncertainties
Koushik Sen, Mahesh Viswanathan, and Gul Agha (Univ. of Illinois at Urbana-Champaign, USA)

Safety Metric Temporal Logic is Fully Decidable
Joel Ouaknine and James Worrell (Oxford Univ. Computing Laboratory, UK)

Simulation-Based Graph Similarity
Oleg Sokolsky, Sampath Kannan, and Insup Lee (Unversity of Pennsylvania, USA)

19:30 HEURIGER
Traditional local wine and food

Programme of Thursday, March 30

08:30 – 09:30 SESSION 1

TACAS — Invited Talk (chair: Jens Palsberg) EI 7

Distributed Model-Checking Algorithms for WPDS with Applications to Trust-Management Systems
Somesh Jha (Univ. of Wisconsin, Madison, USA)

09:30 – 10:00 COFFEE

10:00 – 12:00 SESSION 2

CC — Program Analysis EI 8

Interprocedural Dataflow Analysis in the Presence of Large Libraries
Atanas Rountev, Scott Kagan, and Thomas Marlowe (Ohio State Univ. and Seton Hall Univ., USA)

Efficient Flow-Sensitive Interprocedural Data-flow Analysis in the Presence of Pointers
Teck Bok Tok, Samuel Z. Guyer, and Calvin Lin (The Univ. of Texas at Austin and Tufts Univ., Medford, USA)

Path-based Reuse Distance Analysis
Changpeng Fang (PathScale Inc., USA), Steve Carr, Soner Önder, and Zhenlin Wang (Michigan Technological Univ., USA)

Context-sensitive Points-to Analysis: Is It Worth It?
Ondřej Lhoták and Laurie Hendren (School of Computer Science, Univ. of Waterloo, and School of Computer Science, McGill Univ., Montreal, CDN)

FOSSACS — Categorical Models (chair: Dirk Pattinson) EI 10

A Finite Model Construction For Coalgebraic Modal Logic
Lutz Schröder (Univ. of Bremen, D)

Presenting Functors by Operations and Equations
Marcello Bonsangue (LIACS Leiden Univ., NL) and Alexander Kurz (Leicester Univ., UK)

Bigraphical Models of Context-aware Systems
Lars Birkedal, S. Debois, E. Elsborg, T. Hildebrandt, and H. Niss (IT Univ. of Copenhagen, DK)

Processes for Adhesive Rewriting Systems
Paolo Baldan (Univ. Ca Foscari di Venezia, I), Andrea Corradini (Univ. di Pisa, I), Tobias Heindel, Barbara König (Univ. Stuttgart, D), and Paweł Sobociński (Univ. of Cambridge, UK)

TACAS — TACAS/SPIN Tool Demonstrations (chair: Thierry Jeron) EI 7

PRISM: A Tool for Automatic Verification of Probabilistic Systems
Andrew Hinton, Marta Kwiatkowska, Gethin Norman, and David Parker (Univ. of Birmingham, UK)

DISTRIBUTOR and BCG_MERGE: Tools for Distributed Explicit State Space Generation
Hubert Garavel, Radu Mateescu, Damien Bergamini, Adrian Curic, Nicolas Descoubes, Christophe Joubert, Irina Smarandache-Sturm, and Gilles Stragier (INRIA Rhône-Alpes / VASY, F)

MCMAS: a Model Checker for Multi-Agent Systems
Franco Raimondi and Alessio Lomuscio (Univ. College London, UK)

A Counterexample-Guided Refinement Tool for Open Procedural Programs
Aleksandar Dimovski (Univ. of Warwick, UK), Dan R. Ghica (Univ. of Birmingham, UK), and Ranko Lazić (Univ. of Warwick, UK)

12:00 – 14:00 LUNCH

14:00 – 15:00 SESSION 3A

FOSSACS — Invited Talk (chair: Anna Ingólfsdóttir) EI 7

Oh Mega Completeness
Wan Fokkink (Vrije Universiteit Amsterdam, NL)

15:00 – 15:15 BREAK

15:15 – 16:15 SESSION 3B

CC — Dynamic Analysis EI 8

Selective Runtime Memory Disambiguation in a Dynamic Binary Translator
Bolei Guo (Princeton Univ., USA), Youfeng Wu (Intel Corp., USA), Cheng Wang, Matthew J. Bridges, Guilherme Ottoni, Neil Vachharajani, Jonathan Chang, and David I. August (Princeton Univ., USA)

Accurately Choosing Execution Runs for Software Fault Localization
Liang Guo, Abhik Roychoudhury, and Tao Wang (National Univ. of Singapore, SGP)

FOSSACS — Real Time and Hybrid Systems (chair: Kim G. Larsen) EI 10

On Metric Temporal Logic and Faulty Turing Machines
Joel Ouaknine and James Worrell (Oxford Univ., UK)

Denotational Semantics of Hybrid Automata
Abbas Edalat (Imperial College, UK) and Dirk Pattinson (Leicester Univ., UK)

TACAS — TACAS/SPIN Tool Demonstrations (chair: Susanne Graf) EI 7

jMosel: A Stand-Alone Tool and jABC Plugin for M2L(Str)
Christian Topnik, Eva Wilhelm (Univ. Dortmund, D), Tiziana Margaria (Univ. Göttingen, D), and Bernhard Steffen (Univ. Dortmund, D)

MSCan – A Tool for Analyzing MSC Specifications
Benedikt Bollig (LSV, CNRS Cachan, F), Carsten Kern, Markus Schlütter, and Volker Stolz (RWTH Aachen, D)

16:15 – 16:45 COFFEE

16:45 – 18:15 SESSION 4

CC — Demonstrations EI 8

On-line Visualization and Analysis of Real-time Systems with TuningFork
David F. Bacon, Perry Cheng (IBM T.J. Watson Research Center, Hawthorne, USA), Daniel Frampton (Australian National Univ., Canberra, AUS), David Grove (IBM T.J. Watson Research Center, Hawthorne, USA), Matthias Hauswirth (Univ. della Svizzera Italiana, Lugano, CH), and V.T. Rajan (IBM T.J. Watson Research Center, Hawthorne, USA)

Data-Flow Analysis as Model Checking within the jABC
Anna-Lena Lamprecht, Tiziana Margaria (Univ. Göttingen, D), and Bernhard Steffen (Univ. Dortmund, D)

The CGiS compiler
Philipp Lucas, Nicolas Fritz, and Reinhard Wilhelm (Saarland Univ., Saarbrücken, D)

FOSSACS — Process Calculi (chair: Wan Fokkink) EI 10

Reversing Algebraic Process Calculi
Iain Phillips (Imperial College, UK) and Irek Ulidowski (Leicester Univ., UK)

Conjunction on Processes: Full–Abstraction via Ready–Tree Semantics
Gerald Lüttgen (Univ. of York, UK) and Walter Vogler (Univ. Augsburg, D)

Undecidability Results for Bisimilarity on Prefix Rewrite Systems
Petr Jancar (Technical Univ. of Ostrava, CZ) and Jiri Srba (BRICS, Aalborg Univ., DK)

TACAS — Refinement (chair: Michael Huth) EI 7

A Practical and Complete Approach to Predicate Refinement
Ranjit Jhala (Univ. of California, San Diego, USA) and Kenneth L. McMillan (Cadence Berkeley Lab, USA)

Counterexample Driven Refinement for Abstract Interpretation
Bhargav S. Gulavanii (Indian Institute of Technology, Bombay, IND) and Sriram K. Rajamani (Microsoft Research Lab, IND)

Abstraction Refinement with Craig Interpolation and Symbolic Pushdown Systems
Javier Esparza, Stefan Kiefer, and Stefan Schwoon (Univ. of Stuttgart, D)

19:30 RECEPTION
Intel invites all ETAPS participants

Programme of Friday, March 31

08:30 – 09:30 SESSION 1

CC — Invited Talk EI 7

Using Dependent Types to Port Type Systems to Low-Level Languages
George Necula (Univ. of California, Berkeley, USA)

09:30 – 10:00 COFFEE

10:00 – 12:00 SESSION 2

CC — Optimisation EI 8

Loop Transformations in the Ahead-of-Time Optimization of Java Bytecode
Simon Hammond and David Lacey (Univ. of Warwick, UK)

Hybrid Optimizations: Which Optimization Algorithm to Use?
John Cavazos, J. Eliot B. Moss, Mike O'Boyle (Univ. of Edinburgh, Scotland, UK, and Univ. of Massachusetts, Amherst, USA)

A Fresh Look at PRE as a Maximum Flow Problem
Jingling Xue (Univ. of New South Wales, AUS) and Jens Knoop (TU Vienna, A)

Performance Characterization of the 64-bit x86 Architecture from Compiler Optimizations' Perspective
Jack Liu and Youfeng Wu (Intel Corporation, Santa Clara, USA)

FOSSACS — Automata and Logic (chair: Gernot Salzer) EI 10

Propositional Dynamic Logic with Recursive Programs
Christof Loeding (RWTH Aachen, D) and Olivier Serre (LIAFA, Univ. Paris VII and CNRS, F)

A Semantic Approach to Interpolation
Andrei Popescu, Traian Serbanuta, and Grigore Rosu (Univ. of Illinois at Urbana-Champaign, USA)

First-order and Counting Theories of omega-Automatic Structures
Dietrich Kuske (Univ. Leipzig, D) and Markus Lohrey (Univ. Stuttgart, D)

Parity Games Played on Transition Graphs of One-counter Processes
Olivier Serre (LIAFA, Univ. Paris VII and CNRS, F)

12:00 – 14:00 LUNCH

14:00 – 16:00 SESSION 3

CC — Code Generation EI 8

Lightweight Lexical Closures for Legitimate Execution Stack Access
Masahiro Yasugi, Tasuku Hiraishi, and Taiichi Yuasa (Kyoto Univ., J)

Polyhedral Code Generation in the Real World
Nicolas Vasilache, Cédric Bastoul, and Albert Cohen (ALCHEMY Group, INRIA Futurs and LRI, Univ. Paris-Sud XI, F)

Iterative Collective Loop Fusion
T. J. Ashby and M. F. P. O'Boyle (Univ. of Edinburgh, UK)

Converting Intermediate Code to Assembly Code Using Declarative Machine Descriptions
João Dias and Norman Ramsey (Harvard Univ., Boston, USA)

FOSSACS — Domains, Lambda Calculus, Types (chair: Bernhard Gramlich) EI 10

On the Confluence of lambda-Calculus with Conditional Rewriting
Frédéric Blanqui, Claude Kirchner (INRIA LORIA, Nancy, F) and Colin Riba (INPL LORIA, Nancy, F)

Bidomains and Full Abstraction for Countable Non-determinism
James Laird (Univ. of Sussex, UK)

An Operational Characterization of beta-Strong-Normalization
Luca Paolini (Univ. di Torino, I), Elaine Pimentel (Univ. Federal de Minas Gerais, BR), and Simona Ronchi Della Rocca (Univ. di Torino, I)

16:00 – 16:30 COFFEE

16:30 – 18:00 SESSION 4

CC — Register Allocation EI 8

SARA: Combining Stack Allocation and Register Allocation
V. Krishna Nandivada and Jens Palsberg (Univ. of California, Los Angeles, USA)

Register Allocation for Programs in SSA-form
Sebastian Hack, Daniel Grund, and Gerhard Goos (Univ. of Karlsruhe, D)

Enhanced Bitwidth-Aware Register Allocation
Rajkishore Barik and Vivek Sarkar (IBM T.J. Watson Research Center, Hawthorne, USA)

FOSSACS — Security (chair: Luca Aceto) EI 10

Guessing Attacks and the Computational Soundness of Static Equivalence
Martin Abadi (Univ. of California, Santa Cruz, USA), Mathieu Baudet (LSV ENS Cachan, CNRS and INRIA Futurs project SECSI, F), and Bogdan Warinschi (LORIA, INRIA, Nancy, F)

Handling exp,* (and Timestamps) in Protocol Analysis
Roberto Zunino and Pierpaolo Degano (Univ. di Pisa, I)

Symbolic and Cryptographic Analysis of the Secure WS-ReliableMessaging Scenario
Michael Backes (IBM Zurich Research Lab, CH), Sebastian Moedersheim (ETH Zurich, CH), Birgit Pfitzmann (IBM Zurich Research Lab, CH), and Luca Vigano (ETH Zurich, CH)

Workshops

ACCAT 2006 – Applied and Computational Category Theory

Category Theory is a well-known powerful mathematical modeling language with a wide area of applications in mathematics and computer science, including especially the semantical foundations of topics in software science and development. Since about 30 years there have been workshops including these topics. More recently, the ACCAT group established by Jochen Pfalzgraf at Linz and Salzburg has begun to study interesting applications of category theory in Geometry, Neurobiology, Cognitive Sciences, and Artificial Intelligence. It is the intention of this ACCAT workshop to bring together leading researchers in these areas with those in Software Science and Development in order to transfer categorical concepts and theories in both directions. The workshop will consist of 12 invited lectures where extended abstracts will be presented.

Contact: Jochen Pfalzgraf (jpfalz@cosy.sbg.ac.at)
Hartmut Ehrig (ehrig@cs.tu-berlin.de)
http://www.cosy.sbg.ac.at/∼jpfalz/ETAPS-2006.html

AVIS 2006 – Fifth International Workshop on Automated Verification of Infinite-State Systems

The fifth in a series of workshops, AVIS 2006 is a forum for theoreticians, tool builders, and practitioners interested in methods and tools for the automatic verification of large practical systems. Model checking is the focus of current formal methods research. However, it is limited in scope due to the state explosion problem. For large practical systems theorem proving – a process that requires manual effort and mathematical sophistication to use – is the only viable alternative. There has been a recent emergence of hybrid techniques that affords users with full automation by combining the ease-of-use of model checking with the power of theorem proving. AVIS is a forum for exchanging ideas and experiences in this emerging area of research.

Contact: Ramesh Bharadwaj (ramesh@itd.nrl.navy.mil)
http://chacs.nrl.navy.mil/AVIS06

CMCS 2006 – 8th International Workshop on Coalgebraic Methods in Computer Science

During the last few years, it has become increasingly clear that a great variety of state-based dynamical systems, like transition systems, automata, process calculi and class-based systems, can be captured uniformly as coalgebras. Coalgebra is developing into a field of its own interest presenting a deep mathematical foundation, a growing field of applications, and interactions with various other fields such as reactive and interactive system theory, object oriented and concurrent programming, formal system specification, modal logic, dynamical systems, control systems, category theory, algebra, analysis, etc. The aim of the workshop is to bring together researchers with a common interest in the theory of coalgebras and its applications.

Contact: John Power (ajp@inf.ed.ac.uk)
http://conferences.inf.ed.ac.uk/cmcs06/cmcs06.html

COCV 2006 – Fifth Workshop on Compiler Optimization Meets Compiler Verification

COCV provides a forum for researchers and practitioners working onoptimizing and verifying compilation, and on related fields such astranslation validation, certifying and credible compilation,programming language design and programming language semantics forexchanging their latest findings, and for plumbing the mutual impactof these fields on each other. By encouraging discussions andco-operations across different, yet related fields, the workshopstrives for bridging the gap between the communities, and forstimulating synergies and cross-fertilizations among them.

Contact: Wolf Zimmermann (wolf.zimmermann@informatik.uni-halle.de)
http://www.complang.tuwien.ac.at/cocv2006/cocv2006.html

DCC 2006 – Designing Correct Circuits

The 2006 DCC workshop aims to bring together academic and industrial researchers in formal methods for hardware design and verification. It will allow participants to learn about the current state of the art and provide a venue for debate about how more effective methods can be developed.

Much research in formally-based hardware design and verification now takes place in industry, rather than in academia. For the long term survival of our field, we must ensure that academics and industrial researchers continue to work together on the real problems facing microprocessor designers and those developing System on a Chip solutions. A major aim of the workshop is to open the necessary communication channels.

Contact: Mary Sheeran (ms@cs.chalmers.se)
Tom Melham (Tom.Melham@comlab.ox.ac.uk)
http://www.cs.chalmers.se/∼ms/DCC06/

EAAI 2006 – First International Workshop on Emerging Applications of Abstract Interpretation

Abstract interpretation is almost 30 years old. These 30 years witnessed a great success of this methodology, in particular in analysis and verification of programming languages and systems: static program analysis, program compilers, program verification, program transformation, program semantics. This workshop focusses on emerging applications of abstract interpretation in nontraditional or even innovative areas, like security, model checking, embedded and real-time systems, systems biology, software watermarking and obfuscation, hardware verification, etc. The workshop aim is to spread the methods of abstract interpretation towards nontraditional areas and to share common experiences in using abstract interpretation as an approximation technique.

Contact: Francesco Ranzato (franz@math.unipd.it)
http://www.math.unipd.it/EAAI06

FESCA 2006 – Formal Foundations of Embedded Software and Component-Based Software Architectures

The aim of this workshop is to bring together researchers from academia and industry interested in formal modelling approaches as well as associated analysis and reasoning techniques with practical benefits for embedded software and component-based software engineering.

Recent years have seen the emergence of formal and informal techniques and technologies for the specification and implementation of component-based software architectures. With the growing need for safety-critical embedded software and the increased relevance of reliability and scalability for enterprise software, this trend has been amplified.

FESCA therefore is interested in formal methods known from the area of embedded software development and software engineering and tries to cross-fertilize their research and application. One strength of FESCA is the link established between the embedded software design community and the formal software engineering community by exploring how formal approaches developed within one community affect or can be exploited by the other.

Contact: Ralf Reussner (Ralf.Reussner@Informatik.Uni-Oldenburg.de)
http://www.fesca.informatik.uni-oldenburg.de

FRCSS 2006 – Workshop on Future Research Challenges for Software and Services

With Framework VII program in the horizon, the aim of this workshop is twofold:

- Presentation of the current and future activities from the EU, Software Technologies unit, regarding Fundamental Software Engineering, Complexity and Self-Properties, Services, Open Source Software and Industrial initiatives.

- Refinement and discussion of the key challenges and future directions in each specific technical area as well as Software Technologies as a whole.

The workshop will require registration and will be open to all interested parties, including ETAPS 2006 participants. There will be a specific Call for Papers. EU projects on Software Technologies will be encouraged to present their views as well as the Industrial initiatives and available road-mapping support actions.

Contact: Tiziana Margaria (margaria@informatik.uni-goettingen.de)
http://www.seds.informatik.uni-goettingen.de/FRCSS/

GT-VMT 2006 – Fifth International Workshop on Graph Transformation and Visual Modeling Techniques

GT-VMT 2006 is the fifth workshop of a series that serves as a forum for all researchers and practitioners interested in the use of graph-based notation, techniques and tools for the specification, modeling, validation, manipulation and verification of complex systems.

The aim is to promote engineering approaches for the design and implementation of visual modeling techniques that are based on robust formalizations. Contributions are welcome from communities working on popular visual modeling notations like UML, Petri nets, Graph Transformation, Business Process/Workflow Models.

This year's workshop will have an additional focus on Models for Mobile Systems and Services (including Service-Oriented and GRID computing architectures) where huge and highly dynamic graph-like structures offer a challenging ground for graph transformation techniques and tools.

Contact: Roberto Bruni (bruni@di.unipi.it)
http://www.inf.mit.bme.hu/GT-VMT2006

LDTA 2006 – Sixth Workshop on Language Descriptions, Tools and Applications

The LDTA workshops bring together researchers from academia and industry interested in the field of formal language definitions and language technologies, with an emphasis on tools developed for or with these language definitions. This active area of research involves the following basic approaches:

- Program analysis, transformation, and generation
- Formal analysis of language properties
- Automatic generation of language processing tools

Although various specification formalisms like attribute grammars, action semantics, operational semantics, and algebraic approaches have been developed, they are not widely exploited in current practice. A goal of LDTA is to increase the use of these formalisms through demonstrations of their practical utility in, among others, the following application domains:

- Software component models and modeling languages
- Re-engineering and re-factoring
- Aspect-oriented programming
- Domain-specific languages
- XML processing
- Visualization and graph transformation
- Programming environments such as Eclipse, .Net, and Rotor

Contact: Eric Van Wyk (evw@cs.umn.edu)
http://www.ldta06.cs.umn.edu

MBT 2006 – Second Workshop on Model Based Testing

This workshop is devoted to model-based testing of software and hardware. Models guide such efforts as test creation and test verification.

Model-based testing is gaining attention with the advent of models in software/hardware design and development. Of particular importance are formal models with precise semantics. Testing with such models allows one to measure the degree of the product's conformance with the model. Techniques to support model-based testing are drawn from areas like formal verification, model checking, control and data flow analysis, grammar analysis, Markov processes, game theory, and various other areas.

The intent of this workshop is to discuss the state of art in theory, application, tools and industrialization of model-based testing.

Contact: Bernd Finkbeiner (finkbeiner@cs.uni-sb.de)
http://react.cs.uni-sb.de/mbt2006/

QAPL 2006 – Fourth Workshop on Quantitative Aspects of Programming Languages

Quantitative aspects of computation are important and sometimes essential in characterising the behaviour and determining the properties of systems. They are related to the use of physical quantities (storage space, time, bandwidth, etc.) as well as mathematical quantities (e.g. probability and measures for reliability, risk and trust). Such quantities play a central role in defining both the model of a system (architecture, language design, semantics) and the methodologies and tools for the analysis and verification of the system properties. The aim of this workshop is to discuss the explicit use of quantitative information such as time and probabilities both at the specification level and as a tool for analysis and verification. In particular, the workshop focuses on: the design of probabilistic and real-time languages and the definition of semantical models for such languages; the discussion of methodologies for the analysis of probabilistic and timing properties (e.g. security, safety, schedulability) and of other quantifiable properties such as reliability (for hardware components), trustworthiness (in information security) and resource usage (e.g., worst-case memory/stack/cache requirements); the probabilistic analysis of systems which do not explicitely incorporate quantitative aspects (e.g. performance, reliability and risk analysis); applications to safety-critical systems, communication protocols, control systems, asynchronous hardware, and to any other domain involving quantitative issues.

Contact: Alessandra Di Pierro (qapl06@di.unipi.it)
http://www.di.unipi.it/∼qapl06

SC 2006 – 5th International Symposium on Software Composition

The goal of SC 2006 is to advance the research in component-based software development. Challenges are the composition of components, their development, and verification. Another challenge is the scalability of any component-based software development approach to computing devices with different computing capabilities, ranging from cell phones to server farms. Relevant topics of interest comprise all issues related to components-based software development and their application. SC 2006 will be the fifth workshop on software composition. This series is aimed at bringing together the research

and industrial communities in order to develop a better understanding of how software components may be used to build and maintain large software systems. Therefore papers relating theory and practice are particularly welcome.

Contact: Welf Löwe (Welf.Lowe@msi.vxu.se)
http://www.emn.fr/sc06

SLAP 2006 – Synchronous Languages, Applications, and Programming

SLAP is a workshop dedicated to synchronous languages. Such languages have emerged in the 80s as a new method to design real-time embedded critical systems. There exists now a strong interest for them in industry: Lustre, Esterel, and Signal are used with success to program real-time and safety critical applications, from nuclear power plant management layer to Airbus air flight control systems. The purpose of the SLAP workshop is to bring together researchers and practitioners who work in the field of reactive systems. The workshop topics are covering all these issues: synchronous models of computation, synchronous languages and programming formalisms, compiling techniques, formal verification, test and validation of programs, case-studies, education, etc.

Contact: Florence Maraninchi (Florence.Maraninchi@imag.fr)
http://www-verimag.imag.fr/SYNCHRONE/SLAP06/

SPIN 2006 – 13th International SPIN Workshop on Model Checking of Software

The SPIN Workshop is a forum for practitioners and researchers interested in model-checking based techniques for the validation and analysis of communication protocols and software systems. The workshop will focus on topics including theoretical and algorithmic foundations and tools for software model checking, model derivation from code and code derivation from models, techniques for dealing with large and infinite state spaces, and applications. The workshop aims to foster interactions and exchanges of ideas with all related areas in software engineering.

Contact: Antti Valmari (spin06pc@cs.tut.fi)
http://www.cs.tut.fi/SPIN2006/

TERMGRAPH 2006 – Third International Workshop on Term Graph Rewriting

Term graph rewriting is concerned with the representation of expressions as graphs and their evaluation by rule-based graph transformation. The advantage of using graphs rather than strings or trees is that common subexpressions can be shared, which improves the efficiency of computations in space and time. Sharing is ubiquitous in implementations of programming languages: many implementations of functional, logic, object-oriented and concurrent calculi are based on term graphs. Term graphs are also used in symbolic computation systems and automated theorem proving. Research in term graph rewriting ranges from theoretical questions to practical implementation issues. Many different

research areas are included, for instance: the modelling of first- and higher-order term rewriting by (acyclic or cyclic) graph rewriting, the use of graphical frameworks such as interaction nets and sharing graphs to model strategies of evaluation (for instance, optimal reduction in the lambda calculus), rewrite calculi on cyclic higher-order term graphs for the semantics and analysis of functional programs, graph reduction implementations of programming languages, and automated reasoning and symbolic computation systems working on shared structures.

Contact: Ian Mackie (ian@dcs.kcl.ac.uk)
http://www.dcs.kcl.ac.uk/events/TERMGRAPH2006/

WITS 2006 – Sixth Workshop on Issues in the Theory of Security

WITS is the offical workshop organised by the IFIP WG 1.7 on “Theoretical Foundations of Security Analysis and Design”, established to promote the investigation on the theoretical foundations of security, discovering and promoting new areas of application of theoretical techniques in computer security and supporting the systematic use of formal techniques in the development of security related applications. The members of WG hold their annual workshop as an open event to which all researchers working on the theory of computer security are invited. This is the sixth meeting of the series, and is organized in cooperation with ACM SIGPLAN and the working group FoMSESS of the German Computer Society (GI). There will be proceedings published as “Issues in the Theory of Security” (publisher pending).

Contact: Jan Jürjens (juerjens@in.tum.de)
http://www4.in.tum.de/∼wits06

WRLA 2006 – 6th International Workshop on Rewriting Logic and its Applications

Rewriting logic (RL) is a natural model of computation and an expressive semantic framework for concurrency, parallelism, communication and interaction. It can be used for specifying a wide range of systems and languages in various application fields. It also has good properties as a metalogical framework for representing logics. In recent years, several languages based on RL (ASF+SDF, CafeOBJ, ELAN, Maude) have been designed and implemented. The aim of the workshop is to bring together researchers with a common interest in RL and its applications, and to give them the opportunity to present their recent works, discuss future research directions, and exchange ideas.

Contact: Carolyn Talcott (clt@cs.stanford.edu)
http://www-formal.stanford.edu/clt/WRLA06/

Pre-Conference Workshops Programme

ACCAT Programme

09:00 – 10:30 SESSION 1 OF ACCAT ON SUNDAY, MARCH 26 EI 3A

Welcome and Opening
H. Ehrig (TU Berlin, D) and J. Pfalzgraf (Univ. Salzburg, A)

Presentations

ACCAT, the Origins and a Survey of Own Work
J. Pfalzgraf (Univ. Salzburg, A)

Integration of Categorical Frameworks: Generic Component Concept for System Modelling and Adhesive HLR Systems
J. Padberg (TU Berlin, D)

A Functorial Framework for Constraint Normal Logic Programming
F. Orejas (UPC, Barcelona, E)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF ACCAT ON SUNDAY, MARCH 26 EI 3A

Presentations

Structural Complexity: A Categorical View
Liara Aparecida dos Santos Leal (PUCRS, Porto Alegre, BR)

Institutions, Abstract Model Theory and Software Specification
A. Tarlecki (Univ. Warsaw, PL)

Heterogeneous Specification and the Heterogeneous Tool Set
T. Mossakowski (Univ. Bremen, D)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF ACCAT ON SUNDAY, MARCH 26 EI 3A

Presentations

Recursive Coalgebras
J. Adamek (TU Braunschweig, D)

Factorization Systems and Classification Problems
J.Rosicky (Univ. Brno, CZ)

Theory Morphisms in Membership Equational Logic
J. Meseguer (Univ. Illinois, USA)

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF ACCAT ON SUNDAY, MARCH 26 EI 3A

Presentations

Construction and Properties of Adhesive and Weak Adhesive High-Level Replacement Categories
U. Prange (TU Berlin, D)

Towards a Categorical Semantics of Concurrency for Adhesive Rewriting Systems
A. Corradini (Univ. Pisa, I)

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

CMCS Programme

09:30 – 10:30 SESSION 1 OF CMCS ON SATURDAY, MARCH 25 EI 9

Keynote (chair: John Power)

Local Action
Peter O'Hearn (Microsoft Research and Queen Mary Univ. London, UK)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF CMCS ON SATURDAY, MARCH 25 EI 9

Presentations (chair: John Power)

Generic Trace Theory
Ichiro Hasuo, Bart Jacobs, and Ana Sokolova (Radboud Univ. Nijmegen, NL)

A Coalgebraic Representation of Reduction by Cone of Influence
Hiroshi Watanabe, Koki Nishizawa (AIST, J), and Osamu Takaki (Kyoto Sangyo Univ., J)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF CMCS ON SATURDAY, MARCH 25 EI 9

Presentations (chair: Neil Ghani)

An Effective Coalgebraic Bisimulation Proof Method
Lingyun Luo (Chinese Acad. Sciences, CN)

Synthesis of Mealy Machines Using Derivatives
Helle Hvid Hansen (Free Univ. Amsterdam and CWI, NL), David Costa (CWI, NL), and Jan Rutten (CWI and Free Univ. Amsterdam, NL)

15:30 – 16:00 COFFEE

16:00 – 17:00 SESSION 4 OF CMCS ON SATURDAY, MARCH 25 EI 9

Invited Talk (chair: Neil Ghani)

Modularity in Coalgebra
Corina Cirstea (Univ. Southampton, UK)

19:30 CMCS DINNER
Dinner at the restaurant *Artner*, Floragasse 6, 1040 Wien

09:30 – 10:30 SESSION 1 OF CMCS ON SUNDAY, MARCH 26 EI 9

Invited Talk (chair: Stefan Milius)

Stone Duality for Coalgebraic Modal Logic
Alexander Kurz (Univ. Leicester, UK)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF CMCS ON SUNDAY, MARCH 26 EI 9

Presentations (chair: Stefan Milius)

Continuous Functions on Final Coalgebras
Neil Ghani, Peter Hancock (Univ. Nottingham, UK), and Dirk Pattinson (Univ. Leicester, UK)

Coinductive Field of Exact Real Numbers and General Corecursion
Milad Niqui (Radboud Univ. Nijmegen, NL)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF CMCS ON SUNDAY, MARCH 26 EI 9

Presentations (chair: Jan Rutten)

How Iterative are Iterative Algebras?
J. Adamek and S. Milius (Technical Univ. Braunschweig, D) and J. Velebil (Technical Univ. Prague, CZ)

Some Properties and Some Problems on Set Functors
Daniela Cancila, Furio Honsell, and Marina Lenisa (Univ. di Udine, I)

15:30 – 16:00 COFFEE

16:00 – 17:45 SESSION 4 OF CMCS ON SUNDAY, MARCH 26 EI 9

Presentation and Meeting (chair: Jan Rutten)

Infinitary Howe's Method
Paul Blain Levy (Univ. Birmingham, UK)

Joint meeting of Steering and Programme Committees

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

10:30 – 12:00 SESSION 2 OF CMCS ON MONDAY, MARCH 27 Kontaktraum

Short Contributions (chair: John Power)

Comonadic Notions of Computation
Tarmo Uustalu (Univ. Tallinn, EST) and Varmo Vene (Univ. Tartu, EST)

Worlds Coalgebraically
Olha Sharavska (Univ. Tallinn, EST)

Towards Coalgebraic Methods for Verifying Security Protocols
Corina Cirstea and Mehrnoosh Sadrzadeh (Univ. of Southampton, UK)

12:00 – 14:00 LUNCH

14:00 – 16:00 SESSION 3 OF CMCS ON MONDAY, MARCH 27 Kontaktraum

Short Contributions (chair: Neil Ghani)

Coalgebraic Fixed Point Logics have the Finite Model Property
Clemens Kupke (CWI, NL) and Yde Venema (Univ. van Amsterdam, NL)

On Game Semantics for Intuitionistic Linear Logic
Vladimir Komendantsky (Univ. College Cork, IRL)

PSPACE Bounds for Rank-1 Modal Logics
Lutz Shröder (Univ. Bremem, D) and Dirk Pattinson (Univ. of Leicester, UK)

A Coinductive Axiomatisation of Regular Expressions under Bisimulation
Clemens Grabmayer (Vrije Univ. Amsterdam, NL)

16:00 – 16:30 COFFEE

16:30 – 18:00 SESSION 4 OF CMCS ON MONDAY, MARCH 27 Kontaktraum

Short Contributions (chair: Tarmo Uustalu)

A Calculational Account for Lambda-Coinduction
Alexandra Silva and Luis Barbosa (Univ. of Minho, P)

On (Co)Amalgamation and Synchronization
Uwe Wolter (Univ. of Bergen, N)

19:30 RECEPTION
The *Bürgermeister der Bundeshauptstadt Wien* invites all ETAPS participants to a reception in the *Rathaus* (Vienna City Hall)

DCC Programme

09:30 – 10:30 SESSION 1 OF DCC ON SATURDAY, MARCH 25 EI 2

Model Checking / Abstraction

Microprocessor Verification Based on Datapath Abstraction and Refinement
Zaher S. Andraus, Mark H. Liffiton, and Karem A. Sakallah (Univ. of Michigan, USA)

Reachability Analysis with QBF
Armin Biere (Johannes Kepler Univ., A)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF DCC ON SATURDAY, MARCH 25 EI 2

Clocking

An Implementation of Clock-Gating and Multi-Clocking in Esterel
Laurent Arditi, Gérard Berry, Marc Perreaut (Esterel Technologies), and Mike Kishinevsky (Intel)

“Easy” Parameterized Verification of Cross Clock-Domain Protocols
Geoffrey Brown (Indiana Univ., IND) and Lee Pike (Galois Connections)

Towards the Correct Design of Multiple Clock Domain Circuits
Joe Stoy (Bluespec Inc.)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF DCC ON SATURDAY, MARCH 25 EI 2

Verification Methodology

Evolution and Impact of a Large Industrial Proof
Robert B. Jones and Noppanunt Utamaphethai (Intel)

Is Feature-Oriented Verification Useful for Hardware?
Kathi Fisler (Worcester Polytechnic, USA) and Shriram Krishnamurthi (Brown Univ., USA)

A Coverage Analysis for Safety Property Lists
Koen Claessen (Chalmers, SE)

15:30 – 16:00 COFFEE

16:00 – 17:00 SESSION 4 OF DCC ON SATURDAY, MARCH 25 EI 2

Synthesis

Towards Automatically Compiling Efficient FPGA Hardware
Jean Baptiste Note and Jean Vuillemin (Ecole Normale Supérieure, F)

Proof Producing Synthesis of Arithmetic and Cryptographic Hardware
Konrad Slind, Scott Owens (Univ. of Utah, USA), Juliano Iyoda, and Mike Gordon (Univ. of Cambridge, GB)

09:30 – 10:30 SESSION 1 OF DCC ON SUNDAY, MARCH 26 EI 2

Circuits / Design

Networks of Elastic Circuits
Sava Kristić, Mike Kishinevsky, and John O'Leary (Intel), and Jordi Cortadella (UPC, Barcelona, E)

Self-Healing Reconfigurable Manifolds
Sarah Thompson and Alan Mycroft (Univ. of Cambridge, UK)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF DCC ON SUNDAY, MARCH 26 EI 2

Functional Languages I

Using Wired for Design Exploration
Emil Axelsson, Koen Claessen, and Mary Sheeran (Chalmers, SE)

Interconnect and Geometric Layout in Hydra
John T. O'Donnell (Univ. of Glasgow, UK)

A Functional HDL for ReFLect
Tom Melham (Oxford Univ., UK) and John O'Leary (Intel)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF DCC ON SUNDAY, MARCH 26 EI 2

Functional Languages II

Verification of Circuit Generators
Warren A. Hunt, Jr. and Erik Reeber (Univ. of Texas at Austin, USA)

Two-level Languages and Circuit Design and Synthesis
Walid Taha (Rice Univ., USA)

The Design of a Floating Point Execution Unit Using the Integrated Design and Verification (IDV) System
Carl Seger (Intel)

15:30 – 16:00 COFFEE

16:00 – 17:00 SESSION 4 OF DCC ON SUNDAY, MARCH 26 EI 2

Easing Verification

Automating the Verification of RTL-Level Pipelined Machines
Panagiotis Manolios (Georgia Inst. of Technology, USA)

Another Dimension to High Level Synthesis: Verification
Malay K. Ganai, Aarti Gupta, Akira Mukaiyama, and Kazutoshi Wakabayashi (NEC)

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

EAAI Programme

09:30 – 10:30 SESSION 1 OF EAAI ON SUNDAY, MARCH 26 EI 1

Invited Talk

On Abstraction-Carrying Code and Certificate-Size Reduction
German Puebla (Univ. Politécnica de Madrid, E)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF EAAI ON SUNDAY, MARCH 26 EI 1

Presentations

A PCC Architecture based on Certified Abstract Interpretation
F. Besson, T. Jensen, D. Pichardie (IRISA, F)

JAIL: Firewall Analysis of Java Card by Abstract Interpretation
P. Ferrara (Univ. Venezia, I, and Ecole Polytechnique, F)

Opaque Predicates Detection by Abstract Interpretation
M. Dalla Preda (Univ. Verona, I), M. Madou, K. De Bosschere (Ghent Univ., B), R. Giacobazzi (Univ. Verona, I)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF EAAI ON SUNDAY, MARCH 26 EI 1

Presentations

Abstract Analysis of Plans for Teleoperated Robots
D. Massé (Univ. Bretagne Occidentale, F)

Analyzing Biological Pathways by Abstract Interpretation
G. Scardoni (Univ. Verona, I)

Context Dependent Analysis of BioAmbients
H. Pilegaard, F. Nielson, H. Riis Nielson (T.U. Denmark, DK)

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF EAAI ON SUNDAY, MARCH 26 EI 1

Presentations

Path-Length Analysis for Object-Oriented Programs
F. Spoto (Univ. Verona, I), P.M. Hill (Univ. Leeds, UK), E. Payet (Univ. La Reunion, F)

An Abstract Domain for Separation Logic Formulae
E.-J. Sims (Ecole Polytechnique, F, and Kansas State Univ., USA)

Static Analysis of Actors: From Type Systems to Abstract Interpretation
P.-L. Pantel, M. Garoche, X. Thirioux (IRIT, F)

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

FESCA Programme

09:00 – 10:30 SESSION 1 OF FESCA ON SUNDAY, MARCH 26 EI 5

Component Models and Specification (chair: Ralf Reussner)

ConCom – A Formal Model for Concurrent Components
Andreas Rausch (Technische Univ. Kaiserslautern, D)

Towards Multiple Access in Generic Component Architectures
M. Klein, J. Padberg (Technische Univ. Berlin, D), and F. Orejas (UPC, Barcelona, E)

Extending a Component Specification Language with Time
Bjoern Metzler and Heike Wehrheim (Univ. Paderborn, D)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF FESCA ON SUNDAY, MARCH 26 EI 5

Invited Talk (chair: Ralf Reussner)

Hierarchical vs. Flat Component Models
Frantisek Plasil (Charles Univ., Prague, CZ, joint work with Petr Hnetynka)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF FESCA ON SUNDAY, MARCH 26 EI 5

Component Contracts and Component Selection (chair: Frantisek Plasil)

Parametric Performance Contracts: Non-Markovian Loop Modelling and an Experimental Evaluation
Heiko Koziolek and Viktoria Firus (Univ. of Oldenburg, D)

A Contract-based Approach to Specifying and Verifying Safety Critical Systems
Wei Dong, Zhenbang Chen and Ji Wang (National Lab. for Parallel and Distributed Processing, ChangSha, CN)

Only the Best Can Make It: Optimal Component Selection
Lars Gesellensetter and Sabine Glesner (Technical Univ. of Berlin, D)

15:30 – 16:00 COFFEE

16:00 – 17:00 SESSION 4 OF FESCA ON SUNDAY, MARCH 26 EI 5

Model Checking (chair: Iman Poernomo)

Local Module Checking for CTL Specifications
Samik Basu (Iowa State Univ. Ames, USA), Partha S. Roop, and Roopak Sinha (Univ. of Auckland, NZ)

Specification and Generation of Environment for Model Checking of Software Components
Pavel Parizek and Frantisek Plasil (Charles Univ., CZ)

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

MBT Programme

09:00 – 10:30 SESSION 1 OF MBT ON SATURDAY, MARCH 25 EI 4

Opening and Welcome
Bernd Finkbeiner (Univ. des Saarlandes, D), Yuri Gurevich (Microsoft Research, USA), and Alexander K. Petrenko (ISP RAS, RUS)

Invited Talk (chair: Alexander K. Petrenko)

Title to be announced
Harry Robinson (Google, USA)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF MBT ON SATURDAY, MARCH 25 EI 4

Presentations (chair: Bernd Finkbeiner)

An Extension of the Classification-Tree Method for Embedded Systems for the Description of Events
Mirko Conrad (DaimlerChrysler AG, D) and Alexander Krupp (Paderborn Univ., D)

A Model-based Integration and Testing Approach to Reduce Lead Time in System Development
N.C.W.M Braspenning, J.M. van de Mortel Fronczak, and J.E. Rooda (Eindhoven Univ. of Technology, NL)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF MBT ON SATURDAY, MARCH 25 EI 4

Presentations (chair: Alexandre Petrenko)

Towards Test Purpose Generation from CTL Properties for Reactive Systems
Daniel Aguiar da Silva and Patrícia D. L. Machado (Univ. Federal de Campina Grande, BR)

Runtime Verification for High-Confidence Systems: A Monte Carlo Approach
Sean Callanan, Radu Grosu, Abhishek Rai, Scott A. Smolka, Mike R. True, and Erez Zadok (Stony Brook Univ., USA)

15:30 – 16:00 COFFEE

16:00 – 18:00 SESSION 4 OF MBT ON SATURDAY, MARCH 25 EI 4

Presentation (chair: Bernhard Aichernig)

Controlling Testing using Three-Tier Model Architecture
Antti Kervinen, Mika Maunumaa, and Mika Katara (Tampere Univ. of Technology, FI)

09:30 – 10:30 SESSION 1 OF MBT ON SUNDAY, MARCH 26 EI 4

Invited Talk (chair: Yuri Gurevich)

Ten Years of Model Based Testing – A Sober Evaluation
Alan Hartman (IBM Haifa Research Lab., IL)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF MBT ON SUNDAY, MARCH 26 EI 4

Presentations (chair: Susanne Graf)

Testing Self-Similar Networks
Constantinos Djouvas, Nancy D. Griffeth (The City Univ. of New York, USA), and Nancy A. Lynch (MIT, Boston, USA)

Formal Conformance Testing of Systems with Refused Inputs and Forbidden Actions
Igor B. Bourdonov, Alexander S. Kossatchev, and Victor V. Kuliamin (Russian Academy of Sciences, Moscow, RUS)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF MBT ON SUNDAY, MARCH 26 EI 4

Presentations (chair: Bernd Finkbeiner)

Test Case Generation for Mutation-based Testing of Timeliness
Robert Nilsson (Univ. of Skövde, S), Jeff Offutt (George Mason Univ., Fairfax Virginia, USA), and Jonas Mellin (Univ. of Skövde, S)

When Model-based Testing Fails
Bernhard K. Aichernig (Graz Univ. of Technology, A, and United Nations Univ., Macao S.A.R. China) and Chris George (Graz Univ. of Technology, A)

15:30 – 16:00 COFFEE

16:00 – 16:45 SESSION 4 OF MBT ON SUNDAY, MARCH 26 EI 4

Discussion (chair: Alexander K. Petrenko)

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

SC Programme

09:00 – 10:15 SESSION 1 OF SC ON SATURDAY, MARCH 25 EI 10

Welcome

Invited Talk

Semantically Enabled Service-oriented Architectures
Dieter Fensel (DERI Galway, IRL, and DERI Innsbruck, A)

10:15 – 10:30 COFFEE

10:30 – 12:30 SESSION 2 OF SC ON SATURDAY, MARCH 25 EI 10

Composition Contracts (chair: Alexandre Bergel)

Automatic Checking of Component Protocols in Component-Based Systems
Wolf Zimmermann and Michael Schaarschmidt (Martin-Luther Univ. Halle-Wittenberg, D)

Checking Component Composability
Christian Attiogbé, Pascal André, and Gilles Ardourel (Univ. of Nantes, F)

Static Verification of Indirect Data Sharing in Loosely-coupled Component Systems
Lieven Desmet, Frank Piessens, Wouter Joosen, and Pierre Verbaeten (Katholieke Univ. Leuven, B)

Enforcing Different Contracts in Hierarchical Component-Based Systems
Philippe Collet (Univ. of Nice, Sophia Antipolis, F), Alain Ozanne, and Nicolas Rivierre (France Télécom, F)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF SC ON SATURDAY, MARCH 25 EI 10

AOP I (chair: Welf Löwe)

Automated Pattern-Based Pointcut Generation
Mathieu Braem, Kris Gybels, Andy Kellens, and Wim Vanderperren (Vrije Univ. Brussel, B)

An Aspect-Oriented Approach for Developing Self-Adapting Fractal Components
Pierre-Charles David (France Télécom, F) and Thomas Ledoux (École des Mines de Nantes, F)

Aspects of Composition in the Reflex AOP Kernel
Éric Tanter (Univ. of Chile, RCH)

15:30 – 15:45 COFFEE

15:45 – 17:15 SESSION 4 OF SC ON SATURDAY, MARCH 25 EI 10

Behavioral Semantics (chair: Wolf Zimmermann)

A Component-based Approach to Compose Transaction Standards
Romain Rouvoy (Univ. of Lille, F), Patricia Serrano-Alvarado (Univ. of Nantes, F), and Philippe Merle (Univ. of Lille, F)

A Class-Based Object Calculus of Dynamic Binding: Reduction and Properties
Pawel T. Wojciechowski (Poznán Univ. of Technology, PL)

Tracechecks: Defining Semantic Interfaces with Temporal Logic
Eric Bodden and Volker Stolz (RWTH Aachen Univ., D)

08:45 – 10:45 SESSION 1 OF SC ON SUNDAY, MARCH 26 EI 10

Composition Models (chair: Kung-Kiu Lau)

Service Composition with Directories
Ion Constantinescu, Walter Binder, and Boi Faltings (EPFL, Lausanne, CH)

Modeling Composition in Dynamic Programming Environments with Model Transformations
Uwe Zdun and Mark Strembeck (Vienna Univ. of Economics and BA, A)

General Composition of Software Artifacts
William Harrison (Trinity College, IRL), Harold Ossher, Peri Tarr (IBM Thomas J. Watson Research Center, USA)

Dimensions of Composition Models for Supporting Software Evolution?
In-Gyu Kim, Tegegne Marew, Doo-Hwan Bae (KAIST, ROK), Jang-Eui Hong (CBNU, ROK), and Sang-Yoon Min (KAIST Venture Incubator, ROK)

10:45 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF SC ON SUNDAY, MARCH 26 EI 10

AOP II (chair: Wim Vanderperren)

Context-Aware Aspects
Éric Tanter (Univ. of Chile, Santiago, RCH), Kris Gybels (Vrije Univ. Brussel, B), Marcus Denker (Univ. of Bern, CH), and Alexandre Bergel (Trinity College, IRL)

Understanding Design Patterns Density with Aspects – a Case Study in JHotDraw with AspectJ
Simon Denier and Pierre Cointe (École des Mines de Nantes, F)

A Model for Developing Component-Based and Aspect-Oriented Systems
Nicolas Pessemier, Lionel Seinturier (INRIA, F), Thierry Coupaye (France Télécom, F), and Laurence Duchien (INRIA, F)

12:30 – 13:45 LUNCH

13:45 – 15:45 SESSION 3 OF SC ON SUNDAY, MARCH 26 EI 10

Composition Techniques (chair: Thomas Gschwind)

FROGi: Fractal Components Deployment over OSGi
Mikael Desertot (Domaine Univ., Grenoble, F), Humberto Cervantes (Univ. Autonoma Metropolitana-Iztapalapa, MEX), and Didier Donsez (Domaine Univ., Grenoble, F)

Modular Design of Man-Machine Interfaces with Larissa
K. Altisen, F. Maraninchi, and D. Stauch (Verimag, F)

On the Integration of Classboxes into C#
Markus Lumpe (Iowa State Univ., USA) and Jean-Guy Schneider (Swinburne Univ. of Technology, AUS)

Automatic Control Flow Generation from Software Architectures
Kung-Kiu Lau and Vladyslav Ukis (Univ. of Manchester, UK)

15:45 – 16:00 COFFEE

16:00 – 17:00 SESSION 4 OF SC ON SUNDAY, MARCH 26 EI 10

Concluding Discussion and Remarks

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

SLAP Programme

09:00 – 10:30 SESSION 1 OF SLAP ON SATURDAY, MARCH 25 EI 1

Welcome
Florence Maraninchi (VERIMAG/Institut National Polytechnique de Grenoble, F) and Marc Pouzet (LRI/Univ. of Paris, F)

Invited Talk (chair: Marc Pouzet)

Use and Challenges of Synchronous Languages for High Performance Embedded Streaming Applications
Marc Duranton (Philips Research, Eindhoven, NL)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF SLAP ON SATURDAY, MARCH 25 EI 1

Presentations (chair: Florence Maraninchi)

An Esterel Virtual Machine for Embedded Systems
Becky Plummer, Mukul Kha janchi, and Stephen A. Edwards (Columbia Univ. NY, USA)

Compiling Esterel for Distributed Execution
Li Hsien Yoong, Partha Roop, and Zoran Salcic (University of Auckland, NZ)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF SLAP ON SATURDAY, MARCH 25 EI 1

Presentations (chair: Marc Pouzet)

Towards Static Analysis of SIGNAL Programs using Interval Techniques
Abdoulaye Gamatie, Thierry Gautier, and Paul Le Guernic (INRIA, F)

Modeling multi-clocked data-flow program using the Generic Modeling Environment
Christian Brunette, Jean-Pierre Talpin, Loic Besnard, and Thierry Gautier (INRIA, F)

15:30 – 16:00 COFFEE

16:00 – 18:00 SESSION 4 OF SLAP ON SATURDAY, MARCH 25 EI 1

Presentation and Special Session (chair: Florence Maraninchi)

Recognition and Evaluation of Jevon's Language by Composing 2-State Automata
Paul Amblard (TIMA, University of Grenoble, F)

Special Session on Education
speakers: to be announced

WITS Programme

09:30 – 10:30 SESSION 1 OF WITS ON SATURDAY, MARCH 25 EI 8

Opening Keynote (chairs: Dieter Gollmann and Jan Jurjens)

Limits of the Soundness of Dolev-Yao Models
Birgit Pfitzmann (IBM Zurich Research Lab)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF WITS ON SATURDAY, MARCH 25 EI 8

Composition, Abstraction, and Access Control (chair: Gavin Lowe)

Plans for Service Composition
Massimo Bartoletti, Pierpaolo Degano, and Gian Luigi Ferrari (Univ. of Pisa, I)

Incremental Certificates and Checkers for Abstraction-Carrying Code
Elvira Albert, Puri Arenas (Complutense Univ. of Madrid, E), and German Puebla (Technical Univ. of Madrid)

Event Systems and Access Control
Dominique Mery (Univ. Henri Poincare and LORIA, F) and Stephan Merz (INRIA Lorraine and LORIA, F)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF WITS ON SATURDAY, MARCH 25 EI 8

Applications (chair: Dieter Gollmann)

Breaking and Fixing Public-Key Kerberos
Iliano Cervesato, Aaron D. Jaggard (Tulane Univ., USA); Andre Scedrov, Joe-Kai Tsay, and Chris Walstad (Univ. of Pennsylvania, USA)

Analyzing for Absence of Timing Leaks in VHDL
Terkel K. Tolstrup and Flemming Nielson (Technical Univ. of Denmark, DK)

Defending the Bank with a Proof Assistant
Judicael Courant and Jean-Francois Monin (Univ. Joseph Fourier and VERIMAG, F)

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF WITS ON SATURDAY, MARCH 25 EI 8

Process Algebras (chair: Pierpaolo Degano)

Formal Verification of the ARAN Protocol Using the Applied Pi-Calculus
Jens Chr. Godskesen (IT Univ. of Copenhagen, DK)

Authentication and Sandboxing in a Distributed Pi-Calculus
Hans Huttel and Morten Kuhnrich (Aalborg Univ., DK)

Modeling Security Automata with Process Algebras and Related Results
Fabio Martinelli and Ilaria Matteucci (IIT-CNR, I)

09:30 – 10:30 SESSION 1 OF WITS ON SUNDAY, MARCH 26 EI 8

Keynote (chair: Jan Jurjens)

Topic to be announced
Pieter Hartel (Univ. of Twente, NL)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF WITS ON SUNDAY, MARCH 26 EI 8

Noninterference and Computational Justifications (chair: Peter Ryan)

Noninterference and the Most Powerful Probabilistic Adversary
Alessandro Aldini (Univ. of Urbino “Carlo Bo”, I) and Alessandra Di Pierro (Univ. of Pisa, I)

Non-Interference and Erasure Policies for Java Card Bytecode
Rene Rydhof Hansen and Christian W. Probst (Technical Univ. of Denmark, DK)

A Computational Justification for Guessing Attack Formalisms
Tom Newcomb and Gavin Lowe (Univ. of Oxford, UK)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF WITS ON SUNDAY, MARCH 26 EI 8

Trust, Anonymity, and Verification (chair: TBD)

An Operational Semantics for Trust Policies
Karl Krukow (BRICS, University of Aarhus, DK)

Backward Simulations for Anonymity
Yoshinobu Kawabe, Ken Mano, Hideki Sakurada, and Yasuyuki Tsukada (NTT Corporation)

A Unification-Based Decision Procedure for Cryptographic Protocol Analysis
Deepak Bhardwaj and Deepak D'Souza (Indian Inst. of Science, Bangalore, IND)

15:30 – 16:00 COFFEE

16:00 – 17:00 SESSION 4 OF WITS ON SUNDAY, MARCH 26 EI 8

Closing Keynote (chair: Pierpaolo Degano)

Automated Validation of Internet Security Protocols: Present and Future
Luca Vigano (ETH Zurich, CH)

17:00 – 18:00 IFIP WG 1.7 MEETING (INTERNAL)

19:30 JOINT WORKSHOPS PRE-CONFERENCE DINNER
Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien

Post-Conference Workshops Programme

AVIS Programme

09:15 – 10:30 SESSION 1 OF AVIS ON SATURDAY, APRIL 1 EI 1

Welcome and Introduction
AVIS organizers

Invited Talk

Topic to be announced
Eric Meijer (Microsoft Research, USA)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF AVIS ON SATURDAY, APRIL 1 EI 1

Program Analysis

Abstract Interpretation meets Model Checking near the 10^6 LOC Mark
Peter T. Brewer and Simon Pickin (Univ. Carlos III, Madrid, E)

Fast Pointer Systems to Counter Systems Using Shape Analysis
Sébastien Bardin, Alain Finkel, Étienne Lozes, and Arnaud Sangnier (ENS Cachan, F)

Interprocedural Program Analysis for Java based on Weighted Pushdown Model Checking
Li Xin and Mizuhito Ogawa (JAIST, J)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF AVIS ON SATURDAY, APRIL 1 EI 1

Invited Talk

To be announced

Parameterized and Infinite State Systems

On the Coverability Problem of Constrained Multiset Rewriting
Parosh Aziz Abdulla (Uppsala Univ. S) and Giorgio Delzanno (Univ. of Genoa, I)

15:30 – 16:00 COFFEE

16:00 – 17:15 SESSION 4 OF AVIS ON SATURDAY, APRIL 1 EI 1

Concurrency

Applying Reduction Rules to ECATNets
Noura Boudiaf (CEDRIC-CNAM, F), Allaoua Chaoui (Univ. of Constantine, DZ), and Kamel Barkaoui (CEDRIC-CNAM, F)

A Bounded True Concurrency Process Algebra for Automated Verification
M. Carmen Ruiz, Diego Cazorla, Fernando Cuartero, and Juan J. Pardo (Univ. of Castilla, E)

Final Discussion and Closing Remarks

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

COCV Programme

08:40 – 10:30 SESSION 1 OF COCV ON SUNDAY, APRIL 2 EI 5

Opening
Wolf Zimmermann (Univ. of Halle, D)

Invited Keynote Speech

Practical Applications of Compiler Verification Techniques in Developing Production Optimizing Compilers
Robert Charles Morgan (IBM, USA)

Presentation (chair: Wolf Zimmermann)

Functional Elmination of Phi-Instructions
Lennart Beringer (LMU Munich, D)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF COCV ON SUNDAY, APRIL 2 EI 5

Presentations (chair: George C. Necula)

Generating Invariants for Translation Validation
Yi Fang (Microsoft, Redmond, US) and Lenore D. Zuck (Univ. of Illinois at Chicago, USA)

Optimisation Validation
David Aspinall (Univ. of Edinburgh, UK), Lennart Beringer (LMU Munich, D), and Alberto Momigliano (Univ. of Edinburgh, UK, and Univ. of Milano, I)

Coinductive Verification of Program Optimizations using Similarity Relations
Sabine Glesner, Johannes Leitner, and Jan Olaf Blech (Technical Univ. of Berlin, D)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF COCV ON SUNDAY, APRIL 2 EI 5

Presentations (chair: Markus Müller-Olm)

Structuring Optimizing Transformations and Proving them Sound
Aditya Kanade, Amitabha Sanyal, and Uday Khedker (IIT Bombay, IND)

Data-Flow Analysis as a General Concept for the Transport of Verifiable Programs
Wolfram Amme, Marc-Andre Müller, Philipp Adler (Univ. of Jena, D)

Using Verified Data-Flow Analysis-based Optimizations in Attribute Grammars
Eric Van Wyk, Lijesh Krishnan (Univ. of Minnesota, USA)

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF COCV ON SUNDAY, APRIL 2 EI 5

Invited Keynote Speech (chair: Jens Knoop)

What Level of Mathematical Reasoning can Computer Science Demand of a Software Implementer?
Hans Langmaack (Christian-Albrechts-Univ. Kiel, D)

Closing
Jens Knoop (Vienna Univ. of Technology, A)

FRCSS Programme

09:00 – 10:30 SESSION 1 OF FRCSS ON SATURDAY, APRIL 1 Kontaktraum

Opening

Welcome
Tiziana Margaria and Jose-Luis Fernandez Villacanas

The Austrian Perspective
Gerald Steinhard (Dean, Vienna Univ. of Technology, A)

Keynote: The Future of Software and Services
Günter Böckle (Siemens)

The NESSI Perspective
Stefano de Panfilis (Engineering)

Project Presentations of Challenges

AOSD
Awais Rashid

RODIN
Alexander Romanovsky

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF FRCSS ON SATURDAY, APRIL 1 Kontaktraum

Presentations from Our Projects

SECSE
Stefano de Panfilis

DEDISYS
Karl Goeschka

MODELWARE
Philippe Millot

ASG
Jari Veijalainen (tbc)

AMIGO
Maddy Janse

INFRAWEBS
H.-J. Nern

PYPY
Alistair Burt

MADAM
Svein Hallsteinsen

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF FRCSS ON SATURDAY, APRIL 1 Kontaktraum

Technical Session: From Software to Services

Maintaining Large Software Distributions: New Challenges from the FOSS Era
Roberto Di Cosmo, Berke Durak, Xavier Leroy, Fabio Mancinelli, and Jerome Vouillon

Softure: Adaptable, Reliable and Performing Software for the Future
Valerie Issarny, Antonia Bertolino, Wolfgang Emmerich, and Paola Inverardi

Requirements Composition and Refinement: Towards Composition-Centric Requirements Engineering
Ruzanna Chitchyan, Awais Rashid, and Pete Sawyer

Short Contributions

Business Modelling Environment. BMETool
Miguel Jose Montesdeoca, Juan Hernandez, Ana Placido, and Mario Hernandez

An European Open Source Project Information Server
Chris Chedgey, Micheal O'Foghlu, and Eamonn de Leastar

Perspectives for a Model-driven Service Engineering Discipline
Claus Pahl

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF FRCSS ON SATURDAY, APRIL 1 Kontaktraum

Technical Session: Semantics and Services as Complexity Challenge

Emergent Phenomena in AmI Spaces
Ioannis Zaharakis and Achilles Kameas

A Semantic Choreography-Driven Frequent Flyer Program
José-Manuel López-Cobo, Alejandro López-Pérez, James Scicluna

Characterization of Semantic Grid Engineering
Joachim Bayer, Fabio Bella, and Alexis Ocampo

Short Contributions

Extended Service Binder: Dynamic Service Availability Management in Ambient Intelligence
André Bottaro and Anne Gérodolle

Service-Oriented Development In a Unified framework (SODIUM) – Future Research Challenges
Arne Berre, H. Hoff, D. Skogan, A. Tsalgatidou G. Athanasopoulos, and M. Pantazoglou

Research Challenges in Mobile and Context-Aware Service Development
Julien Pauty, Davy Preuveneers, Peter Rigole, and Yolande Berbers

Context Management and Semantic Modeling for Ambient Intelligence
Fano Ramparany, Jérôme Euzenat, Tom Broens, Jérôme Pierson

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

GT-VMT Programme

08:40 – 10:30 SESSION 1 OF GT-VMT ON SATURDAY, APRIL 1 EI 3

Welcome
Roberto Bruni and Daniel Varro

Invited Talk (chair: Roberto Bruni)

Topic to be announced
Jeff Magee

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF GT-VMT ON SATURDAY, APRIL 1 EI 3

Theory of Graph Transformation (chair: Reiko Heckel)

Efficient Conflict Detection in Graph Transformation Systems by Essential Critical Pairs
Leen Lambers, Hartmut Ehrig, and Fernando Orejas

Exploiting User-Definable Synchronizations in Graph Transformations
Ivan Lanese

Towards a Notion of Transaction in Graph Rewriting
Paolo Baldan, Andrea Corradini, Fernando Luis Dotti, Luciana Foss, and Fabio Gadducci

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF GT-VMT ON SATURDAY, APRIL 1 EI 3

QVT and Graph Transformation (chair: Mark Minas)

Graph Transformation Semantics for a QVT Language
Arend Rensink and Ronald Nederpel

Transformational Pattern System – some Assembly Required
Mika Siikarla, Tarja Systa

On Challenges for a Graphical Transformation Notation and the UMLX Approach
Edward Willink

View Creation of Meta Models by Using Modified Triple Graph Grammars
Johannes Jakob and Andy Schurr

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF GT-VMT ON SATURDAY, APRIL 1 EI 3

Verification of Validation (chair: Paolo Baldan)

Towards Testing the Implementation of Graph Transformations
Andrea Darabos, Andras Pataricza, and Daniel Varro

Towards Verifying Model Transformations
Anantha Narayanan and Gabor Karsai

Augur 2 – A New Version of a Tool for the Analysis of Graph Transformation Systems
Barbara König and Vitali Kozioura

BPSL Modeler – Visual Notation Language for Intuitive Business Property Reasoning
Ke Xu, Ying Liu, and Cheng Wu

Simulation and Formal Analysis of Workflow Models
Mate Kovacs and Laszlo Gonczy

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

09:00 – 10:30 SESSION 1 OF GT-VMT ON SUNDAY, APRIL 2 EI 3

Invited Talk (chair: Daniel Varro)

The Role of Visual Modeling and Model Transformations in Business-driven Development
Jana Koehler

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF GT-VMT ON SUNDAY, APRIL 2 EI 3

Models, Code, Metrics (chair: Mark Minas)

Maintaining Coherency between Models with Distributed Rules: from Theory to Eclipse
Paolo Bottoni, Francesco Parisi Presicce, Gabriele Taentzer, and Simone Pulcini

Visual Specification of Metrics for Domain Specific Visual Languages
Esther Guerra, Paloma Diaz, and Juan de Lara

Semi-Automatic Generation of Metamodels and Models from Grammars and Programs
Andreas Kunert

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF GT-VMT ON SUNDAY, APRIL 2 EI 3

Programming and Implementation Techniques (chair: Arend Rensink)

Implementing an EJB3-Specific Graph Transformation Plugin by Database-Independent Queries
Gergely Varro

Copying Subgraphs within Model Repositories
Pieter Van Gorp, Hans Schippers, and Dirk Janssens

The York Abstract Machine
Greg Manning and Detlef Plump

An Example of Cloning Graph Transformation Rules for Programming
Mark Minas and Berthold Hoffmann

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF GT-VMT ON SUNDAY, APRIL 2 EI 3

UML and OCL (chair: Arend Rensink)

Towards a Graphical Tool for refining User to System Requirements
Marco Autili and Patrizio Pelliccione

Translation of Restricted OCL Constraints into Graph Constraints for Generating Meta Model Instances by Graph Grammars
Karsten Ehrig, Jochen Kuster, Gabriele Taentzer, and Jessica Winkelmann

A Rule-based, Integrated Modelling Approach for Object-Oriented Systems
Benjamin Braatz

A typed attributed Graph Grammar with Inheritance for the Abstract Syntax of UML Class and Sequence Diagrams
Frank Hermann, Hartmut Ehrig, and Gabriele Taentzer

17:30 – 18:00 CLOSING

LDTA Programme

09:00 – 10:30 SESSION 1 OF LDTA ON SATURDAY, APRIL 1 EI 5

Invited Talk and Presentation

DSL Coordination: an Open Problem in Model Driven Engineering
Jean Bézivin (Invited Talk)

Characterizing the Uses of a Software Modeling Tool
Xiaoming Li, Daryl Shannon, Jabari Walker, Safraz Kurshid, and Darko Marinov

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF LDTA ON SATURDAY, APRIL 1 EI 5

Presentations

Prolog Framework for the Rapid Prototyping of Language Processors with Attribute Grammars
José Luis Sierra and Alfredo Fernández-Valmayor

AspectLISA: an Aspect-Oriented Compiler Construction System Based on Attribute Grammars
Damijan Rebernak, Marjan Mernik, Pedro Rangel Henriques and Maria João Varanda Pereira

Tool Demonstration: The Language Evolver Lever
Elmar Juergens and Markus Pizka

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF LDTA ON SATURDAY, APRIL 1 EI 5

Presentations

Combining Deep and Shallow Embeddings
Joni Helin

Incremental Confined Types Analysis
Michael Eichberg, Sven Kloppenburg, Mira Mezini, and Tobias Schuh

Tool Demonstration: sbp: A Scannerless Boolean Parser
Adam Megacz

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF LDTA ON SATURDAY, APRIL 1 EI 5

Presentations, Discussion, and Closing

A Domain-Specific Language for Generating Dataflow Analyzers
Jia Zeng, Chuck Mitchell, and Stephen A. Edwards

Automated Derivation of Translators From Annotated Grammars
Diego Ordonez Camacho, Kim Mens, Mark van den Brand, and Jurgen Vinju

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

QAPL Programme

09:15 – 10:30 SESSION 1 OF QAPL ON SATURDAY, APRIL 1 EI 4

Welcome

Invited Talk

Modelling and Verification of Real-Time Systems with UML and IF: Some Experimental Results and Future Plans
Susanne Graf (VERIMAG, Grenoble, F)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF QAPL ON SATURDAY, APRIL 1 EI 4

Sochastic Models

Trace semantics for Stochastic Systems with Nondeterminism
Verena Wolf, Christel Baier, and Mila Majster-Cederbaum (Univ. of Mannheim, D)

Component-Oriented Specification of Performance Measures
Alessandro Aldini and Marco Bernardo (Univ. of Urbino, I)

Stochastic Ambient Calculus
M.G. Vigliotti and P.G. Harrison (Imperial College, UK)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF QAPL ON SATURDAY, APRIL 1 EI 4

Invited Talk

On the Power of a Single Clock
Joel Ouaknine (Oxford, UK)

Presentation

Timers for Distributed Systems
Gabriel Ciobanu and Cristian Prisacariu (Romanian Academy, RO)

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF QAPL ON SATURDAY, APRIL 1 EI 4

Process Calculi

Beta-Binders for Biological Quantitative Experiments
Pierpaolo Degano, Davide Prandi, Corrado Priami, and Paola Quaglia (Univ. di Trento, I)

Expressiveness of Probabilistic π-Calculi
Sylvain Pradalier and Catuscia Palamidessi (Lix, Ecole Politechnique, F)

Stochastic Fusion Calculus
Gabriel Ciobanu and Laura Cornacel (Romanian Academy, RO)

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

09:00 – 10:30 SESSION 1 OF QAPL ON SUNDAY, APRIL 2 EI 4

Invited Talk

Cryptographic Fulfilment of Distributed-System Specifications
Birgit Pfitzmann (IBM, Zurich, CH)

Abstract Presentation

Towards a Quantitative Analysis of Security Protocols
Pedro Adao, Paulo Mateus, Tiago Reis, and Luca Vigano (ETH Zurich, CH)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF QAPL ON SUNDAY, APRIL 2 EI 4

Java

Quantitative Static Analysis over Semirings: Application to Cache Behaviour Analysis of Java Card Byte Code
Pascal Sotin, David Cachera, and Thomas Jensen (IRISA, F)

Exact and Portable Profiling for the JVM Using Bytecode Instruction Counting
Walter Binder and Jarle Hulaas (EPFL, CH)

Return Value Prediction meets Information Theory
Jeremy Singer and Gavin Brown (Univ. of Manchester, UK)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF QAPL ON SUNDAY, APRIL 2 EI 4

Invited Talk

Stochastic Klaim and its Logic: A Formal Approach Towards Dependable Global Computing
Rocco De Nicola (Florence, I)

Abstract Presentation

Formal Analysis of Streaming Downloading Protocol for System Upgrading
Miaomiao Zhang and Dang Van Hung (Tongji Univ. CN)

15:30 – 16:00 COFFEE

16:00 – 17:00 SESSION 4 OF QAPL ON SUNDAY, APRIL 2 EI 4

Declarative Programming

Stochastic Concurrent Constraint Programming
Luca Bortolussi (Univ. of Udine, I)

Quantitative Datalog Semantics for Databases with Uncertain Information
Daniel Stamate (Goldsmiths Univ. of London, UK)

SPIN Programme

08:30 – 09:30 SESSION 1 OF SPIN ON THURSDAY, MARCH 30 EI 7

TACAS Invited Talk

Distributed Model-Checking Algorithms for WPDS with Applications to Trust-Management Systems
Somesh Jha (Univ. of Wisconsin, Madison, USA)

09:30 – 10:00 COFFEE

10:00 – 12:00 SESSION 2 OF SPIN ON THURSDAY, MARCH 30 EI 7

TACAS/SPIN Tool Demonstrations (chair: Thierry Jeron)

PRISM: A Tool for Automatic Verification of Probabilistic Systems
Andrew Hinton, Marta Kwiatkowska, Gethin Norman, and David Parker (Univ. of Birmingham, UK)

DISTRIBUTOR and BCG_MERGE: Tools for Distributed Explicit State Space Generation
Hubert Garavel, Radu Mateescu, Damien Bergamini, Adrian Curic, Nicolas Descoubes, Christophe Joubert, Irina Smarandache-Sturm, and Gilles Stragier (INRIA Rhône-Alpes / VASY, F)

MCMAS: a Model Checker for Multi-Agent Systems
Franco Raimondi and Alessio Lomuscio (Univ. College London, UK)

A Counterexample-Guided Refinement Tool for Open Procedural Programs
Aleksandar Dimovski (Univ. of Warwick, UK), Dan R. Ghica (Univ. of Birmingham, UK), and Ranko Lazić (Univ. of Warwick, UK)

12:30 – 14:00 LUNCH

14:00 – 15:00 SESSION 3A OF SPIN ON THURSDAY, MARCH 30 EI 7

FOSSACS Invited Talk

Oh Mega Completeness
Wan Fokkink (Vrije Univ. Amsterdam, NL)

15:00 – 15:15 BREAK

15:15 – 16:15 SESSION 3B OF SPIN ON THURSDAY, MARCH 30 EI 7

TACAS/SPIN Tool Demonstrations (chair: Susanne Graf)

jMosel: A Stand-Alone Tool and jABC Plugin for M2L(Str)
Christian Topnik, Eva Wilhelm (Univ. Dortmund, D), Tiziana Margaria (Univ. Göttingen, D), and Bernhard Steffen (Univ. Dortmund, D)

MSCan – A Tool for Analyzing MSC Specifications
Benedikt Bollig (LSV, CNRS Cachan, F), Carsten Kern, Markus Schlütter, and Volker Stolz (RWTH Aachen, D)

16:15 – 16:45 COFFEE

16:45 – 18:30 SESSION 4 OF SPIN ON THURSDAY, MARCH 30 EI 9

Tool and Tutorial (chair: Dragan Bosnacki)

Model Checking Dynamic States in GROOVE
Harmen Kastenberg and Arend Rensink (Univ. of Twente, Enschede, NL)

Tutorial: Directed Model Checking
Stefan Edelkamp (Univ. of Dortmund, D)

19:30 RECEPTION

Intel invites all ETAPS participants to a reception in the "Prechtlsaal" on the ground floor of the TU Main Building, Karlsplatz 13, 1040 Wien

08:30 – 09:30 SESSION 1 OF SPIN ON FRIDAY, MARCH 31 EI 7

CC Invited Talk

Using Dependent Types to Port Type Systems to Low-Level Languages
George Necula (Univ. of California, Berkeley, USA)

09:30 – 10:00 COFFEE

10:00 – 12:00 SESSION 2 OF SPIN ON FRIDAY, MARCH 31 EI 7

Directed Model Checking (chair: Stefan Leue)

Large-Scale Directed Model Checking LTL
Stefan Edelkamp and Shahid Jabbar (Univ. of Dortmund, D)

Directed Model Checking with Distance-Preserving Abstractions
Klaus Dräger, Bernd Finkbeiner (Univ. des Saarlandes, Saarbrücken, D), and Andreas Podelski (Max-Planck-Inst. for CS, Saarbrücken, D)

Adapting an AI Planning Heuristic for Directed Model Checking
Sebastian Kupferschmid (Univ. of Freiburg, D), Jörg Hoffmann (Max-Planck-Inst. for CS, Saarbrücken, D), Henning Dierks (OFFIS, D), and Gerd Behrmann (Aalborg Univ., DK)

Larger Automata and Less Work for LTL Model Checking
Jaco Geldenhuys (Stellenbosch Univ., Matieland, RSA) and Henri Hansen (Tampere Univ. of Tech., FI)

12:30 – 14:00 LUNCH

14:00 – 16:00 SESSION 3 OF SPIN ON FRIDAY, MARCH 31 EI 9

Markovian Systems (chair: Gianfranco Ciardo)

Don’t know in Probabilistic Systems
Harald Fecher (Univ. of Kiel, D), Martin Leucker (TU Munich, D), and Verena Wolf (Univ. of Mannheim, D)

Symbolic Model Checking of Stochastic Systems: Theory and Implementation
Matthias Kuntz and Markus Siegle (Univ. of Federal Armed Forces, Munich, D)

Distributed Model Checking (chair: Gianfranco Ciardo)

Parallel and Distributed Model Checking in Eddy
Igor Melatti, Robert Palmer, Geoffrey Sawaya, Yu Yang, Robert Mike Kirby, and Ganesh Gopalakrishnan (Univ. of Utah, USA)

Distributed On-the-Fly Model Checking and Test Case Generation
Christophe Joubert (INRIA Rhone-Alpes / VASY, F) and Radu Mateescu (ENS LYON / LIP / PLUME, F)

16:00 – 16:30 COFFEE

16:30 – 18:00 SESSION 4 OF SPIN ON FRIDAY, MARCH 31 EI 9

Advanced Handling of Data Aspects (chair: Ganesh Gopalakrishnan)

Bounded Model Checking of Software using SMT Solvers instead of SAT Solvers
Alessandro Armando, Jacopo Mantovani, and Lorenzo Platania (Univ. degli Studi di Genova, I)

Symbolic Execution with Abstract Subsumption Checking
Saswat Anand (Georgia Inst. Tech., USA), Corina S. Pasareanu, and Willem Visser (NASA Ames Res. Center, USA)

Abstract Matching for Software Model Checking
Pedro de la Camara, Maria del Mar Gallardo, and Pedro Merino (Univ. of Malaga, E)

19:30 SPIN DINNER
Dinner at the hotel *Das Triest*, Wiedner Hauptstraße 12, 1040 Wien

08:30 – 10:30 SESSION 1 OF SPIN ON SATURDAY, APRIL 1 EI 9

SPIN Invited Talk (chair: Antti Valmari)

Formal Verification of Industrial Microprocessor Designs
Roope Kaivola

Applications (chair: Corina Pasareanu)

A Parametric State Space for the Analysis of the Infinite Class of Stop-and-Wait Protocols
Guy Edward Gallasch and Jonathan Billington (Univ. of South Australia, AUS)

Verification of Medical Guidelines by Model Checking – A Case Study
Simon Bäumler, Michael Balser, Andriy Dunets, Wolfgang Reif, and Jonathan Schmitt (Univ. of Augsburg, D)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF SPIN ON SATURDAY, APRIL 1 EI 9

Assume-Guarantee (chair: Markus Siegle)

Towards a Compositional SPIN
Corina S. Pasareanu and Dimitra Giannakopoulou (NASA Ames Research Center, Moffett Field, CA, USA)

Partial Order Reduction (chair: Markus Siegle)

Exploiting Symmetry and Transactions for Partial Order Reduction of Rule Based Specifications
Ritwik Bhattacharya (Univ. of Utah, USA), Steven M. German (IBM T.J. Watson Research Center, USA), and Ganesh Gopalakrishnan (Univ. of Utah, USA)

Partial-Order Reduction for General State Exploring Algorithms
Dragan Bosnacki (Eindhoven Univ. of Tech., NL), Stefan Leue (Univ. of Konstanz, D), and Alberto Lluch Lafuente (Empoli, I)

12:30 – 14:00 LUNCH

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

TERMGRAPH Programme

09:15 – 10:30 SESSION 1 OF TERMGRAPH ON SATURDAY, APRIL 1 EI 10

Welcome

Invited Talk (chair: Maribel Fernández)

Concurrent Term Graph Models for Nominal Calculi with Fusion
Ugo Montanari (Univ. of Pisa, I)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF TERMGRAPH ON SATURDAY, APRIL 1 EI 10

Presentations (chair: Aart Middeldorp)

Observational Equivalence for the Interaction Combinators and Internal Separation
Damiano Mazza (Univ. of Marseille, F)

Unification and Matching of Nominal Terms in Maude
Christophe Calvès and Maribel Fernández (King's College London, UK)

Explicit Alpha Conversion and Garbage Collection in X
Steffen van Bakel and Jayshan Raghunandan (Imperial College London, UK)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF TERMGRAPH ON SATURDAY, APRIL 1 EI 10

Presentations (chair: Ian Mackie)

Towards a Theory of Tracing for Functional Programs based on Graph Rewriting
Olaf Chitil and Yong Luo (Univ. of Kent, UK)

A Local Graph-rewriting System for Deciding Equality in Sum-product Theories
José Bacelar Almeida, Jorge Sousa Pinto, and Miguel Vilaça (Univ. of Minho, P)

Lazy Context Cloning for Non-Deterministic Graph Rewriting
Sergio Antoy, Daniel W. Brown and Su-Hui Chiang (Portland State Univ., USA)

15:30 – 16:00 COFFEE

16:00 – 17:30 SESSION 4 OF TERMGRAPH ON SATURDAY, APRIL 1 EI 10

Presentations (chair: Bernhard Gramlich)

Modeling Pointer Redirection as Cyclic Term-graph Rewriting
Dominique Duval, Rachid Echahed, and Frédéric Prost (IMAG, Grenoble, F)

Term Graphs for Imperative Programming Languages
Paul Hovland, Boyana Norris, and Jean Utke (Argonne National Lab., USA)

Discussion

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

WRLA Programme

09:00 – 10:30 SESSION 1 OF WRLA ON SATURDAY, APRIL 1 EI 2

Welcome

Invited Talk (chair: Carolyn Talcott)

Title to be announced
Arvind (MIT, USA)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF WRLA ON SATURDAY, APRIL 1 EI 2

Rewriting Techniques (chair: Francisco Durán)

Making Partial Order Reduction Tools Language-Independent
Azadeh Farzan and José Meseguer (Univ. of Illinois at Urbana-Champaign, USA)

Distributive Rho-Calculus
Horatiu Cirstea (LORIA and Nancy I and Nancy II, F), Clément Houtmann (LORIA, ENS-Cachan, F) Benjamin Wack (LORIA and Nancy I and Nancy II, F)

Canonical Abstract Syntax Trees
Antoine Reilles (CNRS and LORIA, F)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF WRLA ON SATURDAY, APRIL 1 EI 2

Tools (chair: Peter Ölveczky)

Maude MSOS Tool
Fabricio Chalub and Christiano Braga (Univ. Federal Fluminense, BR)

Abstraction and Model Checking of Core Erlan Programs in Maude
Martin Neuhäusser and Thomas Noll (RWTH Aachen Univ., D)

Java+ITP: A Verification Tool Based on Hoare Logic and Algebraic Semantics
Ralf Sasse and José Meseguer (Univ. of Illinois at Urbana-Champaign, USA)

15:30 – 16:00 COFFEE

16:00 – 17:30 (18:00) SESSION 4 OF WRLA ON SATURDAY, APRIL 1 EI 2

Rewriting System Competition (chair: Grigore Rosu)

19:30 JOINT WORKSHOPS POST-CONFERENCE DINNER
Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien

09:00 – 10:30 SESSION 1 OF WRLA ON SUNDAY, APRIL 2 EI 2

Rewriting Logic as a Framework (chair: Narciso Martí-Oliet)

Abstraction and Completeness for Real-Time Maude
Peter Csaba Ölveczky (Univ. of Oslo, N) and José Meseguer (Univ. of Illinois at Urbana-Champaign, USA)

A Rewrite Framework for Language Definitions and for Generation of Efficient Interpreters
Mark Hills, Traian Serbanuta, and Grigore Rosu (Univ. of Illinois Urbana-Champaign, USA)

A Rewriting Logic Framework for Soft Constraints
Martin Wirsing (Ludwig Maximilian Univ. München, D), Grit Denker, Carolyn Talcott, Andy Poggio, Linda Briesemeister (SRI International, USA)

10:30 – 11:00 COFFEE

11:00 – 12:30 SESSION 2 OF WRLA ON SUNDAY, APRIL 2 EI 2

Modeling and Representation (chair: Martin Wirsing)

Solving Sudoku Puzzles with Rewriting Rules
Gustavo Santos-García (Univ. de Salamanca, E) and Miguel Palomino (Univ. Complutense de Madrid, E)

On Modelling Sensor Networks in Maude
Dilia Rodriguez (Air Force Research Lab., USA)

Implementation of Mobile Maude
Francisco Duran (Univ. de Málaga, E), Alberto Verdejo, and Adrian Riesco (Univ. Complutense de Madrid, E)

12:30 – 14:00 LUNCH

14:00 – 15:30 SESSION 3 OF WRLA ON SUNDAY, APRIL 2 EI 2

Semantics and System Demos (chair: Manuel Clavel)

A Rewriting Semantics for ABEL with Applications to Hardware/Software Co-Design and Analysis
Mike Katelman and José Meseguer (Univ. of Illinois at Urbana-Champaign, USA)

System Demo: Maude
Steven Eker (SRI International, USA)

System Demo: TOM + XRHO the Explicit Rewriting Calculus
Germain Faure and Antoine Reilles (LORIA, F)

15:30 – 16:00 COFFEE

16:00 – 17:30 (18:00) SESSION 4 OF WRLA ON SUNDAY, APRIL 2 EI 2

Tool Demos (chair: José Meseguer)

MOMENT-OCL: Algebraic Specifications of OCL 2.0 within the Eclipse Modeling Framework
Artur Boronat, Joaquín Oriente, Abel Gómez, José Á. Carsí, and Isidro Ramos (Univ. Politècnica de Valencia, E)

ITP/OCL: A Rewriting-Based Validation Tool for UML+OCL Class Diagrams
Manuel Clavel (Univ. Complutense de Madrid, E)

Web ITP Tool Server: A Web-Based Interface for the ITP Tool
Adrian Riesco (Univ. Complutense de Madrid, E)

Tutorials

The Computer Science Perspective on Quantum Information Processing and Communication

Saturday, March 25 by Philippe Jorrand

08:30 – 10:30 SESSION 1, SATURDAY, MARCH 25 Location: EI 3A

Lecture 1: Basic Principles for Quantum Computation and Communication

Lecture 2: Communication, the Quantum Way

10:30 – 11:00 COFFEE

11:00 – 13:00 SESSION 2, SATURDAY, MARCH 25 Location: EI 3A

Lecture 3: Computing with Quantum Resources

Lecture 4: Foundational Structures for Quantum Computation

13:00 – 14:00 LUNCH

Phoenix: A Framework for Code Generation and Program Analysis

Saturday, April 1 by Chuck Mitchell and Mark Lewin

08:30 – 10:30 SESSION 1, SATURDAY, APRIL 1 Location: EI 8

10:30 – 11:00 COFFEE

11:00 – 13:00 SESSION 2, SATURDAY, APRIL 1 Location: EI 8

13:00 – 14:00 LUNCH

Social Programme

CMCS Dinner, Saturday, March 25

Dinner at the restaurant *Artner*, Floragasse 6, 1040 Wien, 7:30 pm. The restaurant is in short walking distance from the ETAPS location.

Joint Workshops Pre-Conference Dinner, Sunday, March 26

Dinner at the historic restaurant *Piaristenkeller*, Piaristengasse 45, 1080 Wien, 7:30 pm. Public transportation from Karlsplatz: U2 to Rathaus, then about 9 minutes walk.

Reception, Monday, March 27

The *Bürgermeister der Bundeshauptstadt Wien* invites all ETAPS participants to a reception in the *Rathaus* (Vienna City Hall), 7:30 pm.

The Rathaus is one of the most splendid amongst the numerous monumental buildings along Vienna's famous Ringstraße. Historicism dominates the architecture of the Ringstraße, combining various stylistic elements of the past into a style in its own right. The Rathaus was built in Gothic style. Today the Rathaus is the head office of Vienna's municipal administration.

Public transportation from Karlsplatz: U2 to Rathaus; or if you prefer sightseeing: from tram station Gußhausstraße with tram line D (direction Nußdorf) to Rathausplatz/Burgtheater.

Banquet, Tuesday, March 28

Main Conference Banquet in the Orangery of Schönbrunn Palace, 7:30 pm.

Schönbrunn Palace is an important cultural monument showing the magnificence of the former Austrian-Hungarian empire. Together with the huge park it is on the UNESCO list of World Heritage Sites. The Schönbrunn Orangery is one of the two largest Baroque orangeries in the world. We have the banquet in the renovated front section, while the rear part is still in use as winter quarters for citrus trees and other plants.

Public transportation from Karlsplatz: Underground U4 (direction Hütteldorf) to Schönbrunn.

"Heuriger", Wednesday, March 29

Traditional dinner at the "Heurigen" *Schübel-Auer*, Kahlenberger Straße 22, Wien-Nußdorf, 7:30 pm.

"Heuriger" is the Viennese term for the wine of the most recent grape harvest, and it is also the name of the places where the wine is served.

Public transportation from Tram station Gußhausstraße: Tram line D to Beethovengang (direction Nußdorf).

Reception, Thursday, March 30

Intel invites all ETAPS participants to a reception in the “Prechtlsaal” on the ground floor of the TU Main Building, Karlsplatz 13, 1040 Wien, 7:30 pm.

SPIN Dinner, Friday, March 31

Dinner at the hotel *Das Triest*, Wiedner Hauptstraße 12, 1040 Wien, 7:30 pm. The hotel is in short walking distance from the ETAPS location.

Joint Workshops Post-Conference Dinner, Saturday, April 1

Dinner at the restaurant *Wiener Rathauskeller*, Lanner Saal, Rathausplatz 1, 1010 Wien, 7:30 pm. Public transportation from Karlsplatz: U2 to Rathaus.

Restaurant Guide

The map on the next page shows restaurants and other food sources near the ETAPS location.

Comments on the map

Most restaurants offer lunch specials (Menü: several courses; Tagesteller: one course) for about 5 to 8 Euro (without drinks and tips). Those that do not and that do not have regular meals in that range are marked as * (expensive) on the map.

Most Cafés offer lunch specials and small meals; those that offer a menu of full meals are usually marked as Viennese restaurants (V).

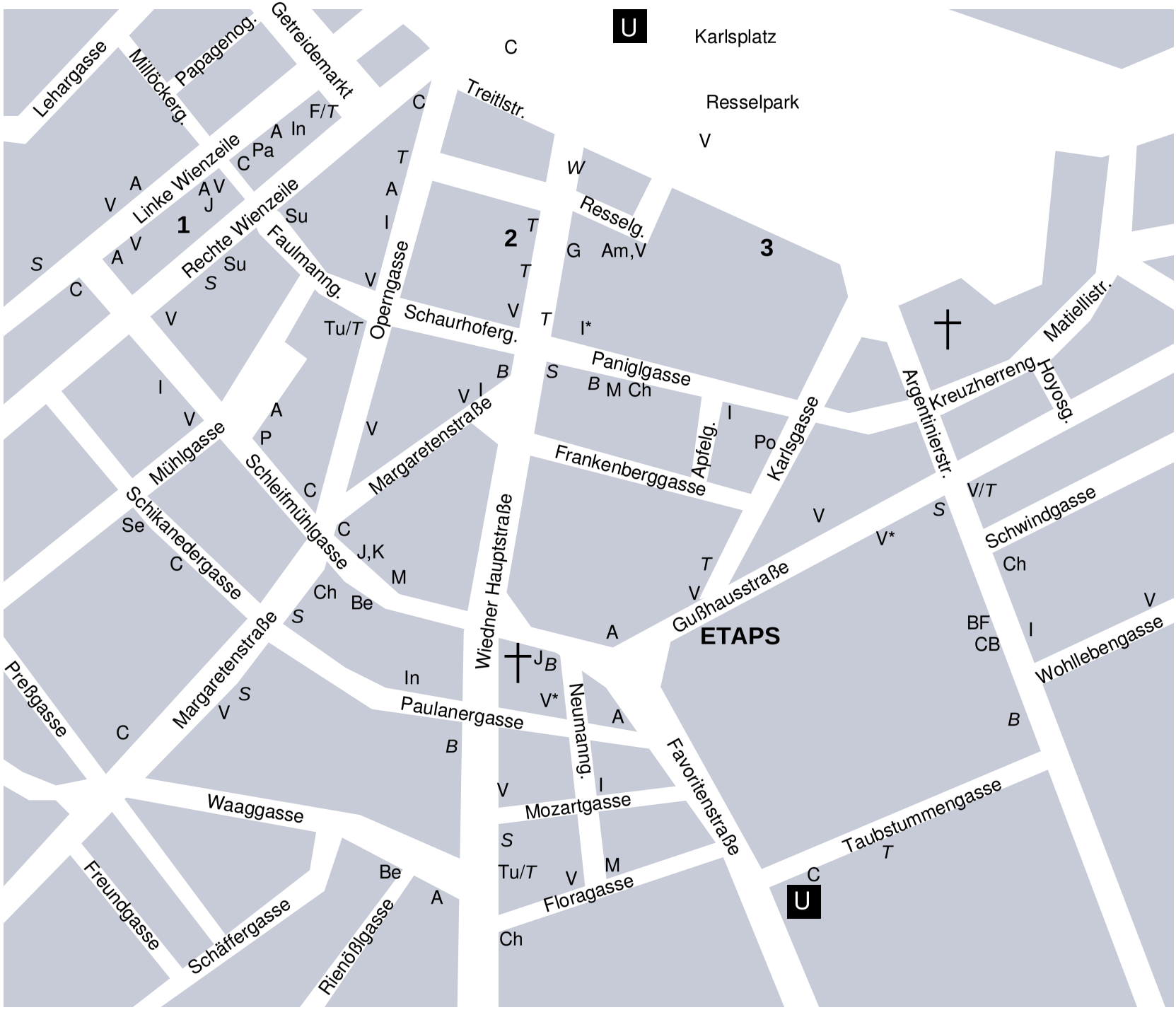
Bakeries usually also offer various kinds of sandwiches.

The restaurants shown on the map are open for lunch and usually for dinner. Restaurants that only open for dinner are not shown; you can find some dinner-only places near the crossing of Schleifmühlgasse and Mühlgasse. You can find a large number of restaurants in the inner city (towards the north), usually in side streets.

The Naschmarkt (**1**) between Rechte and Linke Wienzeile is mainly a market for fruit, vegetables, and other raw food, but there are also many small restaurants. Avoid buying fruit near the northern end.

Payment

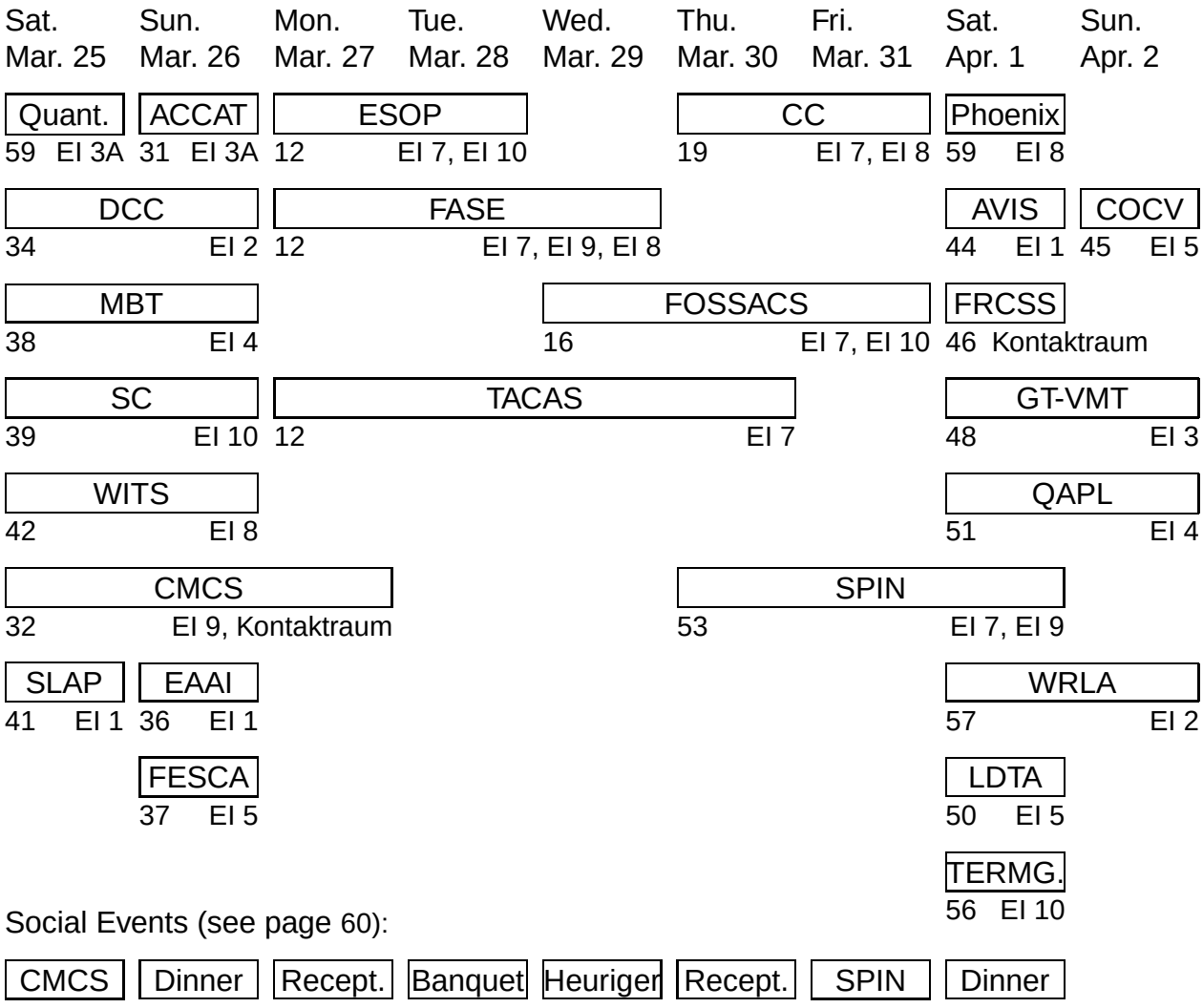
You have to tell the waiter/waitress that you are finished and want to pay ("‘Zahlen!"'). A tip of 5%–10% of the bill is customary if you were served by a waiter/waitress.



* expensive
A Asian
Am American
B Bakery
Be Beer (Viennese food)
BF Bavarian-Franconian
C Cafe
CB Crêpes, Baguettes
Ch Chinese
F Fish
G Greek
I Italian
In Indian
J Japanese
K Korean
M Modern (Austrian, Italian, French influences)
P Pizza
Pa Pancakes (Palatschinken)
Po Polish
S Supermarket
Se Serbian
Su Sushi
T Takeaway
Tu Turkish
V Viennese
W Würstelstand (Hot sausage)
1 Naschmarkt
2 Mensa and Grillrestauraunt (first floor, in red area)
3 Prechtlsaal

Quick Programme Overview

Below boxes find first page number of programme (to the left) and lecture room(s):



Social Events (see page 60):

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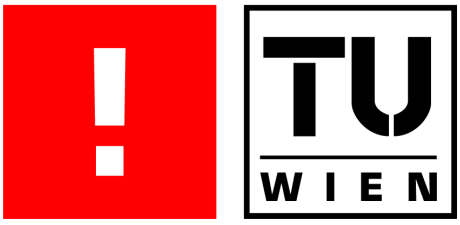
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