Lecture Notes in Computer Science 3922

Commenced Publication in 1973
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ETAPS 2006 was the ninth instance of the European Joint Conferences on Theory and Practice of Software. ETAPS is an annual federated conference that was established in 1998 by combining a number of existing and new conferences. This year it comprised five conferences (CC, ESOP, FASE, FOSSACS, TACAS), 18 satellite workshops (AC-CAT, AVIS, CMCS, COCV, DCC, EAAI, FESCA, FRCSS, GT-VMT, LDTA, MBT, QAPL, SC, SLAP, SPIN, TERMGRAPH, WITS and WRLA), two tutorials, and seven invited lectures (not including those that were specific to the satellite events). We received over 550 submissions to the five conferences this year, giving an overall acceptance rate of 23%, with acceptance rates below 30% for each conference. Congratulations to all the authors who made it to the final programme! I hope that most of the other authors still found a way of participating in this exciting event and I hope you will continue submitting.

The events that comprise ETAPS address various aspects of the system development process, including specification, design, implementation, analysis and improvement. The languages, methodologies and tools which support these activities are all well within its scope. Different blends of theory and practice are represented, with an inclination towards theory with a practical motivation on the one hand and soundly based practice on the other. Many of the issues involved in software design apply to systems in general, including hardware systems, and the emphasis on software is not intended to be exclusive.

ETAPS is a loose confederation in which each event retains its own identity, with a separate Program Committee and proceedings. Its format is open-ended, allowing it to grow and evolve as time goes by. Contributed talks and system demonstrations are in synchronized parallel sessions, with invited lectures in plenary sessions. Two of the invited lectures are reserved for “unifying” talks on topics of interest to the whole range of ETAPS attendees. The aim of cramming all this activity into a single one-week meeting is to create a strong magnet for academic and industrial researchers working on topics within its scope, giving them the opportunity to learn about research in related areas, and thereby to foster new and existing links between work in areas that were formerly addressed in separate meetings.

ETAPS 2006 was organized by the Vienna University of Technology, in cooperation with:

- European Association for Theoretical Computer Science (EATCS);
- European Association for Programming Languages and Systems (EAPLS);
- European Association of Software Science and Technology (EASST);
- Institute for Computer Languages, Vienna;
- Austrian Computing Society;
- The Bürgermeister der Bundeshauptstadt Wien;
- Vienna Convention Bureau;
- Intel.
The organizing team comprised:

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- **Publicity:** Joost-Pieter Katoen
- **Satellite Events:** Andreas Krall
- **Industrial Liaison:** Eva Kühn
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- **Tutorials Chair, Website:** Franz Puntigam
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- **Local Organization, Workshops Proceedings:** Markus Schordan

Overall planning for ETAPS conferences is the responsibility of its Steering Committee, whose current membership is:

Perdita Stevens (Edinburgh, Chair), Luca Aceto (Aalborg and Reykjavík), Rastislav Bodík (Berkeley), Maura Cerioli (Genova), Matt Dwyer (Nebraska), Hartmut Ehrig (Berlin), José 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 (Florence), Hanne Riis Nielson (Copenhagen), Jens Palsberg (UCLA), Mooly Sagiv (Tel-Aviv), João Saraiva (Minho), Don Sannella (Edinburgh), Vladimiro Sassone (Southampton), Helmut Seidl (Munich), Peter Sestoft (Copenhagen), Andreas Zeller (Saarbrücken).

I would like to express my sincere gratitude to all of these people and organizations, the Program Committee chairs and PC members of the ETAPS conferences, the organizers of the satellite events, the speakers themselves, the many reviewers, and Springer for agreeing to publish the ETAPS proceedings. Finally, I would like to thank the Organizing Chair of ETAPS 2006, Jens Knoop, for arranging for us to have ETAPS in the beautiful city of Vienna.

Edinburgh, January 2006

Perdita Stevens
ETAPS Steering Committee Chair
Preface

Software engineering aims to create a feedback cycle between academia and industry, proposing new solutions and identifying those that “work” in practical contexts. The conference on Fundamental Approaches to Software Engineering (FASE) —as one of the European Joint Conferences on Theory and Practice of Software (ETAPS)— is committed to this aim.

With the society increasingly relying on software, the ability to produce low-cost and high-quality software systems is crucial to technological and social progress. FASE provides software engineers with a forum for discussing theories, languages, methods, and tools derived from the interaction of academic research and real-world experience.

Contributions were sought targeting problems of practical relevance through fundamental contributions, based on solid mathematical or conceptual foundations, which could lead to improved engineering practices.

The response of the scientific community was overwhelming, with record submission numbers of 166 research papers and 7 tool papers. From these, 27 research papers and 2 tool papers were selected for publication, with an overall acceptance rate of 17%. The international character of the conference is underlined by the fact that just about one third of the authors are from European countries, while the others come from North America, Asia and Australia.

Accepted papers address topics like distributed and service-oriented computing, measurement and empirical software engineering, methods and tools for software development, validation and verification, model-based development, and software evolution. The scientific programme is complemented by the invited lecture of Francisco Curbera on “A Programming Model for Service Oriented Applications” and of Carlo Ghezzi on “Software Engineering: Emerging Goals and Lasting Problems”.

We are deeply indebted to the 24 members of the Program Committee and the 123 additional reviewers for their invaluable time, spent reading and discussing a large number of papers and producing more than 500 reviews.

FASE 2006 was held in Vienna (Austria), hosted and organized by the Institute for Computer Languages at the Vienna University of Technology. Next year FASE will take place in Braga (Portugal). Being part of ETAPS, FASE shares the sponsoring and support acknowledged in the foreword. Heartfelt thanks are also due to Perdita Stevens for excellent and efficient global coordination and to Jens Knoop and his staff for their wonderful job as local organizers.

Finally, special thanks to all contributors and participants who, at the end of the day, are what this is all about.

Milano and Leicester, January 2006

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