

Commutative Algebra

Marco Fontana • Sophie Frisch • Sarah Glaz
Editors

Commutative Algebra

Recent Advances in Commutative Rings,
Integer-Valued Polynomials, and Polynomial
Functions



Springer

Editors

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Preface

This volume is mainly the outcome of a series of mini-courses and a conference on *Commutative rings, integer-valued polynomials and polynomial functions* at Technische Universität Graz, Austria, December 16–18 (mini-courses) and December 19–22 (conference), 2012. It also contains a small collection of invited articles by some of the leading experts in the area, carefully selected for the impact of their research on the major themes of the conference.

The aim of this meeting was to present recent progress in the area of commutative algebra, with primary emphasis on commutative ring theory and integer-valued polynomials along with connections to algebraic number theory, algebraic geometry and homological algebra. The wide range of topics is reflected in the table of contents of this volume. Some of the invited speakers who gave mini-courses have supplied surveys of the state of the art in newly emerging subfields.

At the conference, we had the good fortune to see that our field attracts excellent young mathematicians (who submitted good work, both individually and in collaboration with the old guard) and the not so good fortune to see that none of the young researchers have permanent jobs. May the first trend remain in full force and the second one be remedied in the near future!

Among the people and organizations who helped to make the conference and this volume of proceedings possible, our special thanks go to the departmental secretary Hermine Panzenböck and the doctoral student Roswitha Rissner, who, between the two of them, shared all the hard work of organizing, from designing the conference poster and implementing the website to applications for subsidies and the painstaking work of bookkeeping and balancing the accounts. Without their efforts, the conference would not have taken place and this volume would not have seen the light of day.

We thank the sponsors of the conference: the province of Styria, whose subsidy allowed us to sponsor the travel expenses of some graduate students and conference participants from low-income countries, and the faculty of mathematics and physics of Technische Universität Graz and the joint graduate school of natural sciences “NAWI Graz” of Technische Universität Graz and Karl-Franzens Universität Graz,

who together paid the travel expenses of all the invited speakers. Last, but not least, we thank the editorial staff of Springer, in particular Elizabeth Loew, for their cooperation, hard work and assistance with the present volume.

Rome, Italy
Graz, Austria
Storrs, Connecticut, USA
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