Call for Papers:

Springer’s Cognitive Computation

Special Issue on

Cognitive Modelling and Learning for Multimedia Mining and Understanding

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Cognitive modelling and learning has become a new trend for advanced signal analysis, especially for semantic content extraction and understanding. Various approaches have been proposed in recent years to address a range of underlying challenges, including data acquisition, denoising, feature extraction, dimensionality reduction, restoration, data compression, segmentation, detection and classification. In addition, fusion and big data mining is also receiving growing attention for enhanced modelling and analysis.

With rapid developments in machine learning, signal processing and big data analysis techniques, in particular compressed sensing, deep learning and multi-kernel based modelling, there are exciting new opportunities for exploiting these advances for semantic signal analysis and understanding in a range of inter-disciplinary research areas. Relevant applications can currently be found in fields ranging from communications, energy and manufacturing to health, security, remote sensing and numerous other fields. As a result, it is timely to summarise recent progress and advancements, including new models, algorithms and innovative applications, particularly those that are focussed on scalability, quality, efficiency and efficacy of solutions.

In light of this, the aim of this special issue is to solicit state-of-the-art contributions, and also provide a premier forum for both academic and industrial research community to report progress, exchange findings, and facilitating multidisciplinary research works. Fundamental models, algorithms, integrated solutions and novel applications as well as benchmark data and methods for performance assessment are particularly focused for this special issue.
Topics include (but are not limited to):

- Cognitive models and deep learning.
- Sparse representation, learning and compressive sensing in cognitive learning.
- New featured models for cognitive computation.
- Swarm intelligence and data fusion based cognitive computation.
- Emerging applications in cognitive computation based multimedia mining.
  - Content based indexing and retrieval.
  - Denoising and blind signal detection and separation.
  - Segmentation and classification.
  - Performance analysis/evaluation.

**Important Dates:**

- Submissions Deadline: 1 September 2017
- First notification of acceptance: 15 October 2017
- Submission of revised papers: 15 November 2017
- Final notification to the authors: 15 December 2017
- Submission of final/camera-ready papers: 15 January 2018
- Approximate Publication of special issue: April 2018

**Submission Requirements:**

All papers should follow the manuscript preparation requirements for the Springer Cognitive Computation submissions, see [http://www.springer.com/biomed/neuroscience/journal/12559](http://www.springer.com/biomed/neuroscience/journal/12559). The authors are requested to submit their manuscripts via the online submission manuscript system, available at [http://www.editorialmanager.com/cogn/](http://www.editorialmanager.com/cogn/). During submission, authors should explicitly choose the title of the special issue in the Subject line.

Should there be any further enquiries, please feel free to address them to the lead guest editor or the editor in chief of this journal.