



Special Issue on Computational Cognition and Perception for Humanized Computing

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1 Introduction to computational cognition and perception for humanized computing

In recent years, Artificial Intelligence (AI) has attracted attention as a key for growth in developed countries and developing countries. The attention has been focused mainly on developing new deep learning-based Information Communication Technology (ICT) and Internet of Things (IoT) applications. Although recently developed deep learning technology certainly excels in extracting certain patterns, there are many limitations. Most of recent models are overly dependent on big data, lack a self-idea function, and are complicated. In order to overcome these limitations and to solve the real-world industrial problems, Computational Cognition and Perception (CCP) and Computational Neuroscience (CN) are driving as one of the best tools for future brain-inspired intelligence researches.

Rather than merely developing next-generation AI models, we are trying to provide a platform to share up-to-date scientific and industrial achievements of general-purpose intelligence cognition methods. These methods provide efficient tools to solve the issues of recent AI models, and

capture remarkable human learning abilities, combining the strengths of CCP/CN and deep generative neural networks.

The overall aim of this special issue is to collect the state-of-the-art contributions on the Computational Neuroscience, Computational Cognition and Perception, Computer Vision, Natural Language Processing, Human Action Analysis, and related applications. From over 80 papers submitted to this special issue, finally, 22 high-quality articles were selected, resulting in an acceptance rate of 27.5%. Each paper was peer reviewed by three or more experts during the assessment process. The selected articles have exceptional diversity in terms of artificial intelligence and computer vision techniques and applications. They represent the most recent development in both theory and practice.

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The email address of the authors Mohsen Guizani and Imrich Chlamtac has been updated in the original article.

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