Lecture Notes in Computer Science 2304
Edited by G. Goos, J. Hartmanis, and J. van Leeuwen

Springer
Berlin
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R. Nigel Horspool (Ed.)

Compiler Construction

11th International Conference, CC 2002
Held as Part of the Joint European Conferences
on Theory and Practice of Software, ETAPS 2002
Grenoble, France, April 8-12, 2002
Proceedings

Springer

Series Editors

Gerhard Goos, Karlsruhe University, Germany
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Volume Editor

R. Nigel Horspool
University of Victoria, Dept. of Computer Science
Victoria, BC, Canada V8W 3P6
E-mail: nigelh@uvic.ca

Cataloging-in-Publication Data applied for

Die Deutsche Bibliothek - CIP-Einheitsaufnahme

Compiler construction : 11th international conference ; proceedings / CC 2002, held as part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2002, Grenoble, France, April 8 - 12, 2002. R. Nigel Horspool (ed.). - Berlin ; Heidelberg ; New York ; Barcelona ; Hong Kong ; London ; Milan ; Paris ; Tokyo : Springer, 2002
(Lecture notes in computer science ; Vol. 2304)
ISBN 3-540-43369-4

CR Subject Classification (1998): D.3.4, D.3.1, F.4.2, D.2.6, I.2.2, F.3

ISSN 0302-9743
ISBN 3-540-43369-4 Springer-Verlag Berlin Heidelberg New York

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Springer-Verlag Berlin Heidelberg New York
a member of BertelsmannSpringer Science+Business Media GmbH

http://www.springer.de

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Printed in Germany

Typesetting: Camera-ready by author, data conversion by DA-TeX Gerd Blumenstein
Printed on acid-free paper SPIN 10846505 06/3142 5 4 3 2 1 0

Foreword

ETAPS 2002 was the fifth 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 5 conferences (FOSSACS, FASE, ESOP, CC, TACAS), 13 satellite workshops (ACL2, AGT, CMCS, COCV, DCC, INT, LDTA, SC, SFEDL, SLAP, SPIN, TPTS, and VISS), 8 invited lectures (not including those specific to the satellite events), and several tutorials.

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 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 independent 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 2002 was organized by the Laboratoire Verimag in cooperation with

Centre National de la Recherche Scientifique (CNRS)
Institut de Mathématiques Appliquées de Grenoble (IMAG)
Institut National Polytechnique de Grenoble (INPG)
Université Joseph Fourier (UJF)
European Association for Theoretical Computer Science (EATCS)
European Association for Programming Languages and Systems (EAPLS)
European Association of Software Science and Technology (EASST)
ACM SIGACT, SIGSOFT, and SIGPLAN

The organizing team comprised

Susanne Graf - General Chair
Saddek Bensalem - Tutorials
Rachid Echahed - Workshop Chair
Jean-Claude Fernandez - Organization
Alain Girault - Publicity
Yassine Lakhnech - Industrial Relations
Florence Maraninchi - Budget
Laurent Mounier - Organization

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

Egidio Astesiano (Genova), Ed Brinksma (Twente), Pierpaolo Degano (Pisa), Hartmut Ehrig (Berlin), José Fiadeiro (Lisbon), Marie-Claude Gaudel (Paris), Andy Gordon (Microsoft Research, Cambridge), Roberto Gorrieri (Bologna), Susanne Graf (Grenoble), John Hatcliff (Kansas), Görel Hedin (Lund), Furio Honsell (Udine), Nigel Horspool (Victoria), Heinrich Hußmann (Dresden), Joost-Pieter Katoen (Twente), Paul Klint (Amsterdam), Daniel Le Métayer (Trusted Logic, Versailles), Ugo Montanari (Pisa), Mogens Nielsen (Aarhus), Hanne Riis Nielson (Copenhagen), Mauro Pezzè (Milan), Andreas Podelski (Saarbrücken), Don Sannella (Edinburgh), Andrzej Tarlecki (Warsaw), Herbert Weber (Berlin), Reinhard Wilhelm (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, and finally Springer-Verlag for agreeing to publish the ETAPS proceedings. As organizer of ETAPS'98, I know that there is one person that deserves a special applause: Susanne Graf. Her energy and organizational skills have more than compensated for my slow start in stepping into Don Sannella's enormous shoes as ETAPS Steering Committee chairman. Yes, it is now a year since I took over the role, and I would like my final words to transmit to Don all the gratitude and admiration that is felt by all of us who enjoy coming to ETAPS year after year knowing that we will meet old friends, make new ones, plan new projects and be challenged by a new culture! Thank you Don!

January 2002 José Luiz Fiadeiro

Preface

Once again, the number, the breadth and the quality of papers submitted to the CC 2002 conference continues to be impressive. In spite of some difficult times which may have discouraged many potential authors from thinking of travelling to a conference, we still received 44 submissions.

Of these submissions, 21 came from 12 different European countries, 17 from the USA and Canada, and the remaining 6 from Australia and Asia.

In addition to the regular paper submissions, we have an invited paper from Patrick and Radhia Cousot. It is especially fitting that Patrick Cousot should deliver the CC 2002 invited paper in Grenoble because many years ago he wrote his PhD thesis at the University of Grenoble.

The members of the Program Committee took their refereeing task very seriously and decided very early on that a physical meeting was necessary to make the selection process as fair as possible. Accordingly, nine members of the Program Committee attended a meeting in Austin, Texas, on December 1, 2001, where the difficult decisions were made. Three others joined in the deliberations via a telephone conference call. Eventually, and after much (friendly) argument, 18 papers were selected for publication.

I wish to thank the Program Committee members for their selfless dedication and their excellent advice. I especially want to thank Kathryn McKinley and her assistant, Gem Naivar, for making the arrangements for the PC meeting. I also wish to thank my assistant, Catherine Emond, for preparing the materials for the PC meeting and for assembling the manuscript of the proceedings.

The paper submissions and the reviewing process were supported by the START system (`http://www.softconf.com`). I thank the author of START, Rich Gerber, for making his software available to CC 2002 and for his prompt attention to the little problems that arose.

These conference proceedings include the invited paper of Patrick and Radhia Cousot, the 18 regular papers, and brief descriptions of three software tools.

January 2002 Nigel Horspool

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