

Call for Papers

Intelligent automation & Soft Computing

Special Issue on the big data research and development

With the advances of information communication technologies, it is critical to improve the efficiency and accuracy of modern data processing techniques. The past decade has witnessed the tremendous technical advances in Sensor Networks, Internet/Web of Things, Cloud Computing, Mobile/Embedded Computing, Spatial/Temporal Data Processing, and Big Data, and these technologies have provided new opportunities and solutions to data processing techniques. Big data is an emerging paradigm applied to datasets whose size is beyond the ability of commonly used software tools to capture, manage, and process the data within a tolerable elapsed time. Such datasets are often from various sources (Variety) yet unstructured such as social media, sensors, scientific applications, surveillance, video and image archives, Internet texts and documents, Internet search indexing, medical records, business transactions and web logs; and are of large size (Volume) with fast data in/out (Velocity). More importantly, big data has to be of high value (Value) and establish trust in it for business decision making (Veracity). Various technologies are being discussed to support the handling of big data such as massively parallel processing databases, scalable storage systems, cloud computing platforms, and MapReduce. Big data is more than simply a matter of size; it is an opportunity to find insights in new and emerging types of data and content, to make business more agile, and to answer questions that were previously considered beyond our reach. This special issue wants to demonstrate the emerging issues in the research of Big Data and approaches towards it. Original and research articles are solicited in all aspects including theoretical studies, practical applications, and experimental prototypes.

All submitted papers will be peer-reviewed and selected on the basis of both their quality and their relevance to the theme of this special issue. Potential topics include, but are not limited to:

- * Big data novel theory, algorithm and applications
- * Big data standards
- * Big data mining and analytics
- * Big data Infrastructure, MapReduce and Cloud Computing
- * Big data visualization
- * Big data semantics, scientific discovery and intelligence
- * Big data performance analysis and large-scale deployment
- * Security, privacy, trust, and legal issues to big data
- * Big data placement, scheduling, and optimization

- * Volume, velocity, variety, value and veracity of big data
- * Storage and computation management of big data
- * Large-scale big data workflow management
- * Mobility and big data
- * Sensor network, social network, web mining, ontology and big data

The submitted papers must be original and must not be under consideration in any other venue. All submitted papers will be reviewed by at least three reviewers and selected based on their originality, significance, relevance, and clarity of presentation. The editors will approve final decisions on accepted papers. Manuscripts should not exceed 20 pages in length and must be prepared according to the following journal's Author Guidelines. Prospective authors should submit full manuscripts with MS Word format or PDF format.

Manuscript Due: March 31, 2016

First Round of Reviews: May 31, 2016

Second Round of Reviews: June 30, 2016

Guest Editors:

Prof. Zheng Xu, Tsinghua University, Beijing, China

Prof. Yunhuai Liu, Hong Kong University of Science and Technology, Hong Kong

Prof. Neil Yen, Aizu University, Japan

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About the Guest Editors:

Zheng Xu was born in Shanghai, China. He received the Diploma and Ph.D. degrees from the School of Computing Engineering and Science, Shanghai University, Shanghai, in 2007 and 2012, respectively. He is currently working in the third research institute of ministry of public security and Tsinghua University, China. His current research interests include data mining, big data, social network. He has authored or co-authored more than 70 publications including IEEE Trans. on Automation Science and Engineering, IEEE Trans. on Cloud Computing, IEEE Trans. on Emerging Topics in Computing, IEEE Trans. on Systems, Man, and Cybernetics-Part C etc.

Yunhuai Liu is a professor in the third research institute of ministry of public security, China. He received the PhD degrees from Hong Kong University of Science and Technology (HKUST) in 2008. His main research interests include wireless sensor networks, pervasive computing, and wireless network. He has authored or co-authored more than 50 publications and his publications have appeared in IEEE Trans. on Parallel and Distributed Systems, IEEE Journal of Selected Areas in

Communications, IEEE Trans. on Mobile Computing, IEEE Trans. on Vehicular Technology etc.

Neil Y. Yen received Doctorate degree in human sciences at Waseda University, Totsukamachi, Japan, and in engineering at Tamkang University, New Taipei, Taiwan, in 2012. His Doctorate degree at Waseda University was funded by Japan Society for the Promotion of Science (JSPS) under RONPAKU program. He has joined the University of Aizu, Aizuwakamatsu, Japan, as an Associate Professor since April 2012. Dr. Yen has been engaged extensively in an interdisciplinary field of research, where the themes are in the scope of big data science, computational intelligence, and human-centered computing. Dr. Yen has been actively involved in the research community by serving as Guest Editor, Associate Editor, and Reviewer for international referred journals and as Organizer/Chair of ACM/IEEE-sponsored conferences, workshops, and special sessions. He is now a Member of IEEE Computer Society, IEEE System, Man, and Cybernetics Society, and Technical Committee of Awareness Computing (IEEE SMCS).