

Contents

On Spatial Constraint Solving Approaches	1
<i>Christoph M. Hoffmann and Bo Yuan</i>	
A Hybrid Method for Solving Geometric Constraint Problems	16
<i>Xiao-Shan Gao, Lei-Dong Huang, and Kun Jiang</i>	
Solving the Birkhoff Interpolation Problem via the Critical Point Method: An Experimental Study	26
<i>Fabrice Rouillier, Mohab Safey El Din, and Éric Schost</i>	
A Practical Program of Automated Proving for a Class of Geometric Inequalities	41
<i>Lu Yang and Ju Zhang</i>	
Randomized Zero Testing of Radical Expressions and Elementary Geometry Theorem Proving	58
<i>Daniela Tulone, Chee Yap, and Chen Li</i>	
Algebraic and Semialgebraic Proofs: Methods and Paradoxes	83
<i>Pasqualina Conti and Carlo Traverso</i>	
Remarks on Geometric Theorem Proving	104
<i>Laura Bazzotti, Giorgio Dalzotto, and Lorenzo Robbiano</i>	
The Kinds of Truth of Geometry Theorems	129
<i>Michael Bulmer, Desmond Fearnley-Sander, and Tim Stokes</i>	
A Complex Change of Variables for Geometrical Reasoning	143
<i>Tim Stokes and Michael Bulmer</i>	
Reasoning about Surfaces Using Differential Zero and Ideal Decomposition	154
<i>Philippe Aubry and Dongming Wang</i>	
Effective Methods in Computational Synthetic Geometry	175
<i>Jürgen Bokowski</i>	
Decision Complexity in Dynamic Geometry	193
<i>Ulrich Kortenkamp and Jürgen Richter-Gebert</i>	
Automated Theorem Proving in Incidence Geometry – A Bracket Algebra Based Elimination Method	199
<i>Hongbo Li and Yihong Wu</i>	
Qubit Logic, Algebra and Geometry	228
<i>Timothy F. Havel</i>	
Nonstandard Geometric Proofs	246
<i>Jacques D. Fleuriot</i>	

Emphasizing Human Techniques in Automated Geometry Theorem Proving: A Practical Realization	268
<i>Ricardo Caferra, Nicolas Peltier, and François Puitg</i>	
Higher-Order Intuitionistic Formalization and Proofs in Hilbert’s Elementary Geometry	306
<i>Christophe Dehlinger, Jean-François Dufourd, and Pascal Schreck</i>	
Author Index	325

Automated Deduction in Geometry

Third International Workshop, ADG 2000, Zurich,

Switzerland, September 25-27, 2000, Revised Papers

Richter-Gebert, J.; Wang, D. (Eds.)

2001, VIII, 328 p., Softcover

ISBN: 978-3-540-42598-4