

**Special Issue on
Sparse Representations for Image and Video Analysis
Journal of Visual Communication and Image Representation (JVCI)**

Sparse representation has gained popularity in the last few years as a technique to reconstruct a signal with few training examples. This reconstruction can be defined as adaptively finding a dictionary which best represents the signal on sample bases. Sparse representation establishes a more rigorous mathematical framework for studying high-dimensional data and ways to uncover the structures of the data, giving rise to a large repertoire of efficient algorithms. The sparse representation has just been applied to visual analysis for few years, while has shown its advantages in processing the visual information. Thus it will have a great potential in this field.

Sparse representation has wide applications in image/video processing, analysis, and understanding, such as denoising, deblurring, inpainting, compression, super-resolution, detection, classification, recognition, and retrieval. Many approaches based on sparse representation were proposed for these applications in the past years, and showed the promising results. This special issue aims to bring together the range of research efforts in sparse representation for image/video processing, analysis, and understanding. The goals of this special issue are threefold: (1) to introduce the advances of the theories on sparse representation; (2) to survey the progress of the applications of sparse representation in visual analysis; and (3) to discuss new sparse representation based technologies that will be potentially impactful in the image/video applications (primary results are needed).

Scope

The scope of this special issue is to cover all aspects that relate to sparse representation for visual analysis. Topics of interest include, but are not limited to the following:

- The fundamental theories on sparse representation
- Dictionary learning for sparse representation and modeling
- The novel learning methods based on sparse representation
- The applications of sparse representation in image/video denoising, inpainting, deblurring, compression, and super-resolution
- Sparse representation for pattern recognition and classification
- Sparse representation for image/video retrieval
- Sparse reconstruction for medical imaging and radar imaging
- Sparse component analysis and its application to blind source separation

Information for Authors

Authors should prepare their manuscript according to the Guide for Authors available from the online submission page of the 'Journal of Visual Communication and Image Representation' at <http://ees.elsevier.com/jvci/>. When submitting via this page, please select “**SparseRepresentations**” as the Article Type. Prospective authors should submit high quality, original manuscripts that have not appeared, nor are under consideration, in any other journals. All submissions will be peer reviewed following the JVCI reviewing procedures.

Important Dates

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