

Linear Algebra and Multilinear Algebra

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The 2014 International Conference on Tensors, Matrices and Their Applications (TMA 2014) was held at Suzhou University of Science and Technology (USTS), Suzhou, China, December 17–19, 2014. The academic committee of TMA 2014 is co-chaired by Professors Richard A. Brualdi, Kung-Ching Chang, Chi-Kwong Li, and Yong-Zhong Song.

TMA 2014 was intended for researchers from both tensor theory and matrix communities to discuss novel methods and applications as well as theoretical advances. TMA 2014 was endorsed by the International Linear Algebra Society (ILAS), and jointly sponsored by the National Natural Science Foundation of China, the Hong Kong Polytechnic University, Fudan University, Jiangsu Normal University (JSNU), and Suzhou University of Science and Technology (USTS). It also got sponsorship from the Mathematical Center of Ministry of Education of China and the Suzhou Government. Jianrong Wu (USTS), Changqing Xu (USTS), Yimin Wei (Fudan), and Zhengke Miao (JSNU) co-chaired the local committee of TMA 2014.

The central topics of their frequent discussion during that time were mainly about the interplay of matrix and the multi-way matrix whose nickname is tensor. The discussion prompted the idea of the Suzhou conference. There are 24 invited speakers, including Z. -J. Bai, Lieven De Lathauwer, Chi-Kwong Li, M. Ng, L. Qi, S. Qiao, P. Semrl, J. Shao, and E. Tyrtysnikov.

This special issue contains 11 articles. We feel so strongly that the fruitful works reflecting the interweaving across tensors and matrices covering structured tensors, tensor decompositions, tensor spectrum, tensor approximations, tensor optimizations, and matrix analysis, makes not only mathematicians but also physicists, computer scientists, engineers, and even

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those working in mechanics know that there is a family so called Tensor and Matrix.

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