Preface

Alessandro Armando · Peter Baumgartner · Gilles Dowek

This special issue of the *Journal of Automated Reasoning* is dedicated to a selection of papers presented at the International Joint Conference on Automated Reasoning (IJCAR 2008), held in Sydney in August 2008. Out of the 39 papers and system descriptions presented at the conference, four were invited for a submission to this special issue. The extended versions of these papers have been reviewed in the way usual to the *Journal of Automated Reasoning*, before being published in this volume.

Two of these papers are dedicated to proof search in specific logics, coming from the area of large data bases and of program correctness, the third paper presents a general framework where various proof systems can be expressed, in a logic programming way, the fourth presents decision methods for dense linear orders, formally checked in an interactive theorem proving system. These papers illustrate several of the trends of automated theorem proving, always stimulated by its interactions with other areas of informatics: the theory of data bases, that of program correctness, logic programming, interactive theorem proving, decidability, . . .

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A. Armando
DIST, University of Genova, Genova, Italy
e-mail: armando@dist.unige.it

P. Baumgartner (✉)
NICTA, Canberra Research Lab, Canberra, Australia
e-mail: Peter.Baumgartner@nicta.com.au

P. Baumgartner
The Australian National University, Canberra, Australia

G. Dowek
LIX, École Polytechnique, Paris, France
e-mail: Gilles.Dowek@polytechnique.edu