

## Preface

The present volume contains the Proceedings of the Conference and Summer School

### **Algebraic Geometry, Algebra, and Applications (AGAAP)**

held from September 23 to October 3, 2003 in the Bulgarian mountain resort Borovetz. It was a result of the scientific cooperation among:

Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences

Alfred Rényi Institute of Mathematics of the Hungarian Academy of Sciences

Institute of Mathematics of the Polish Academy of Sciences

“Simion Stoilow” Institute of Mathematics of the Romanian Academy

and their initiative to strengthen the mutual transfer of knowledge and research competencies.

The aim of the Conference and the School was to give an update on techniques and methods in algebraic geometry, algebra, and their applications, oriented not only to the experts but also to a larger audience. There were 36 participants from 14 countries. The scientific program consisted of two minicourses of 5-hours each,

“Algebraic K-theory of schemes” by Marek Szyjewski and

“Geometry of polynomial mappings” by Zbigniew Jelonek,

16 one- and two-hour lectures and 15 short 35-minute communications.

The present Proceedings include 17 surveys and research papers. Most of the articles are based on the talks presented at the Conference. We decided to include also the contributions of several mathematicians who planned but were not able to participate at the Conference. We hope that we have succeeded to show some recent trends in algebraic geometry, algebra, and the interference between their different branches.

Unfortunately, by some circumstances, not all of the speakers at the Conference presented the written form of their lessons. Nevertheless, we thank them for the interesting talks giving the participants new information and ideas for further work.

We want to say our personal thanks to Nickolai Manev, Chairman of the Organizing Committee, who took care for the whole organization of the Conference and the School. His efforts allowed us to be occupied only with the scientific organization of the Conference. We are also very thankful to the staff of the Rila Hotel in Borovetz for the warm hospitality and the excellent conditions during the Conference.

We are very grateful to all contributors to the present volume and to the referees for their careful and patient work.

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