

PREFACE: INTERNATIONAL CONFERENCE ON MATRIX ANALYSIS AND ITS APPLICATIONS – MatTriad 2017

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The history of MatTriad – The International Conference on Matrix Analysis and its Applications dates back to 2005 when the first meeting in the series was held in Będlewo, Poland. Since then the conferences with MatTriad logo are organized every second year, of which the 2007 and 2009 editions were held in Będlewo, whereas the 2011, 2013, and 2015 editions took place outside of Poland, namely in Tomar, Portugal, Herceg Novi, Montenegro, and Coimbra, Portugal, respectively.

The 2017 edition of MatTriad, seventh in the series, was held on September 25-29, 2017, again in Będlewo at the Mathematical Research and Conference Center of the Polish Academy of Sciences. The conference brought together researchers sharing an interest in a variety of aspects of matrix analysis and its applications in different areas of science. Matrix theory is used in almost all other parts of mathematics and all areas to which mathematics is applied, and, in return, other parts of mathematics can be very useful in proving matrix facts that are difficult or impossible to prove using conventional matrix-theoretic methods. Many advances have been made recently, both theoretical and practical, with a lot of discussion between matrix theorists and other mathematicians.



MatTriad 2017 was co-organized by the International Stefan Banach Mathematical Center – Institute of Mathematics of the Polish Academy of Sciences, Faculty of Mathematics and Computer Science, Adam Mickiewicz University, Poznań, Poland, Institute of Socio-Economic Geography and Spatial Management, Adam Mickiewicz University, Poznań, Poland, and Department of Mathematical and Statistical Methods, Poznań University of Life Sciences, Poland. The Scientific Committee was chaired by Tomasz Szulc (Adam Mickiewicz University, Poznań, Poland) and comprised Natália Bebiano (University of Coimbra, Portugal), Ljiljana Cvetković (University of Novi Sad, Serbia), Heike Faßbender (Technische Universität Braunschweig, Germany), and Simo Puntanen (University of Tampere, Finland). The Organizing Committee was chaired by Augustyn Markiewicz (Poznań University of Life Sciences, Poland) and comprised Francisco Carvalho (Polytechnic Institute of Tomar, Portugal), Katarzyna Filipiak (Poznań University of Technology, Poland), Jan Hauke (Adam Mickiewicz University, Poznań, Poland), Aneta Sawikowska (Poznań University of Life Sciences, Poland), and Dominika Wojtera-Tyrakowska (Adam Mickiewicz University, Poznań, Poland).

The conference consisted of 2 invited lectures, 7 invited talks, 54 contributed talks, and 2 posters focused on the topics relevant from the point of view of the profile of MatTriad 2017, in particular Interval Matrices, Total Positivity, and Matrix Methods in Linear Models. There was also a session in memoriam of Prof. Jaroslav Zemánek (1946–2017). The invited lectures were delivered by Fuzhen Zhang (USA): Tensors and

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FIGURE 1. *Participants of MatTriad 2017*

some combinatorial properties of tensors and Lynn R. LaMotte (USA): Deconstructing type III, whereas the invited talks were given by Narayanaswamy Balakrishnan (Canada), Andreas Frommer (Germany), Volker Mehrmann (Germany), Jolanta Pielaszkievicz (Sweden), K. Manjunatha Prasad (India), Mirloslav Rozložník (Czech Republic), and Ernest Šanca (Serbia).

During the conference dinner, the chair of Scientific Committee proudly announced the winners of the Young Scientists Awards (YSA) for the best talks presented by Ph.D. students and young scientists: Álvaro Barreras (Spain) and Ryo Tabata (Japan). The winners will be Invited Speakers at the 2019 edition of MatTriad. The list of the participants of MatTriad 2017, abstracts of the talks and posters, photo gallery as well as further related information are available at the web page <https://mattriad.wmi.amu.edu.pl>.

The present special issue of the *Electronic Journal of Linear Algebra* contains selected papers strongly correlated to the talks given at MatTriad 2017. These papers went through the normal refereeing procedures and were subject to the usual standards for publication of the journal. This is the second special issue of the *Electronic Journal of Linear Algebra* devoted to MatTriad, for volume 25 of the journal contains the papers related to the talks presented at MatTriad 2011.

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