Editor's note

Along with the flourishing development of information science, the Internet has realized the interconnections among the ubiquitous entities in the cyber space. It brings the unceasing expansion of the interactive data, information, knowledge, and services. The frontier information science is expected to imitate the heuristic intelligence, including human cognition (e.g. attention, emotion, and wisdom) and natural attributes (e.g., dynamics, and self-adaptability), to promote the evolution of the information techniques. Accordingly, Cybermatics (i.e., cyberscience and technology) emerges as an interdisciplinary involving three main aspects: the Internet of Things (IoT), cyber, physical and social computing, and green computing and communications.

Cybermatics is to address the scientific and engineering topics referring to Cyber philosophy, science, technology, sociology and more. For example, one character of Cybermatics, ubiquitous connections, includes physical perceptions, cyber interactions, and social correlations, and achieves the convergence of the cyber-physical-social spaces. Currently, the Cybermatics is still in its initial stage, and some related programs and supporting technologies (e.g., the brain activity map project (BAM), brain informatics (BI), human body communication (HBC), collective intelligence) have been launched. It is predicted that the Cybermatics will bring more open topics and challenges for research communities.

The special focus on advanced science and technology for future Cybermatics contains some selected papers from the proceedings of the 2013 IEEE International Conference on Green Computing and Communications and IEEE Internet of Things and IEEE Cyber, Physical and Social Computing (GreenCom-iThings-CPSCoM 2013). The scope of the topic covers system architecture, infrastructures, network protocols, and communications. Cutting-edge researches and innovative solutions are presented to reflect the key advances and state-of-the-art on the Cybermatics.

The guest editors express sincere thanks to numerous reviewers for the constructive contributions and efforts. We also gratefully acknowledge the SCIENCE CHINA-Information Sciences Editorial Office for all the precious supports through the whole process of this special focus.

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