SATELLITE EVENTS

ACCAT 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.

Contact: Ulrike Prange (uprange@cs.tu-berlin.de)
URL: http://tfs.cs.tu-berlin.de/workshops/accat2007/

AVIS Sixth International Workshop on Automated Verification of Infinite-State Systems

AVIS is a forum for researchers interested in the application of formal methods for the automatic verification of large practical systems. Model checking, which has found wide application on hardware descriptions, does not scale to practical software systems due to state explosion. For such systems, theorem proving -- a process requiring manual effort and mathematical sophistication to use -- has so far been the only viable alternative.

More recently, hybrid techniques have been developed that combine the ease-of-use of model checkers with the power of theorem provers, yielding tools that are less sensitive to the size of the state space (which may be infinite.) AVIS provides a forum for those who are interested in this emerging area of research that has a bright future.

Contact: Ramesh Bharadwaj (ramesh@itd.nrl.navy.mil)
URL: http://chacs.nrl.navy.mil/AVIS07

Bytecode Second Workshop on Bytecode Semantics, Verification, Analysis and Transformation

Bytecode, such as produced by e.g. Java and .NET compilers, has become an important topic of interest, both for industry and academia. The industrial interest stems from the fact that bytecode is typically used for the Internet and mobile devices (smartcards, phones, etc.), where security is a major issue. Moreover, bytecode is device-independent and allows dynamic loading of classes, which provides an extra challenge for the application of formal methods. In addition, the unstructuredness of the code and the pervasive presence of the operand stack also provide extra challenges for the analysis of bytecode. This workshop will focus on the latest developments in the semantics, verification, analysis, and transformation of bytecode. Both new theoretical results and tool demonstrations are welcome.

Contact: Fausto Spoto (fausto.spoto@univr.it)
URL: http://www.sci.univr.it/~spoto/Bytecode07/

COCV Sixth International Workshop on Compiler Optimization Meets Compiler Verification

COCV provides a forum for researchers and practitioners working on optimizing and verifying compilation, and on related fields such as translation validation, certifying compilation and embedded systems with a special emphasis on hardware verification, formal synthesis methods, correctness aspects in HW/SW co-design, formal verification of hardware/software systems, and practical and industrial applications of formal techniques for exchanging their latest findings, and for plumbing the mutual impact of these fields on each other. By encouraging discussions and co-operations across different, yet related fields, the workshop strives for bridging the gap between the communities, and for stimulating synergies and cross-fertilizations among them.

Contact: Sabine Glesner (glesner@cs.tu-berlin.de)
URL: http://pes.cs.tu-berlin.de/cocv2007/

FESCA 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 modeling approaches as well as associated analysis and reasoning techniques with practical benefits for embedded software and component-based software engineering.

Recent years has seen the emergence of formal and informal techniques and technologies for the specification and implementation of component-based software architectures. Formal methods have sometimes not kept up with the increasing complexity of software. For instance, a range of new middleware platforms have been developed in both enterprise and embedded systems industries. FESCA aims to address the open question of how formal methods can be applied effectively to these new contexts.

Contact: Iman Poernomo (iman.poernomo@kcl.ac.uk)
URL: http://www.kcl.ac.uk/palab/fesca

FInCo Foundations of Interactive Computation

Since the 1960's, computation has become increasingly interactive. Concurrent, distributed, reactive, embedded, component-oriented, agent-oriented and service-oriented systems all fundamentally depend on interaction. However, a satisfactory formal foundation of interactive computation, analogous to one that recursive functions, Turing Machines, and lambda-calculus provide for algorithms, is still lacking. Furthermore, the implications of treating interaction as a first-class concept in the process of software design and construction remain to be fully understood.

Following the success of FInCo 2005, our goals are to work towards developing a unified conceptual and formal framework for understanding the principles of interaction, establishing language- and domain-independent models for it, and improving the development of software applications and systems through the application of interactive principles and models.

Contact: Dina Goldin (finco07@cs.brown.edu)
URL: http://www.cs.brown.edu/sites/finco07/

GT-VMT Sixth International Workshop on Graph Transformation and Visual Modeling Techniques

GT-VMT 2007 is the sixth 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. Due to the variety of languages and methods used in different domains, the aim of the workshop is to promote engineering approaches that starting from high-level specifications and robust formalizations allow for the design and the implementation of such visual modeling techniques, hence providing effective tool support at the semantic level (e.g., for model analysis, transformation, and consistency management). This year's workshop will have an additional focus on application of graph transformation and visual modeling techniques in engineering, biology, and medicine.

Contact: Karsten Ehrig (karsten@mcs.le.ac.uk)
URL: http://www.cs.le.ac.uk/events/GTVMT07/

HAV Heap Analysis and Verification

Accurate and efficient expression, discovery, and verification of the structure of program heap memory is an active research area. Many problems remain open, and therefore many programs remain unverified. We are seeing advances however: Among these are exciting new techniques for analysis and verification of concurrently accessed heap memory, new techniques for interprocedural and modular analysis and verification, and great strides increasing the range of practically applicable analysis and verification techniques. The aim of this workshop is to bring together researchers to exchange and develop new ideas in all aspects of formal analysis and verification for heaps. Submissions are invited from across the full spectrum of basic theoretical work through to applied practical work.

Contact: Josh Berdine (jjb@microsoft.com)
URL: http://www.cs.tau.ac.il/~msagiv/hav.html

HFL Hardware design using Functional Languages

More abstract representations and verification techniques are needed to keep up with the ever-increasing complexity of modern hardware designs. We face challenging research problems, many of them related to language design and to ways of modelling circuits at various levels of abstraction. This workshop will bring together researchers in modern functional languages, hardware description languages, high-level modelling and validation, and formal design environments. It aims to present the state of the art, and to spark debate about how to proceed. To achieve the necessary breakthroughs, we must ensure that academics and industrial researchers continue to work together to solve the real challenge of hardware design and verification. A major aim of this workshop is to open the necessary communication channels.

Contact: Andy Martin (hfl07@hflworkshop.org)
URL: http://hfl07.hflworkshop.org/

LDTA Seventh Workshop on Language Descriptions, Tools and Applications

The LDTA workshops bring together academic and industrial researchers 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 research area includes basic approaches such as the analysis, transformation, and generation of programs, the formal analysis of language properties, and the automatic generation of language processing tools.

Several specification formalisms like attribute grammars, action semantics, operational semantics, and algebraic approaches have been developed over the years. A goal of LDTA is to increase the use of such formalisms through demonstrations of their practical utility in, among others, the following application domains: component models and modeling languages, re-engineering and re-factoring, aspect-oriented and domain-specific languages, XML processing, visualization and graph transformation, and programming environments, such as Eclipse.

Contact: ???
URL: ???

MOMPES 4th Intl. Workshop on Model-based Methodologies for Pervasive and Embedded Software

Model Based Development (MBD) comprises approaches to software development which heaviliy rely on modeling and the systematic transition from models to executable code. One of these approaches is the OMG's Model Driven Architecture (MDA), which is based on the separation between the specification of a system and its implementation using specific platforms.

TACAS

Tools and Algorithms for the Construction and Analysis of Systems

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 that share common interests in, and techniques for, tool development and its algorithmic foundations. The research areas covered by such communities include but are not limited to formal methods, software and hardware verification, static analysis, programming languages, software engineering, real-time systems, communications protocols, and biological systems. The TACAS forum provides a venue for such communities at which common problems, heuristics, algorithms, data structures and methodologies can be discussed and explored. In doing so, TACAS aims to support researchers in their quest to improve the utility, reliability, flexibility and efficiency of tools and algorithms for building systems.

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

- Specific. 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
- Abstraction techniques for modeling and validation
- Compositional and refinement-based methodologies
- Testing and test-case generation
- Analytical techniques for secure, real-time, hybrid, critical, biological or dependable systems
- Integration of formal methods and static analysis in high-level hardware design or software environments
- Tool environments and tool architectures
- SAT solvers
- Applications and case studies

As TACAS addresses a heterogeneous audience, potential authors are strongly encouraged to write about their ideas and findings in general and jargon-independent, rather than in 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:
Christel Baier (U. Bonn, Germany), Armin Biere (Johannes Kepler U, Austria), Ed Brinksma (ESI and U. of Twente, The Netherlands), Rance Cleaveland (U. of Maryland & Fraunhofer USA Inc, USA), Byron Cook (tool chair) (Microsoft Research, Cambridge, UK), Dennis Dams (Lucent Technologies, Murray Hill, USA), Marsha Chechik (U. Toronto, Canada), Francois Fages (INRIA Rocquencourt, France), Kathi Fisler (Worcester Polytechnic, USA), Limor Fix (Intel Research Laboratory, Pittsburgh, USA), Hubert Garavel (INRIA Rhones-Alpes, France), Susanne Graf (VERIMAG, Grenoble, France), Orna Grumberg (co-chair) (TECHNION, Israel Institute of Technology, Haifa, Israel), John Hatcliff (Kansas State U., USA), Holger Hermanns (U. des Saarlandes, Germany), Michael Huth (co-chair) (Imperial College London, UK), Daniel Jackson (Massachusetts Institute of Technology, USA), Somesh Jha (U. of Wisconsin at Madison, USA), Orna Kupferman (Hebrew U., Jerusalem, Israel), Marta Kwiatkowska (U. of Birmingham, UK), Kim Larsen (Aalborg U., Denmark), Michael Leuschel (Heinrich-Heine U., Düsseldorf, Germany), Andreas Podelski (Max-Planck-Institut für Informatik, Saarbrücken, Germany), Tiziana Margaria-Steffen (U. Göttingen, Germany), Tom Melham (Oxford U., UK), Natarajan Shankar (SRI, Menlo Park, USA), Bernhard Steffen (U. Dortmund, Germany), Lenore Zuck (U. of Illinois, USA).

Invited Speaker: K. Rustan M. Leino (Microsoft Research, USA)
Conference Page: http://www.doc.ic.ac.uk/~mrh/tacas07.html

BRAGA

Braga, capital of the Minho province, is an ancient city in the heart of the green and fertile region known as the Costa Verde. The region is known for its attractiveness in terms of climate, gastronomy, prices, and culture. The region is served by the Oporto international airport, providing direct flights to many major European cities. Braga is known for its barroque churches and splendid 18th century houses. The old city is solemn and antique, but animated with commercial activity and academic life.

ETAPS

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 2007 is the tenth event in the series.

ETAPS STEERING COMMITTEE:

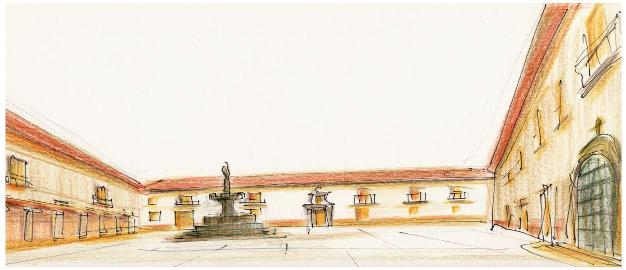
Perdita Stevens (Edinburgh, Chair), Luca Aceto (Aalborg and Reykjavík), Rastislav Bodik (Berkeley), Maura Cerioli (Genova), Matt Dwyer (Lincoln), Hartmut Ehrig (Berlin), José Luiz Fiadeiro (Leicester), Marie-Claude Gaudel (Paris), Roberto Gorrieri (Bologna), Reiko Heckel (Leicester), Michael Huth (London), Joost-Pieter Katoen (Aachen), Paul Klint (Amsterdam), Jens Knoop (Vienna), Shriram Krishnamurthi (Brown), Kim Larsen (Aalborg), Tiziana Margaria (Göttingen), Ugo Montanari (Pisa), Rocco de Nicola (Firenze), Hanne Riis Nielson (Copenhagen), Jens Palsberg (Indiana), Don Sannella (Edinburgh), João Saraiva (Braga), Vladimiro Sassonen (Brighton), Helmut Seidl (Munique), Peter Sestoft (Copenhagen), Andreas Zeller (Saarbrücken), Lenore Zuck (Chicago).

ETAPS ORGANIZING COMMITTEE:

João Saraiva (Chair), Joost Visser (Satellite events), Luls Soares Barbosa (Satellite events), José Nuno Oliveira, Pedro Rangel Henriques, José João Almeida, António Nestor Ribeiro, Jorge Sousa Pinto, José Bacelar Almeida (Website).

Important Dates

6 Oct 2006:	Submission deadline (strict) for abstracts of research and tool demonstration papers
13 Oct 2006:	Submission deadline (strict) for full versions of research and tool demonstration papers
08 Dec 2006:	Notification of acceptance
05 Jan 2007:	Camera-ready versions due



First Announcement
and Call for Submissions

ETAPS 2007

March 24 - April 1, 2007
Braga, Portugal

http://www.di.uminho.pt/etaps07

etaps07@di.uminho.pt

Invited Speakers

Don Batory (U. Texas, USA)
Andrew Pitts (Cambridge U., UK)
Jan Bosch (Nokia, Finland)
Radha Jagadeesan (DePaul U., USA)
K. Rustan M. Leino (Microsoft Research, USA)

This workshop focuses on the scientific and practical aspects related with the adoption of MDA and other MBD methodologies (notation, process, methods, and tools) for supporting the construction of computer-based systems, and more specifically, pervasive and embedded software.

Contact: João M. Fernandes (mompes@di.uminho.pt)
URL: http://www.di.uminho.pt/mompes

OpenCert Foundations and Techniques for Open Source Software Certification

The aim of this workshop is to bring together researchers from academia and industry who are interested in developing techniques for the quality assessment of Open Source Software (OSS), leading to the definition of a complete certification process. The workshop will focus on formal methods and model-based techniques, emphasising those aspects which are specific to OSS, such as unconventional development, rapid evolution of the code, and huge amount of legacy code. Contributions to the workshop are expected to present foundations, methods, tools and case studies that integrate techniques from different areas such as certification, security, reverse engineering, and formal modeling and verification, in order to overcome the challenges in the quality assessment of OSS.

Contact: Luis Barbosa (lsb@di.uminho.pt)
URL: http://opencert.iist.unu.edu/

QAPL 5th 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 (e.g. time, bandwidth) as well as mathematical quantities (e.g. probabilities) which play a central role in defining models (architectures, protocols, languages, etc.) and methodologies for analysis and verification.

The aim of this workshop is to discuss the explicit role of real-time aspects, probabilities, resource consumption, performance parameters, etc. in the design as well the analysis of such systems. The topics covered are transversal to all areas of Computer Science including Languages, Protocols, Architectures, Security, Semantics, Analysis, etc. Particular relevance will be given to the emerging areas of Quantum Computation and Bioinformatics.

Contact: Alessandra Di Pierro (dipierro@di.unipi.it)
URL: www.doc.ic.ac.uk/~qapl

SC Workshop on Software Composition

The goal of SC 2007 is to develop a better understanding of how we build and maintain large software systems, and thereby to build the body of knowledge and experience in software composition. The sixth SC symposium will bring together the research and industrial communities to address the challenges of the component-based approach to software development. Suggested topics of interest related to component systems include:

- Composition and adaptation techniques
- Composition issues in industrial-strength systems
- Composition languages, calculi and type systems
- Composition of active documents
- Compositional web service design and implementation
- Dynamic composition and reconfiguration
- Pervasive computing environments
- Semantics-based composition and analysis
- The role of Aspect-Oriented Software Development in composition
- Verification, validation and testing techniques

Contact: Judith Bishop (jbishop@cs.up.ac.za)
URL: http://ssel.vub.ac.be/sc2007

SLA++P 2007 Model-driven High-level Programming of Embedded Systems

SLA++P is dedicated to synchronous languages and the model-driven high-level programming of reactive and embedded systems. Firmly grounded in clean mathematical semantics, synchronous languages are receiving increasing attention in industry ever since they emerged in the 80s. Lustre, Esterel, Signal are now widely and successfully used to program real-time and safety critical applications of commercial scale. At the same time, model-based programming is making its way in other fields of software engineering, often involving cycle-based synchronous paradigms. SLA++P extends the former SLAP workshop series on Synchronous Languages, Applications, and Programming but is not limited to synchronous approaches. It is open to other engineering design techniques with strong semantical foundations to go from high-level description to provable executable code.

Contact: Michael Mendler (michael.mendler@wiai.uni-bamberg.de)
URL: http://web.uni-bamberg.de/wiai/gdi/SLAP07/

TERMGRAPH 4th International Workshop on Computing with Terms and Graphs

The advantage of computing with graphs rather than terms is that common subexpressions can be shared, improving the efficiency of computations in space and time. Sharing is ubiquitous in implementations of programming languages: many functional, logic, object-oriented and concurrent calculi are implemented using term graphs. Research in term and graph rewriting ranges from theoretical questions to practical implementation issues. Different research areas include: 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 (optimal reduction), rewrite calculi for the semantics and analysis of functional programs, graph reduction implementations of programming languages, graphical calculi modelling concurrent and mobile computations, object-oriented systems, graphs as a model of biological or chemical abstract machines, and automated reasoning and symbolic computation systems working on shared structures.

Contact: Ian Mackie (ian.mackie@kcl.ac.uk)
URL: www.termgraph.org.uk

WITS 7th Intl. Workshop on Issues in the Theory of Security

WITS is the official workshop organized 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 seventh meeting of the series, and is organized in cooperation with ACM SIGPLAN (to be confirmed) and the working group FoMSESS of the German Computer Society (GI). There will be proceedings published as "Issues in the Theory of Security".

Contact: Riccardo Focardi (http://www.dsi.unive.it/~focardi/)
URL: http://www.dsi.unive.it/IFIPWG1_7/wits2007.html

SUBMISSION INFORMATION

Research Papers

Prospective authors are invited to submit full papers in English presenting original research. Submitted papers must be unpublished and not submitted for publication elsewhere. In particular, simultaneous submission of the same contribution to multiple ETAPS conferences is forbidden. The proceedings will be published in the Springer-Verlag Lecture Notes in Computer Science series. Final papers will be no more than 15 pages long in the format specified by Springer-Verlag at http://www.springer.de/comp/lncs/authors.html. It is recommended that submissions adhere to that format and length. Submissions that are clearly too long may be rejected immediately. Instructions on how to submit are available at the URL of each individual conference.

Tool Demonstration Papers

Demonstrations of novel and state-of-the-art tools are also invited. A submission should have a clear connection to one of the main ETAPS conferences, possibly complementing a paper submitted separately. Tool demonstrations are an integrated part of the ETAPS programme. Selected demonstrations will be presented in ordinary conference sessions. The time allowed will be approximately the same as that for the presentation of a research paper. The demonstration will be accompanied by the publication of a short paper (up to 4 pages) in the proceedings of the relevant ETAPS conference, describing the main features of the tool. There will be opportunities for follow-up demonstrations with small groups.

Submissions should follow the instructions published in the URL of the relevant conference. They should take the form of a self-contained tool description of no more than 4 pages in the format specified by Springer-Verlag at http://www.springer.de/comp/lncs/authors.html. The tool description should be accompanied by an appendix (not intended for publication, and not included in the page limit) indicating which features of the tool would be demonstrated - preferably with some sample screen snapshots.

N.B. Tool demonstrations should not be confused with research contributions to the TACAS conference, which emphasizes principles of tool design, implementation, and use, rather than focusing on specific domains of application.

Tutorials

MAIN CONFERENCES

CC

International Conference on Compiler Construction

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 Committee:
Eric Allen (Sun Microsystems, Inc.), Emery Berger (University of Massachusetts Amherst), Rastislav Bodik (University of California, Berkeley), William Cook (University of Texas at Austin), Chen Ding (University of Rochester), Sabine Glesner (Technical University of Berlin), Dan Grossman (University of Washington), Rajiv Gupta (University of Arizona), Andrew Kennedy (Microsoft Research Cambridge), Shriram Krishnamurthi (Brown University) (co-chair), Christian Lengauer (University of Passau), Cristina Videira Lopes (University of California, Irvine), Todd Millstein (University of California, Los Angeles), Martin Odersky (Ecole Polytechnique Fédérale de Lausanne) (co-chair), G. Ramalingam (IBM Research), Vijay Saraswat (IBM TJ Watson Research Center), Zhong Shao (Yale University), Yannis Smaragdakis (Georgia Tech), Gregor Snelting (University of Passau), Joost Visser (Universidade do Minho), Reinhard Wilhelm (Saarland University).

Invited Speaker: Don Batory, University of Texas at Austin
Conference Page: http://cc2007.cs.brown.edu/

ESOP

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:
Steve Brookes (CMU Pitsburgh, USA), Gerard Boudol (INRIA Sophia Antipolis, France), Giuseppe Castagna (ENS Paris, France), Patrick Cousot (ENS Paris, France), Mads Dam (KTH stocholm, Sweden), Pierpaolo Degano (U. Pisa, Italy), Rocco De Nicola (Chair) (U. Firenze, Italy), Sophia Drossopoulou (Imperial College, UK), Cedric Fournet (Microsoft Cambridge, UK), Stefania Gnes (ISTI CNR, Italy), Joshua Guttman (MITRE, USA), Chris Hankin (Imperial College, UK), Matthew Hennessy (U. Sussex, UK), Alan Jeffrey (Bell Labs, USA), John Mitchell (Stanford U., USA), Fleming Nielson (IMM Copenhagen, DK), Catuscia Palamidessi (INRIA Paris, France), Benjamin Pierce (U. Pennsilvania, USA), Andrei Sabelfeld (Chalmers, Sweden), Don Sannella (U. Edinburgh, UK), Bernhard Steffen (U. Dortmund, Germany), Walid Taha (Rice U., USA), Jan Vitek (Purdue U., USA), Martin Wirsing (LMU Munich, Germany), Xavier Leroy (INRIA Paris, France), Gianluigi Zavattaro (U. Bologna, Italy).

Invited Speaker: Andrew Pitts (Cambridge University, UK)
Conference Page: http://rap.dsi.unifi.it/esop07/

FASE

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 progress. An intrinsic characteristic of software that integrates with real-world processes 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 the 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 foster feedback between academia and industry by proposing new solutions and evaluating the effectiveness of those solutions in practical contexts.

Submissions to FASE may address either novel proposed solutions or the evaluation of solutions, but they must clearly identify: the problem being solved, the proposed solution and its relationship to existing solutions, and, in the case of evaluations, the context in which the evaluation was conducted. Contributions that combine the development of conceptual and methodological advances with their formal foundations and tool support are particularly encouraged.

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

- 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
- 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:
Luciano Baresi (Politecnico di Milano), Yolande Berbers (Katholieke Universiteit Leuven), Carlos Canal (University of Málaga), Myra Cohen (University of Nebraska), Ivica Crnkovic (Mälardalen University), Arie van Deursen (Delft University of Technology), Juergen Dingel (Queen's University), Matt Dwyer (University of Nebraska) (co-chair), Harald Gall (University of Zurich), Holger Giese (University of Paderborn), Martin Grosse-Rhode (Fraunhofer-ISST), Anthony Hall (independent consultant), Reiko Heckel (University of Leicester), Patrick Heymans (University of Namur), Paola Inverardi (University of L'Aquila), Valerie Issarny (INRIA-Rocquencourt), Natalia Juristo (Universidad Politecnica de Madrid), Kai Koskimies (Tampere University of Technology), Patricia Lago (Vrije Universiteit), Antónia Lopes (University of Lisbon) (co-chair), Mieke Massink (CNR-Institute of Information Science and Technology), Carlo Montangero (University of Pisa), Barbara Paech (University of Heidelberg), Leila Ribeiro (Federal University of Rio Grande do Sul), Robby (Kansas State University), Catalin Roman (Washington University), Thomas Thelin (ABB Automation Technology Products), Sebastian Uchitel (Imperial College), Jianjun Zhao (Fukuoka Institute of Technology).

Invited Speaker: Jan Bosch (Nokia, Finland)
Conference Page: http://fase07.di.fc.ul.pt

FOSSACS

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.
- Fundamentals of security
- Semi-structured data
- Program correctness and verification

Programme Committee:
Martin Abadi (University of California at Santa Cruz and Microsoft Research), Michael Benedikt (Bell Laboratories), Ahmed Bouajjani (Université Paris 7), Cristiano Calcagno (Imperial College London), Didier Caucal (IRISA-CNRS, Rennes), Flavio Corradini (University of Camerino), Robert van Glabbeek (Stanford Universit), Andrew D. Gordon (Microsoft Research Cambridge), Hendrik Jan Hoogeboom (Leiden University), Anna Ingolfsdottir (Aalborg University), Florent Jacquemard (LSV, ENS de Cachan), Werner Kuich (TU Wien), Kamal Lodaya (Institute of Mathematical Sciences, Chennai), Antoine Miné (ENS, Paris), Damian Niwinski (Warsaw University), David A. Schmitt (University of Kansas), Stefan Schwoon (Universität Stuttgart), Helmut Seidl (TU München) (chair), Scott A. Smolka (State University of New York at Stony Brook), P.S. Thiagarajan (National University of Singapore), Sophie Tison (Université des Sciences et Technologies de Lille), Heiko Vogler (TU Dresden), Christoph Weidenbach (Max-Planck-Institut für Informatik, Saarbrücke).

Invited Speaker: Radha Jagadeesan, DePaul University
Conference Page: to be announced