

Special Issue on
**Applications of Tensor Models in Wireless
Communications and Mobile Computing**

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Tensor decompositions, also named tensor factorizations, are very useful for representing and analyzing multidimensional data. With the emergence of new results in multilinear algebra, tensor decompositions have found applications in several areas. In particular, they have gained considerable space in wireless communications, mobile computing, and signal processing. These decompositions possess important properties that bring some advantages over the classical matrix based methods for solving different kinds of problems.

Although much research has been done within this subject, many challenges are still to be explored. The proposition of new tensor decompositions, factorization algorithms, and mathematical properties have a great potential to bring significant impacts in several areas as, for instance, biomedical and audio processing, mobile computing, and computer vision. Moreover, the multidimensional nature of the signals in future wireless communication systems provides a good opportunity to exploit tensor based models, aiming to meet strong requirements regarding capacity and spectral efficiencies.

The goal of this special issue is to gather submissions presenting recent advances in tensor decompositions with applications in communication systems and mobile computing. Submissions with focus either on theoretical aspects of tensor decompositions or on application-oriented problems are invited. Submissions related to 5G wireless communications are especially welcome. High quality original articles as well as review articles that describe the current state of the art are also encouraged.

Potential topics include but are not limited to the following:

- ▶ New tensor decompositions and uniqueness issues of tensor models
- ▶ Low-rank approximations
- ▶ Algorithms for computing tensor decompositions
- ▶ Optimization problems related to tensor models
- ▶ Modeling and estimation of wireless channels using tensor models
- ▶ Digital receivers for mobile systems
- ▶ Wireless MIMO and cooperative communications using tensor models
- ▶ Tensor decomposition in 5G networks
- ▶ Computer vision
- ▶ Biomedical and audio signal processing
- ▶ Pattern recognition and neural networks

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/wcmc/atmc/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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