

# CALL FOR PAPERS

## Special Session on Cognitive Architectures and Multi-Agent Systems

to be held in the frame of  
IECON 2013 - The 39<sup>th</sup> Annual Conference of the IEEE Industrial Electronics Society  
10<sup>th</sup> - 13<sup>th</sup> of November 2013, Austria Center, Vienna, Austria



### TOPIC OF THE SPECIAL SESSION

A lot of effort has been made in developing systems of Artificial Intelligence (AI) and lately Artificial General Intelligence (AGI) in order to cope with increasingly demanding and complex tasks, which are managed by humans on a daily base. In opposition to previous approaches that use task models, recent research covers the area of cognitive architectures and develops process models of human information processing by providing architectures, whose structure enables cognitive functions. An appropriate approach to model and implement cognitive architectures is their application in multi-agent systems. This approach not only brings insights to human cognition, but also leads to the discovery of new patterns of information processing, which enable powerful applications in many areas, such as automation and robotics, agent-based modeling and simulation, multi-agent systems, assistance and surveillance systems.

Researchers are invited to present candidate models or research approaches on how to achieve the goal of creating and applying integrated and consistent models of cognition, not focusing on single mechanisms, but rather on finding approaches to create a bigger picture that enables future development of systems that are

### SPECIAL SESSION ORGANISATION

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The organizers look forward to welcoming you to Vienna, Austria from 10<sup>th</sup> to 13<sup>th</sup> November 2013.

### Important Dates

Regular Paper submission:	April 01, 2013
Notification of acceptance:	June 15, 2013
Final submission:	August 01, 2013



capable to better understand and adapt to real world requirements based on human capabilities.

Possible topics include, but are not limited to:

- Cognitive architectures and their applications
- Artificial General Intelligence (AGI)
- Models of human information processing
- Cognitive multi-agent systems
- Memory and knowledge representation
- Motivational and emotional models for autonomous agents
- Models of cognitive mechanisms for information evaluation and decision making
- Artificial Intelligence (AI) integrating embodiment and symbol grounding

### **SUBMISSION OF PAPERS**

The working language of the conference is English. Submit the full paper as PDF following the IEEE layout requirements by using the templates given at the conference web page. Accepted and presented papers will be published in an IEEE Proceedings volume and will be sent to IEEE Xplore. In addition, selected authors are encouraged to submit their papers for publication in the IEEE Transactions on Industrial Electronics or in the IEEE Transactions on Industrial Informatics.

### **THE CONFERENCE**

IECON 2013 is the 39th Annual Conference of the IEEE Industrial Electronics Society, focusing on industrial and manufacturing theory and applications of electronics, controls, communications, instrumentation and computational intelligence. The objectives of the conference are to provide high quality research and professional interactions for the advancement of science, technology, and fellowship.

Papers with new research results are encouraged for submission. IECON 2013

will be held concurrently with the 7th IEEE International Conference on E-Learning in Industrial Electronics (ICE-LIE 2013). Participation in any of these events just requires a single conference registration fee. The world's industry, research, and academia are cordially invited to participate in the wealth of presentations, tutorials, special sessions and social activities, and furthermore, enjoy beautiful Vienna.