



# The 17<sup>th</sup> International Conference on Intelligent Software Methodologies, Tools and Techniques (SOMET 2018)

Granada, Spain, Sept. 26-28, 2018

Special Session:

## Cognitive and Neural Systems (CNS)

<http://secaba.ugr.es/SOMET2018/#sessions>

### Introduction

Artificial intelligence and computer sciences are at the forefront of multi-disciplinary research and development internationally. The ability of computer systems to support human beings or increase their natural intelligence - in order to efficiently solve complex problems in specific fields of action - is still a big challenge.

The Cognitive and Neural Systems theme integrates cognitive science and psychology, artificial intelligence and neural networks, computational modeling and neuroscience in order to emulate human cognitive abilities, such as learning from experience, reasoning, perceiving, understanding and communicating with humans and the environment by means of language and non-verbal forms.

Research about Cognitive and Neural Systems refer to three different areas: artificial vision and natural language processing to perceive and understand the external environment, automatic high-performance learning from huge amounts of heterogeneous data to generate inferences and formulate hypotheses, multimodal natural interaction to communicate with humans in a simple and adaptive manner according to the behavior and the environmental context.

This special session provides an opportunity to explore

how approaches in these research areas could be better combined and integrated to design and realize Cognitive and Neural Systems. In particular, original contributions are sought, covering the whole range of theoretical and practical aspects, technologies and systems in such research areas. Relevant topics include, but are not limited to, the following:

- Natural Language Processing and Conversational Systems
- Human-like Reasoning and Adaptive Behavior
- Machine/Deep Learning from huge amounts of heterogeneous data
- Sentiment Analysis and Social Learning
- Visual Recognition from Images/Videos
- Neuroscience-Inspired Cognitive Architectures
- Trustworthy and Explainable Artificial Intelligence
- Cognitive and Neuro-Robotics
- Applications in Science, Engineering, Medicine, Healthcare, Finance, Business, Law, Education, Transportation, Retailing, Telecommunication, Multimedia

### Session Organizers

- **Dr. Massimo Esposito**, *Institute for High Performance Computing and Networking - National Research Council of Italy (ICAR-CNR), Italy*
- **Professor Angelo Cangelosi**, *The University of Manchester (UoM) and University of Plymouth (PU), UK*
- **Dr. Giovanni Luca Masala**, *Big Data group - University of Plymouth (PU), UK*

### Important Dates

- **Paper submission: March 31, 2018**
- **Camera Ready: June 15, 2018**
- **Registration: June 2 – July 4, 2018**

### Paper Submission

The papers of this session will be printed in proceeding of main conference. The Proceedings of the conference will be published as a book by *IOS international publisher* in series: *Frontiers in Artificial Intelligence and Applications*, that is indexed by SCOPUS.

- Sign in: <https://cmt3.research.microsoft.com/SOMET2018>
- Select Special Session: **Cognitive and Neural Systems**

Papers must be written by using the IOS format **up to 14 A4 pages** for Regular papers, and up to 10 pages for Short papers. The submissions will be peer-reviewed for originality and scientific quality. (IOS format: <https://www.iospress.nl/service/authors/latex-and-word-tools-for-book-authors/>)

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