Lecture Notes in Computer Science 4941

Commenced Publication in 1973
Founding and Former Series Editors:
Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

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Types for Proofs and Programs

International Conference, TYPES 2007
Cividale del Friuli, Italy, May 2-5, 2007
Revised Selected Papers

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Preface

These proceedings contain a selection of refereed papers presented at or related to the Annual Workshop of the TYPES project (EU coordination action 510996), which was held during May 2–5, 2007 in Cividale del Friuli (Udine), Italy.

The topic of this workshop was formal reasoning and computer programming based on type theory: languages and computerized tools for reasoning, and applications in several domains such as analysis of programming languages, certified software, formalization of mathematics and mathematics education. The workshop was attended by more than 100 researchers and included more than 40 presentations. We also had the pleasure of three invited lectures, from Frédéric Blanqui (INRIA, Protheo team), Peter Sewell (University of Cambridge) and Amy Felty (University of Ottawa).

From 22 submitted papers, 13 were selected after a reviewing process. Each submitted paper was reviewed by three referees; the final decisions were made by the editors.

This workshop is the last of a series of meetings of the TYPES working group funded by the European Union (IST project 29001, ESPRIT Working Group 21900, ESPRIT BRA 6435). The proceedings of these workshops were published in the *Lecture Notes in Computer Science* series:

TYPES 1993 Nijmegen, The Netherlands, LNCS 806
TYPES 1994 Båstad, Sweden, LNCS 996
TYPES 1995 Turin, Italy, LNCS 1158
TYPES 1996 Aussois, France, LNCS 1512
TYPES 1998 Kloster Irsee, Germany, LNCS 1657
TYPES 1999 Lökeborg, Sweden, LNCS 1956
TYPES 2000 Durham, UK, LNCS 2277
TYPES 2002 Berg en Dal, The Netherlands, LNCS 2646
TYPES 2003 Turin, Italy, LNCS 3085
TYPES 2004 Jouy-en-Josas, France, LNCS 3839
TYPES 2006 Nottingham, UK, LNCS 4502

ESPRIT BRA 6453 was a continuation of ESPRIT Action 3245, *Logical Frameworks: Design, Implementation and Experiments.* Proceedings for annual meetings under that action were published by Cambridge University Press in the books *Logical Frameworks and Logical Environments.*

TYPES 2007 was made possible by the contribution of many people. We thank all the participants to the workshops, and all the authors who submitted papers for consideration for these proceedings. We would like to also thank the referees for their effort in preparing careful reviews. Finally we acknowledge the support of the University of Udine in the organization of the meeting.

January 2008

Marino Miculan
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