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# PREFACE

This volume of Demonstratio Mathematica contains the proceedings of the

**AAA88—88th Workshop on General Algebra**
**(88. Arbeitstagung Allgemeine Algebra)**

The conference was held at Warsaw University of Technology, Faculty of Mathematics and Information Science from June 19 to June 22, 2015, and was organized by the algebra group at the Warsaw University of Technology within the Stefan Banach conference series. Support was provided by the Warsaw University of Technology, the Stefan Banach International Mathematical Center, and the Warsaw Center of Mathematics and Computer Science.

The Organizing Committee consisted of: G. Bińczak, T. Brengos, N. Dojer (University of Warsaw), A. Mućka, A. Pilitowska, A. Romanowska, M. Stronkowski, A. Zamojska-Dzienio, and M. Ziembowski. The Scientific Committee consisted of: E. Aichinger (Johannes Kepler University, Linz, Austria), A. Pilitowska, A. Romanowska, and J. D. H. Smith (Iowa State University, Ames, Iowa, U.S.A.).

The main topics of the conference were related to the current focus of research in universal algebra, as reflected in the 40-year long tradition of the AAA conferences, but were primarily designed to emphasize the ubiquity and applicability of universal algebraic techniques. Thus the featured topics included:

1. Non-classical algebraic structures;
2. Universal algebra and lattice theory;
3. Applications of algebra in logic, combinatorics and computer science;
4. Classical algebraic structures, especially in connection with universal-algebraic methods.

The primary aim of the conference was to review the most recent research results and trends in the above areas, and to promote discussions and inter-

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actions between different groups. It brought together researchers working in the above areas, and served to foster collaboration and future research.

The secondary goal was to attract the interest of graduate students and younger researchers, providing them with interesting and significant problems to work on. A large number of participants were young researchers, graduate students, and even some undergraduate students. One graduate student presented a shorter plenary lecture.

The list of invited plenary talks included:

1. "An introduction to latin bitrades", Aleš Drápal, Charles University, Prague, Czech Republic.
2. "Topological algebras on Boolean spaces as dual spaces and applications in formal language theory", Mai Gehrke, Université Paris Diderot, Paris, France.
3. "Fregean varieties", Katarzyna Słomczyńska, Pedagogical University in Kraków, Poland. (Because of a sudden illness, this talk could not be delivered directly. Instead, Mai Gehrke extended her invited talk to two hours.)
4. "Quantum quasigroups", Jonathan D. H. Smith, Iowa State University, Ames, Iowa, U.S.A.
5. "Dualizable algebras with parallelogram terms", Ágnes Szendrei, University of Colorado, Boulder, Colorado, U.S.A. and Szegedi Tudományegyetem, Hungary.
6. "Algebraic constructions for expanders", Mikhail Volkov, Ural Federal University, Ekaterinburg, Russia.

The program comprised 4 one-hour and one two-hour invited plenary lectures, 4 shorter plenary lectures, 52 twenty-minute contributed talks, and a special lecture about the scientific and didactic achievements of the late Professor Tadeusz Traczyk. The conference hosted 90 participants from 25 countries (Armenia, Austria, Czech Republic, France, Germany, Hungary, Iran, Israel, Japan, Kazakhstan, Latvia, Luxemburg, Oman, Poland, Portugal, Russia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Thailand, U.K., U.S.A.), including 37 Polish participants.

Most talks, and especially the plenary lectures, were very well received, and the organizers heard much positive feedback from the participants about the choice and level of these presentations. The slides of most lectures are available on the conference website: `www.mini.pw.edu.pl/aaa88`

On behalf of the Scientific Committee,
*Anna Romanowska*