



ETAPS

EUROPEAN JOINT CONFERENCES ON
THEORY & PRACTICE OF SOFTWARE

2014

EUROPEAN JOINT CONFERENCES ON THEORY & PRACTICE OF SOFTWARE

APRIL 5 - 13
GRENOBLE, FRANCE



Université
Joseph Fourier 
GRENOBLE

PERSYVAL - Lab



EUROPEAN JOINT CONFERENCES ON THEORY & PRACTICE OF SOFTWARE

**APRIL 5 - 13 2014
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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, has traditionally been a confederation of five main annual conferences (CC, ESOP, FASE, FOSSACS and TACAS) accompanied by satellite workshops and other events. Since 2012, a new main conference, POST, has been added to the other five ones.

The seventeenth edition, ETAPS 2014, will take place in Grenoble, France.

STEERING COMMITTEE CHAIR:

Joost-Pieter Katoen (*RWTH Aachen University, Germany, and University of Twente, the Netherlands*)

STEERING COMMITTEE:

Martin Abadi (*MSR Silicon Valley & UCSC, USA*)
Erika Ábrahám (*RWTH Aachen University, Germany*)
Roberto Amadio (*University of Paris 7, France*)
Gilles Barthe (*IMDEA Madrid, Spain*)
David Basin (*ETH Zürich, Switzerland*)
Saddek Bensalem (*University of Grenoble, France*)
Michael O'Boyle (*University of Edinburgh, Scotland*)
Giuseppe Castagna (*University of Paris 7, France*)
Albert Cohen (*University of Paris 6, France*)
Vittorio Cortellessa (*University of L'Aquila, Italy*)
Koen De Bosschere (*Gent university, Belgium*)
Matthias Felleisen (*Northeastern University, USA*)
Philippa Gardner (*Imperial College London, UK*)
Stefania Gnesi (*University of Pisa, Italy*)
Andrew Gordon (*University of Cambridge, UK*)
Daniele Gorla (*University of Roma, Italy*)
Klaus Havelund (*NASA JPL, USA*)
Reiko Heckel (*University of Leicester, UK*)
Holger Hermanns (*University of Saarbrücken, Germany*)
Ranjit Jhala (*University of California San Diego, USA*)
Paul Klint (*CWI Amsterdam, the Netherlands*)
Jens Knoop (*TU Vienna, Austria*)
Steve Kremer (*Inria Nancy, France*)
Gerald Lüttgen (*University of Bamberg, Germany*)
Tiziana Margaria (*University of Potsdam, Germany*)
Fabio Martinelli (*IIT Pisa, Italy*)
John Mitchell (*Stanford University, USA*)
Anca Muscholl (*University of Bordeaux, France*)
Catuscia Palamidessi (*LIX, France*)
Frank Pfenning (*Carnegie Mellon University, USA*)
Nir Piterman (*University of Leicester, UK*)
Arend Rensink (*University of Twente, the Netherlands*)
Don Sannella (*University of Edinburgh, UK*)
Vladimiro Sassone (*University of Southampton, UK*)
Zhong Shao (*Yale University, USA*)
Scott Smolka (*SUNY at Stony Brook, USA*)
Gabriele Taentzer (*Philipps-Universität Marburg, Germany*)
Tarmo Uustalu (*Inst of Cybernetics, Estonia*)
Daniel Varro (*Budapest Univ of Techn. and Economics, Hungary*)
Lenore Zuck (*University of Illinois at Chicago, USA*)

MAIN CONFERENCES



CC

International Conference on Compiler Construction

ESOP

European Symposium on Programming

FASE

Fundamental Approaches to Software Engineering

FOSSACS

Foundations of Software Science
and Computation Structures

POST

Principles of Security and Trust

TACAS

Tools and Algorithms for the Construction
and Analysis of Systems



23RD INTERNATIONAL CONFERENCE ON COMPILER CONSTRUCTION (CC)

CC is interested in work on processing programs in the most general sense: analyzing, transforming or executing input that describes how a system operates, 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, parallel, distributed, embedded or mobile environments;
- Design of novel language constructs and their implementation.

PROGRAMME CHAIR:

Albert Cohen (*Inria, France*)

PROGRAMME COMMITTEE:

Bjorn De Sutter (*Ghent University, Belgium*)

Atsushi Igarashi (*Kyoto University, Japan*)

Jan Vitek (*Purdue University, USA*)

Evelyn Duesterwald (*IBM T.J. Watson Research Center, USA*)

Jens Knoop (*TU Vienna, Austria*)

Louis-Noël Pouchet (*UCLA, USA*)

Helmut Seidl (*TU Munich, Germany*)

Christoph Kessler (*Linköping University, Sweden*)

Jingling Xue (*University of New South Wales, Australia*)

Jenq Kuen Lee (*National Tsing Hua University, Taiwan*)

Stephen A. Edwards (*Columbia University, USA*)

Michelle Strout (*Colorado State University, USA*)

Gabriel Dos Reis (*Texas A&M University, USA*)

Jose Nelson Amaral (*University of Alberta, Canada*)

Fernando Magno Quintão Pereira (*Federal University of Minas Gerais, Brazil*)

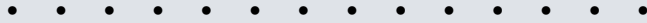
Claire Maiza (*Grenoble INP, France*)

Sandrine Blazy (*University of Rennes 1, France*)

Ayal Zaks (*Intel, Israel*)

Dibyendu Das (*AMD, India*)

23RD EUROPEAN SYMPOSIUM ON PROGRAMMING (ESOP)



ESOP is devoted to fundamental issues in the specification, design, analysis, and implementation of programming languages and systems. ESOP seeks contributions on all aspects of programming language research including, but not limited to, the following areas:

- Programming paradigms and styles: functional programming, object-oriented programming, aspect-oriented programming, logic programming, constraint programming, extensible programming languages, domain-specific languages, synchronous and real-time programming languages;
- Methods and tools to write and specify programs and languages: programming techniques, logical foundations, denotational semantics, operational semantics, meta programming, module systems, language-based security;
- Methods and tools for reasoning about programs: type systems, abstract interpretation, program verification, testing;
- Methods and tools for implementation: program transformations, rewriting systems, partial evaluation, experimental evaluations, virtual machines, intermediate languages, run-time environments;
- Concurrency and distribution: process algebras, concurrency theory, parallel programming, service-oriented computing, distributed and mobile languages.

PROGRAMME CHAIR:

Zhong Shao (*Yale, USA*)

PROGRAMME COMMITTEE:

Zena Ariola (*University of Oregon, USA*)

Gavin Bierman (*MSR Cambridge, UK*)

Viviana Bono (*Università di Torino, Italy*)

Luis Caires (*Universidade Nova de Lisboa, Portugal*)

Avik Chaudhuri (*Adobe Systems, USA*)

Koen Claessen (*Chalmers Univ. of Technology, Sweden*)

Isil Dillig (*College of William & Mary, USA*)

Roberto Giacobazzi (*Università di Verona, Italy*)

Alexey Gotsman (*IMDEA, Spain*)

Martin Hofmann (*LMU Munich, Germany*)

Zhenjiang Hu (*NII, Japan*)

Joxan Jaffar (*NUS, Singapore*)

Neel Krishnaswami (*MPI-SWS, Germany*)

Paul-André Melliès (*CNRS & U Paris Diderot, France*)

Todd Millstein (*UCLA, USA*)

Tobias Nipkow (*TUM, Germany*)

David Pichardie (*Inria Rennes, France*)

Francois Pottier (*Inria Rocquencourt, France*)

Tom Schrijvers (*University of Ghent, Belgium*)

David Van Horn (*Northeastern University, USA*)

Martin Vechev (*ETH Zurich, Switzerland*)

Philip Wadler (*University of Edinburgh, UK*)

Nobuko Yoshida (*Imperial College London, UK*)

Steve Zdancewic (*University of Pennsylvania, USA*)



17TH INTERNATIONAL CONFERENCE ON FUNDAMENTAL APPROACHES TO SOFTWARE ENGINEERING (FASE)

FASE is concerned with the foundations on which software engineering is built. Submissions should focus on novel techniques and the way in which they contribute to making software engineering a more mature and soundly-based discipline. Contributions that combine the development of conceptual and methodological advances with their formal foundations and tool support are particularly encouraged. We welcome contributions on all such fundamental approaches, including:

- Software engineering as an engineering discipline, including its interaction with and impact on society;
- Requirements engineering: capture, consistency, and change management of software requirements;
- Software architectures: description and analysis of the architecture of individual systems or classes of applications;
- Specification, design, and implementation of particular classes of systems: adaptive, collaborative, embedded, distributed, mobile, pervasive, or service-oriented applications;
- Software quality: validation and verification of software using theorem proving, model checking testing, analysis, refinement methods, metrics or visualisation techniques;
- Model-driven development and model transformation: meta-modelling, design and semantics of domain-specific languages, consistency and transformation of models, generative architectures;
- Software processes: support for iterative, agile, and open source development;
- Software evolution: refactoring, reverse and re-engineering, configuration management and architectural change, or aspect-orientation.

PROGRAMME CHAIRS:

Stefania Gnesi (*ISTI-CNR, Italy*)

Arend Rensink (*University of Twente, the Netherlands*)

PROGRAMME COMMITTEE:

Marsha Chechik (*University of Toronto, Canada*)

Vittorio Cortellessa (*Università dell'Aquila, Italy*)

Kzysztof Czarnecki (*University of Waterloo, Canada*)

Juan De Lara (*Universidad Autonoma Madrid, Spain*)

Ewen Denney (*NASA, USA*)

Jürgen Dingel (*Queen's University, Canada*)

Dino Distefano (*Queen-Mary University London, UK*)

Matthew Dwyer (*University of Nebraska, USA*)

Alexander Egyed (*Johannes Kepler University, Austria*)

Dimitra Giannakopoulou (*CMU/NASA Ames, USA*)

Holger Giese (*Universität Potsdam, Germany*)

Paul Grace (*Lancaster University, UK*)

Reiko Heckel (*University of Leicester, UK*)

Jochen Küster (*IBM, Switzerland*)

Ralf Lämmel (*University of Koblenz, Germany*)

Antonia Lopes (*University of Lisbon, Portugal*)

Mieke Massink (*ISTI-CNR, Italy*)

Richard Paige (*University of York, UK*)

Rosario Pugliese (*University of Florence, Italy*)

Bernhard Rumpe (*RWTH Aachen University, Germany*)

Alessandra Russo (*Imperial College London, UK*)

Andy Schürr (*TU Darmstadt, Germany*)

Bran Selic (*Malina Software Corp., Canada*)

Gabriele Taentzer (*Philipps-Universität Marburg, Germany*)

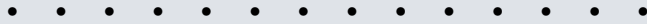
Nicolai Tillmann (*Microsoft Research, USA*)

Dániel Varró (*Budapest Univ. of Techn. and Economics, Hungary*)

Eelco Visser (*University of Delft, the Netherlands*)

Martin Wirsing (*Ludwig-Maximilians-Univ. München, Germany*)

17TH INTERNATIONAL CONFERENCE ON FOUNDATIONS OF SOFTWARE SCIENCE AND COMPUTATION STRUCTURES (FOSSACS)



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. The specific topics covered by the conference include, but are not limited to, the following:

- Categorical models and logics;
- Language theory, automata, and games;
- Modal, spatial, and temporal logics;
- Type theory and proof theory;
- Concurrency theory and process calculi;
- Rewriting theory;
- Semantics of programming languages;
- Program analysis, correctness, transformation, and verification;
- Logics of programming;
- Software specification and refinement;
- Models of concurrent, reactive, stochastic, distributed, hybrid, and mobile systems;
- Emerging models of computation;
- Logical aspects of computational complexity;
- Models of software security;
- Logical foundations of data bases.

PROGRAMME CHAIR:

Anca Muscholl (*University of Bordeaux, France*)

PROGRAMME COMMITTEE:

Luca Aceto (*University of Reykjavik, Iceland*)

Véronique Bruyère (*University of Mons, Belgium*)

Véronique Cortier (*LORIA, France*)

Kousha Etessami (*University of Edinburgh, Scotland*)

Wan Fokkink (*VU University Amsterdam, the Netherlands*)

Holger Hermanns (*Saarland University, Germany*)

Antonín Kučera (*Masaryk University, Czech Republic*)

Sławomir Lasota (*Warsaw University, Poland*)

Christof Löding (*RWTH Aachen University, Germany*)

Andrew Pitts (*University of Cambridge, UK*)

Alexander Rabinovich (*Tel Aviv Univ, Israel*)

Ramaswamy Ramanujam (*Chennai, India*)

Mark Reynolds (*University of Western Australia, Australia*)

Simona Ronchi della Rocca (*University of Torino, Italy*)

Grigore Rosu (*University of Illinois at UC, US*)

Andrey Rybalchenko (*TU Munich, Germany*)

Davide Sangiorgi (*University of Bologna, Italy*)

Sven Schewe (*University of Liverpool, UK*)

Thomas Schwentick (*TU Dortmund, Germany*)

Luc Segoufin (*LSV Cachan, France*)

Peter Selinger (*Dalhousie Univ, Canada*)

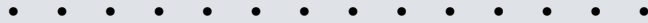
Anil Seth (*IIT Kanpur, India*)

James Worell (*University of Oxford, UK*)

Wiesław Zielonka (*University of Paris 7, France*)



3RD CONFERENCE ON PRINCIPLES OF SECURITY AND TRUST (POST)



Principles of Security and Trust is a broad forum related to the theoretical and foundational aspects of security and trust. Papers of many kinds are welcome: new theoretical results, practical applications of existing foundational ideas, and innovative theoretical approaches stimulated by pressing practical problems.

POST combines and replaces a number of successful and longstanding workshops in this area: Automated Reasoning and Security Protocol Analysis (ARSPA), Formal Aspects of Security and Trust (FAST), Security in Concurrency (SecCo), and the Workshop on Issues in the Theory of Security (WITS). A subset of these events met jointly as an event affiliated with ETAPS 2011 under the name Theory of Security and Applications (TOSCA).

We seek submissions proposing theories to clarify security and trust within computer science; submissions establishing new results in existing theories; and also submissions raising fundamental concerns about existing theories.

We welcome new techniques and tools to automate reasoning within such theories, or to solve security and trust problems. Case studies that reflect the strengths and limitations of foundational approaches are also welcome, as are more exploratory presentations on open questions.

Areas of interest include: access control, anonymity, authentication, availability, cloud security, confidentiality, covert channels, crypto foundations, economic issues, information flow, integrity, languages for security, malicious code, mobile code, models and policies, privacy, provenance, reputation and trust, resource usage, risk assessment, security architectures, security protocols, trust management, web service security. Productive techniques have included automated reasoning, compositionality and transformation, language-based methods, logical formalization, quantitative methods, and static analysis.

PROGRAMME CHAIRS:

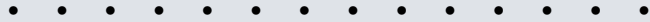
Martín Abadi (*MSR Silicon Valley & UCSC, USA*)
Steve Kremer (*Inria Nancy, France*)

PROGRAMME COMMITTEE:

Anindya Banerjee (*IMDEA, Spain*)
Bruno Blanchet (*Inria Paris, France*)
Ran Canetti (*Boston University, USA and Tel Aviv Univ. Israel*)
Claude Castelluccia (*Inria Grenoble, France*)
George Danezis (*MSR Cambridge, UK*)
Anupam Datta (*CMU, USA*)
Stéphanie Delaune (*ENS Cachan, France*)
Riccardo Focardi (*University of Venice, Italy*)
Somesh Jha (*University of Wisconsin, USA*)
Ninghui Li (*Purdue University, USA*)
Sergio Maffeis (*Imperial College, UK*)
Andrew Myers (*Cornell University, USA*)
Catuscia Palamidessi (*Inria Saclay, École Polytechnique, France*)
Benjamin Pierce (*University of Pennsylvania, USA*)
Frank Piessens (*KU Leuven, Belgium*)
David Pointcheval (*ENS Paris, France*)
David Sands (*Chalmers University of Technology, Sweden*)
Hovav Shacham (*UCSD, USA*)
Nikhil Swamy (*MSR Redmond, USA*)
Paul Syverson (*NRL, USA*)
Ankur Taly (*Google, USA*)
Bogdan Warinschi (*Bristol University, UK*)



20TH INTERNATIONAL CONFERENCE ON TOOLS AND ALGORITHMS FOR THE CONSTRUCTION AND ANALYSIS OF SYSTEMS (TACAS)



TACAS is a forum for researchers, developers and users interested in rigorously based tools and algorithms for the construction and analysis of systems. The conference serves to bridge the gaps between different communities with this common interest and to support them in their quest to improve the utility, reliability, flexibility and efficiency of tools and algorithms for building systems.

Theoretical papers with clear relevance for tool construction and analysis, as well as tool descriptions and case studies with a conceptual message are all encouraged. The topics covered by the conference include, but are not limited to, the following:

- Specification and verification techniques;
- Software and hardware verification;
- Analytical techniques for real-time, hybrid, or stochastic systems;
- Analytical techniques for safety, security, or dependability;
- Model-checking;
- Theorem-proving;
- SAT and SMT solvers;
- Static and dynamic program analysis;
- Testing;
- Abstraction techniques for modeling and verification;
- Compositional and refinement-based methodologies;
- System construction and transformation techniques;
- Tool environments and tool architectures;
- Applications and case studies.

PROGRAMME CHAIRS:

Erika Ábrahám (*RWTH Aachen University, Germany*)
Klaus Havelund (*NASA JPL, USA*)

TOOL CHAIR:

Nikolaj Bjørner (*Microsoft Research, USA*)

PROGRAMME COMMITTEE:

Christel Baier (*Technical University of Dresden, Germany*)
Saddek Bensalem (*VERIMAG/UJF, France*)
Nathalie Bertrand (*IRISA Rennes, France*)
Armin Biere (*Johannes Kepler University, Austria*)
Nikolaj Bjørner (*Microsoft Research, USA*)
Rance Cleaveland (*University of Maryland, USA*)
Cindy Eisner (*IBM Research Haifa, Israel*)
Patrice Godefroid (*Microsoft Research, Redmond, USA*)
Susanne Graf (*Verimag, France*)
Orna Grumberg (*Technion, Israel*)
Boudewijn Haverkort (*University of Twente, the Netherlands*)
Gerard Holzmann (*NASA JPL, USA*)
Barbara Jobstmann (*CNRS, Verimag, France*)
Joost-Pieter Katoen (*RWTH Aachen University, Germany, and University of Twente, the Netherlands*)
Kim Larsen (*Aalborg University, Denmark*)
Roland Meyer (*TU Kaiserslautern, Germany*)
Corina Pasareanu (*NASA Ames Research Center, USA*)
Doron Peled (*Bar Ilan University, Israel*)
Paul Pettersson (*Mälardalen University, Sweden*)
Nir Piterman (*University of Leicester, UK*)
Scott Smolka (*Stony Brook University, USA*)
Bernhard Steffen (*University of Dortmund, Germany*)
Marielle Stoelinga (*University of Twente, the Netherlands*)
Willem Visser (*University of Stellenbosch, South Africa*)
Ralf Wimmer (*University of Freiburg, Germany*)
Lenore Zuck (*University of Illinois at Chicago, USA*)



GRENOBLE

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Located in the southeastern part of France, Grenoble is considered as the capital of the Alps.

Grenoble is surrounded by nature and high mountains: down the Alps, Grenoble is the meeting point of two important rivers, called “Drac” and “Isère”. Grenoble has important historical and gastronomic heritages. Leisure activities in breathtaking nature are easily organizable and within short-distance. Grenoble is also a major scientific center in Europe dedicated to high-tech technologies, e.g., nano, micro, bio, and information technologies.



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FASE

Fundamental Approaches to Software Engineering

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Foundations of Software Science and Computation Structures

POST

Principles of Security and Trust

TACAS

Tools and Algorithms for the Construction and Analysis of Systems

INVITED SPEAKERS:

Christel Baier (*Technical University of Dresden, Germany*)

Benoit Dupont de Dinechin (*Kalray, France*)

Robert Harper (*Carnegie Mellon University, US*)

Maurice Herlihy (*Brown University, US*)

Petr Jančar (*Technical Univ of Ostrava, Czech Republic*)

Orna Kupferman (*Hebrew University Jerusalem, Israel*)

John Launchbury (*Galois, US*)

David Mazières (*Stanford University, US*)

IMPORTANT DATES:

Abstract Submission: **Oct 4, 2013**

Paper Submission: **Oct 11, 2013**

Author Notification: **Dec 20, 2013**

Camera-ready version: **Jan 17, 2014**

LOCAL ORGANIZATION COMMITTEE:

Saddek Bensalem (chair), Marius Bozga, Yliès Falcone, Nicolas Halbwachs, Axel Legay.

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