

Special Issue on Sparse Representation for Machine Learning

CALL FOR PAPERS

Sparse representation attracts great attention as it can significantly save computing resources and find the characteristics of data in a low-dimensional space. Thus, it can be widely applied in engineering fields such as dictionary learning, signal reconstruction, image clustering, feature selection, and extraction.

As real-world data becomes more diverse and complex, it becomes hard to completely reveal the intrinsic structure of data with commonly used approaches. This has led to the exploration of more practicable representation models and efficient optimization approaches. New formulations such as deep sparse representation, graph-based sparse representation, geometry-guided sparse representation, and group sparse representation have achieved remarkable success. This has motivated researchers to utilize the recently developed techniques and tools of mathematics to deal with sparse representation problems.

This Special Issue will accept original research and review articles on the theory and applications of sparse representation. We especially welcome novel sparse formulations and optimization strategies.

Potential topics include but are not limited to the following:

- ▶ Supervised and unsupervised learning with sparse coding
- ▶ Interpretable Artificial Intelligence based on sparse representations
- ▶ Sparse tensor representations
- ▶ Sparse representation models design, analysis, and interpretability
- ▶ Optimization algorithm design and analysis
- ▶ The strategies of regularization parameter selection
- ▶ Sparse representation of non-traditional data such as multichannel signals, etc.
- ▶ Deep sparse representation-based classification
- ▶ Sparse Bayesian learning
- ▶ Object tracking via multitask sparse representation
- ▶ Feature engineering and feature extraction
- ▶ Matrix factorization and completion
- ▶ Applications in signal processing, pattern recognition, multimedia, bioinformatics, etc.

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=416036>.

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

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