



## Tensors and Matrices in Symmetry with Applications

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### Message from the Guest Editors

Dear Colleagues,

Matrices and tensors are shown to be foundational tools for capturing linear and multilinear interactions in various disciplines and have extensive applications in science and engineering. Symmetry plays important roles in models, theory, and algorithms of matrices and tensors. Tensor decompositions, tensor spectral theory, tensor computations, numerical linear and multilinear algebra, structure matrices, tensor (matrix) low rank approximations, and their applications have been active research areas in recent years.

Although a remarkable number of papers have been contributed to theory, algorithms, and applications of tensors and matrices, it is still challenging to develop problem-driven models, structure-exploiting algorithms, and associated mathematical theory for tensor- and matrix-related problems. The goal of this Special Issue is to attract original research papers on the models, theory, algorithms, and applications of tensors and matrices. These applications include automatic control, statistical inference, machine learning, data recovery, computer vision, image and video processing, graph and network analysis, and other data-driven applications.





# symmetry



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## Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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