ETAPS 2005 was the eighth 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), 17 satellite workshops (AVIS, BYTECODE, CEES, CLASE, CMSB, COCV, FAC, FESCA, FINCO, GCW-DSE, GLPL, LDTA, QAPL, SC, SLAP, TGC, UITP), seven invited lectures (not including those that were specific to the satellite events), and several tutorials. We received over 550 submissions to the five conferences this year, giving acceptance rates below 30% for each one. Congratulations to all the authors who made it to the final program! 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 2005 was organized by the School of Informatics of the University of Edinburgh, 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).

The organizing team comprised:

- Chair: Don Sannella
- Publicity: David Aspinall
ETAPS 2005 received support from the University of Edinburgh.

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 Bodik (Berkeley), Maura Cerioli (Genoa), Evelyn Duesterwald (IBM, USA), Hartmut Ehrig (Berlin), José Fiadeiro (Leicester), Marie-Claude Gaudel (Paris), Roberto Gorrieri (Bologna), Reiko Heckel (Paderborn), Holger Hermanns (Saarbrücken), Joost-Pieter Katoen (Aachen), Paul Klint (Amsterdam), Jens Knoop (Vienna), Kim Larsen (Aalborg), Tiziana Margaria (Dortmund), Ugo Montanari (Pisa), Hanne Riis Nielson (Copenhagen), Fernando Orejas (Barcelona), Mooly Sagiv (Tel Aviv), Don Sannella (Edinburgh), Vladimiro Sassone (Sussex), Peter Sestoft (Copenhagen), Michel Wermelinger (Lisbon), Igor Walukiewicz (Bordeaux), Andreas Zeller (Saarbrücken), Lenore Zuck (New York).

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 organizer of ETAPS 2005, Don Sannella. He has been instrumental in the development of ETAPS since its beginning; it is quite beyond the limits of what might be expected that, in addition to all the work he has done as the original ETAPS Steering Committee Chairman and current ETAPS Treasurer, he has been prepared to take on the task of organizing this instance of ETAPS. It gives me particular pleasure to thank him for organizing ETAPS in this wonderful city of Edinburgh in my first year as ETAPS Steering Committee Chair.

Edinburgh, January 2005

Perdita Stevens
ETAPS Steering Committee Chair
Preface

The program committee is pleased to present the proceedings of the 14th International Conference on Compiler Construction (CC 2005) held April 4–5, 2005, in Edinburgh, UK, as part of the Joint European Conferences on Theory and Practice of Software (ETAPS 2005).

Traditionally, CC had been a forum for research on compiler construction. Starting this year, CC has expanded its mission to a broader spectrum of programming tools, from refactoring editors to program checkers to compilers to virtual machines to debuggers. The submissions we received reflected the new scope of the conference.

The Program Committee received 91 submissions (one was later withdrawn), a significant increase from previous years. From the 90 submissions, the Program Committee selected 21 papers, for an acceptance rate of 23%. Four of the accepted papers were tool demonstrations; the submission pool included eight such papers. I believe this is the first CC conference that includes tool demos.

The Program Committee included 15 members representing 10 countries on three continents. Each committee member reviewed (or delegated) roughly 19 papers. Each paper received three reviews. Sixty-eight external reviewers participated in the review process. Committee members were allowed to submit papers, although no paper by a committee member was selected. The Program Committee met on December 4, 2004, in New York for a one-day meeting. All but one of the members participated in the meeting; three members attended via teleconference.

The work of many contributed to the success of this conference. First of all, I want to thank the authors for the care they put into their submissions. My gratitude also goes to Program Committee members and external reviewers for their insightful reviews. IBM generously provided the teleconference service for the Program Committee meeting; thanks to Kemal Ebcioglu for arranging this service. Special thanks go to Manu Sridharan for helping to prepare and run the Program Committee meeting. CC 2005 was made possible by the ETAPS Steering Committee, in particular by the hard work of Don Sannella, the ETAPS 2005 Organizing Committee chair, and José Luiz Fiadeiro and Perdita Stevens, ETAPS chairs. I would also like to thank Evelyn Duesterwald, Görel Hedin, Nigel Horspool and Reinhard Wilhelm, all recent CC chairs, for our many discussions on CC’s future directions. Finally, we are grateful to Andreas Zeller for accepting the invitation to give a keynote talk.

Berkeley, January 2005

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