



16-19 December 2018, Tunisia

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Special Session on

Dimension Reduction Technique in Signal Processing and Machine Learning

In some applications such as machine learning and data mining, the challenge is high dimension classes. The increase in dimension of the classes, it requires increase in time and the space for data processing. A dimension reduction technique is effective to resolve this problem, and in machine learning community, a dimension reduction technique has attracted much attention in the previous decades. Dimensionality reduction as a pre-processing step to machine learning is effective in removing irrelevant and redundant data, increasing learning accuracy, facilitating data interpretation, reducing measurement and storage requirements, increasing predeceasing speeds, improving result comprehensibility, improving generalization performance, etc.

Dimensionality reduction methods are categorized into two categories, feature extraction and feature selection. Feature extraction aims to extract or create a set of effective features from the raw data or create a small number of (more effective) high-level features from (a large number of) low-level features. Feature selection is a process of selecting a small number of highly predictive features out of a large set of candidate attributes that might be strongly irrelevant or redundant. Researchers are invited to contribute their original scholarly work for publication in this special session.

Topics of interest include, but not limited to:

- Machine Learning Methods
- Feature extraction and Pattern recognition
- Dimension reduction and discrimination in Image processing analysis
- Dimension reduction and Linear Models
- Machine Learning and Pattern Recognition
- Statistical data analysis and models
- Stochastic Methods and Bayesian approaches
- Analysis of biomedical image processing
- Classification and clustering
- Dimension Reduction on high-dimensional and large-scale data
- Statistical signal processing
- Evolutionary computation
- Pattern recognition application on medicine
- Pattern recognition application on Engineering

Authors are invited to submit full-length (4 pages) papers, in IEEE format, using the guidelines in the authors' info. Special session papers must be submitted by e-mail in PDF format to the organizers of the session. Accepted papers will be published in the electronic Conference Proceedings (CD ROM) and will be submitted to IEEE Xplore®.

Special Session organizers:

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Important Dates:

- **Research Paper Submission :** **September 15, September 30, 2018**
- **Notification of Acceptance:** **October 7, 2018**
- **Camera Ready Submission:** **October 18, 2018**

