

Preface

Bruno Buchberger passed the milestone of his 60th birthday on October 22, 2002.

All the contributors to this book helped to celebrate this event, by presenting invited talks at the birthday conference “Logic, Mathematics and Computer Science - LMCS2002” presented in Professor Buchberger’s renovated medieval castle at RISC in Hagenberg, Austria. Because of the superb spirit and the success of this symposium, the idea was launched to make these talks available to a larger audience. After more than a decade, the plan has finally come true, in the form of this collection of mathematical essays. Two of them are almost unchanged versions of the LMCS2002 talks: Stephen Wolfram’s “New Directions in the Foundations of Mathematics” and Doron Zeilberger’s “Towards a Symbolic Computational Philosophy (and Methodology!) for Mathematics”. The essay “On the Role of Logic and Algebra in Software Engineering” by Manfred Broy is a slightly edited version of his LMCS2002 talk. Henk Barendregt significantly expanded his talk on “Foundations of Mathematics from the Perspective of Computer Verification”. In their mathematical essence all these contributions are still fully up-to-date, and they rekindle the inspiring atmosphere of the Buchberger Symposium.

I want to take the opportunity to thank Ralf Hemmecke for editorial assistance and, last but not least, Martin Peters and Ruth Allewelt from Springer for their help and almost infinite patience.

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Peter Paule

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