

Preface

The present volume contains the Proceedings of the International Workshop “Polynomial Identities in Algebras. II”, which was held on September 2 – 6, 2011, at the main campus of Memorial University of Newfoundland (MUN) in St. John’s, NL, Canada. The Workshop was organized by Atlantic Algebra Centre (AAC) and financially supported by Atlantic Association for Research in the Mathematical Sciences (AARMS) and Memorial University. As Professor Yuri Bahturin, Director of AAC, wrote in the first announcement of the Workshop (<http://www.mun.ca/aac/Workshops/PastWork/PI2/PIA2fa.pdf>), “the first workshop under the same title was held at Memorial University of Newfoundland in August – September 2002. Since then the theory of Polynomial Identities in Algebra has experienced a strong development. Some problems have been solved, among them the reputed problem of the exponentiality of the growth of identities in associative and Lie algebras and superalgebras. New methods have been introduced, in particular, the methods developed in the theory of group gradings of associative, Lie and Jordan algebras. In addition to traditional combinatorial methods, people working on polynomial identities make more frequent



The participants at the Workshop

use of the Representation Theory, the Theory of Hopf Algebras, and techniques involving computers. Several monographs and surveys have been published, including *Polynomial Identity Rings* by V. Drensky and E. Formanek (Birkhäuser, 2004), *Polynomial Identities and Asymptotic Methods* by A. Giambruno and M. Zaicev (AMS Mathematical Surveys and Monograph Series, Volume 122, 2005) and *Computational Aspects of Polynomial Identities* by A. Kanel-Belov and L. Rowen (A K Peters, Ltd., 2005). The aim of the second edition of the Workshop was to survey the main achievements in the area for the last nine years, discuss the current progress and to determine future directions and outstanding problems”.

Shortly after the completion of the Workshop, on November 22, Professor Yuri Bahturin turned 65. We have decided to dedicate the present volume to his birthday. Many of our colleagues and friends of Yuri have contributed to the Proceedings, although some of them did not have the opportunity to participate in the Workshop.

We are very grateful to all contributors to the present volume, to the referees for their careful and patient work, and to Tatiana Parkhomenko, the technical assistant of *Serdica Mathematical Journal*, for the excellent typesetting of the volume. Our personal thanks are due to the colleagues, students and staff of the Department of Mathematics and Statistics of MUN, who took care of the whole organization process and whose efforts allowed us to concentrate on the scientific program of the Workshop.

Sofia – Palermo – St. John’s – Campinas – Moscow

July 2012

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