

Lecture Notes in Artificial Intelligence 1360

Subseries of Lecture Notes in Computer Science

Edited by J. G. Carbonell and J. Siekmann

Lecture Notes in Computer Science

Edited by G. Goos, J. Hartmanis and J. van Leeuwen

Dongming Wang (Ed.)

Automated Deduction in Geometry

International Workshop
on Automated Deduction in Geometry
Toulouse, France, September 27-29, 1996
Selected Papers



Springer

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Cataloging-in-Publication Data applied for

Die Deutsche Bibliothek - CIP-Einheitsaufnahme

Automated deduction in geometry : selected papers / International Workshop on Automated Deduction in Geometry, Toulouse, France, September 27 - 29, 1996. Dongming Wang (ed.). - Berlin ; Heidelberg ; New York ; Barcelona ; Budapest ; Hong Kong ; London ; Milan ; Paris ; Santa Clara ; Singapore ; Tokyo : Springer, 1998

(Lecture notes in computer science ; Vol. 1360 : Lecture notes in artificial intelligence)

ISBN 3-540-64297-8

CR Subject Classification (1991): I.2.3, F.4.1, I.3.5, G.2

ISBN 3-540-64297-8 Springer-Verlag Berlin Heidelberg New York

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Printed in Germany

Typesetting: Camera ready by author

SPIN 10631780

06/3142 - 5 4 3 2 1 0

Printed on acid-free paper

Preface

This volume contains selected papers presented at the Workshop on Automated Deduction in Geometry held September 27–29, 1996 in Toulouse, France. The workshop, organized by Ricardo Caferra, Luis Fariñas del Cerro, He Shi, and Dongming Wang, and sponsored by Programme de Recherches Avancées de Coopérations Franco-Chinoises (PRA M94-1), Université Paul Sabatier de Toulouse, and PRC-GDR AMI du CNRS, brought together 20 researchers from Asia, Europe and North America. Two invited talks were given by Deepak Kapur and Volker Weispfenning.

In addition to those presented at the workshop, a few papers whose authors were invited to attend the workshop but could not come have also been considered for inclusion in the volume. All the submitted papers underwent a refereeing process at the usual conference standard; finally 11 papers have been accepted.

Automated deduction in geometry is one of the classical research subjects in artificial intelligence. Remarkable success has been achieved since the invention of Wu's method in the later 1970s. Research practice continues to demonstrate the high power and capability of advanced methods for automating geometric problem-solving with modern computing technologies. This collection of state-of-the-art contributions from leading experts and active researchers presents recent advances and new trends on the subject: existing methods are extended, implemented and applied, new elimination and coordinate-free techniques are introduced and developed, and integration of different approaches is attempted. We hope that this book will not only serve as an up-to-date reference but also motivate further developments on automated geometric deduction.

We thank the authors, the referees, and those who contributed to the preparation of this volume.

February 1998

The Editors

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