
Editorial

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Biographical notes: Guo-Zheng Li received his PhD Degree from Shanghai Jiao Tong University in 2004. He is currently Professor in the Department of Control Science and Engineering, Tongji University, China. He is also currently serving on the Committees at CAAI Machine Learning Society and ACM SIG Bioinformatics. He has published more than 50 refereed papers and three book chapters. He is an Associate Editor of IJCIBSB and JMLC, Editor on board of IJDMB, IJAISC, IJFIPM and IJCBDD as well as PC co-chair of IJCBS09 and ITCM2010 and PC Member of numerous conferences. He was a recipient of the Best Paper Awards at PRICAI 2006, BIBE2007, the First Class Award of Shanghai TCM Science in 2011.

Traditional Chinese Medicine (TCM) has been widely practiced for over 50 centuries in China, which is still the major medical system nowadays. Besides, more and more people in different countries have accepted it. Researches on TCM attract more and more scientists from different scientific fields and countries. To provide a platform for researchers and practitioners in the TCM and related fields to communicate and share their novel ideas, the 2010 International Workshop on Information Technology for Chinese Medicine (ITCM'2010) in conjunction with the 2010 IEEE International Conference on Bioinformatics and Bio-Medical Engineering (IEEE-BIBM'2010) was held at Hong Kong, China on Dec. 18th, 2010. Drs. Yiqin Wang, Xiaodong Cheng, Dan Xi and Guo-Zheng Li chaired it. The program committee consists of 26 committee members around the world. All submitted papers have been peer-reviewed by the program committee members or invited external reviewers. A total of 45 papers have been selected and published in Proceedings of the 2010 IEEE International conferences on Bioinformatics and Biomedicine Workshops (IEEE-BIBM Workshops 2010) (ISBN 978-1-4244-8302-0). Registered authors are from 4 countries including Australia, China, South Korea, and USA. The conference features three distinguished keynote speakers of Professors Baoyan Liu, David Zhang and Yiqin Wang, as well as four invited talks by Professors Jiayu Chen, Xiaozuo Lu, Nevin Zhang and Simon Poon on the morning, and 18 presenters on the afternoon.

This special issue is to bring together the latest/innovative research works in the cross field of information technology and TCM. Out of 45 papers, 3 are invited to expand and publish in this issue. The first paper 'A novel approach in discovering significant

interactions from TCM patient prescription data' by Poon et al. introduces a novel approach to systematically generate combinations of interacting herbs with well effect. Experimental results on a real data set prove that high orders of herb-herb interactions can be detected by this approach. The second paper 'Study on intelligent syndrome differentiation in traditional Chinese medicine based on multiple information fusion methods' by Wang et al. presents the information fusion technology of four diagnostic techniques. The authors collected tongue information, facial information, sound information and inquiry information of 506 cases of clinical heart-system patients. Computational results by using neural networks, support vector machines and ML-kNN show information fusion of four diagnostics may improve the recognition rates. The third paper 'MAPLSC: A novel multi-class classifier for medical diagnosis' by You et al. proposes a novel multiple classifier MAPLSC considering the imbalanced data distribution problems in the clinical diagnostic data sets of TCM fatty liver and TCM insomnia. Comparative results on benchmark microarray data sets and TCM clinical data sets show that MAPLSC improves the macro accuracy of recognition than other state-of-arts multiple classification techniques.

Four additional papers are added to illustrate more bioinformatics methods for the reference of study on information technology for Chinese medicine. They are 'Microarray data classification by multi-information based gene scoring integrated with Gene Ontology' by Tseng and Yu, 'Applications of Self Organizing Map (SOM) for prioritisation of endemic zones of Filariasis in Andhra Pradesh, India' by Upadhayula et al., 'A Heuristic for gene selection and visual prediction of sample type' by Zhou et al. and 'Prediction of the disulfide bonding state of cysteines in proteins using conditional random fields' by Shoombuatong et al.

This special issue reveals state-of-art progress in the applications of information technology on TCM. We believe more people will pay attention to the new trend and contribute to the development of TCM informatics, more great work will appear on the foundation of this issue. Many thanks go to the authors for their contribution to this special issue. Thanks to the BIBM steering committee Chair Xiaohua Hu, the ITCM Program Chairs of Drs. Yiqin Wang, Xiaodong Cheng, Dan Xi and Guo-Zheng Li and the organisation Chairs of Drs. Mingyu You and Guo-Ping Liu. This work was partially supported by the Natural Science Foundation of China under grant no. 60873129 and 61005006.