

Special Issue on Recent Advances in Information Processing & Intelligent Information Systems and Applications Track on Networks

Guest Editorial

This special issue comprises of seven selected papers from the International Symposium on Information Processing 2009 (ISIP 2009), Huangshan, China, 21-23 August 2009 and International Symposium on Intelligent Information Systems and Applications 2009 (IISA 2009), Qingdao, China, 28-30 October 2009. The conference received 623 papers submissions from 11 countries and regions, of which 320 papers were selected for presentation after a rigorous review process. From these 320 research papers, through two rounds of reviewing, the guest editors selected eight as the best papers on the Networks track of the Conference. The candidates of the Special Issue are all the authors, whose papers have been accepted and presented at the ISIP 2009 and IISA 2009, with the contents not been published elsewhere before.

The ISIP 2009 are Co-sponsored by Jiaxing University, China, Peoples' Friendship University of Russia, Russia, Nanchang HangKong University, China, Sichuan University, China, Hunan Agricultural University, China, National Chung Hsing University, Taiwan, Guangdong University of Business Studies, China, Academy Publisher of Finland, Finland.

The IISA 2009 are Co-sponsored by Qingdao University of Science & Technology, China; Peoples' Friendship University of Russia, Russia; Nanchang HangKong University, China; National Chung Hsing University, Taiwan; Hunan Agricultural University, China; Guangdong University of Business Studies, China; Jiaxing University, China. Technical Co-Sponsors of the conference are IEEE, IEEE Shandong Section, IEEE Shanghai Section.

"Forward-Secure Multisignature, Threshold Signature and Blind Signature Schemes", by Jia Yu, Fanyu Kong, Xiangguo Cheng, Rong Hao, Yangkui Chen and Guowen Li, proposes two forward-secure multisignature schemes, one forward-secure threshold signature scheme, and one forward-secure blind signature scheme.

"Behavior-based Attestation of Policy Enforcement among Trusted Virtual Domains", by Yu Rong-Wei, Yin Fan, Ke Jin and Wang Li-Na, proposes a behavior-based attestation of policy enforcement for distributed services in trusted virtual machine, which is adapted to trusted virtual domain.

"The Maximum Coverage Set Calculated Algorithm for WSN Area Coverage", by Xin He, Hua Yang and Xiaolin Gui. this paper firstly utilizes node minimum layer overlapping subfield to find out area minimum coverage value, as the upper limit of coverage node set's number. On the basis of this maximum, it put forward to way of dividing node set. Secondly, the maximum coverage set number calculated algorithm is proposed.

"Energy Efficient Path-constrained Sink Navigation in Delay-guaranteed Wireless Sensor Networks", by Shuai Gao and Hongke Zhang. This paper focuses on the path selection problem in delay-guaranteed sensor networks with a path-constrained mobile sink. The optimal path is chosen to meet the requirement on delay as well as minimize the energy consumption of entire network.

"Ad Hoc Network Measurement Based on Network Tomography: Theory, Technique, and Application", by Yao Ye and Cai Wandong, proposes an Ad Hoc network measurement model, and presents in detail the functions and implementation of each elements in this model.

"Agent Communication Language for Automated Negotiation Online", by Mukun Cao, proposes a negotiation communication language expanded from KQML. The work has been attempted in such a way so as to provide general support for a wide variety of commercial negotiation circumstances, and therefore to be particularly suitable for electronic commerce.

"An Efficient Receiver Deniable Encryption Scheme and Its Applications" by Bo Meng, and JiangQing Wang. proposes a practical efficient receiver deniable encryption scheme based on BCP commitment scheme and idea of Klonowski et al. is proposed. The proposed scheme is a one-move scheme without any pre-encryption information required to be sent between the sender and the receiver prior to encryption.

"Bit-coding Aggregation Tree for Global Network Link Quality Representation in WSN", by Zhenhua Wu, Jian Shu, and Pengliu Tan, presents a three levels framework for global network link quality aggregation and representation (LQAR) and a bit-coding aggregation tree (BAT) algorithm for link quality aggregation and routing to sink node. The LQAR framework includes three levels: storage and digest level, aggregation level and representation level. BAT algorithm integrates bit-coding method with aggregation tree for energy saving.

We are particularly grateful to IEEE Fellow Prof. Gary G. Yen, President-Elect of IEEE Computational Intelligence Society and Editor-in-Chief of IEEE Computational Intelligence Magazine, Oklahoma State University, USA; IEEE Fellow Prof. Jun Wang from Chinese University of Hong Kong, Hong Kong; IEEE Fellow Prof. Derong Liu, Associate Editor of IEEE Trans. on Neural Networks, University of Illinois at Chicago, USA; IEEE & IET Fellow Prof. Chin-Chen Chang from National Chung Hsing University, Taiwan, and Chair of IEEE Shanghai Section; and Prof.

Junfa Mao at Shanghai Jiaotong University, China, for accepting our invitation to deliver invited talks at this year's conference.

We wish to thank the Jiaying University, China and Qingdao University of Science & Technology, China for providing the venue to host the conference. We would like to take this opportunity to thank the authors for the efforts they put in the preparation of the manuscripts and for their valuable contributions. We wish to express our deepest gratitude to the program committee members for their help in selecting papers for this issue and especially the referees of the extended versions of the selected papers for their thorough reviews under a tight time schedule. Last, but not least, our thanks go to the Editorial Board of the Journal of Networks for the exceptional effort they did throughout this process.

The ISIP 2010 will be held in Guangdong University of Business Studies, China, we are looking forward to seeing you in Guangdong University of Business Studies, China.

In closing, we sincerely hope that you will enjoy reading this special issue.

Guest Editors:

Fei Yu, Peoples' Friendship University of Russia, Russia. Email: hunanyufei@126.com

Chin-Chen Chang, National Chung Hsing University, Taiwan. Email: ccc@cs.ccu.edu.tw

Wen Chen, Shanghai Jiaotong University, China. Email: [wenchen@sjtu.edu.cn](mailto:wenzen@sjtu.edu.cn)

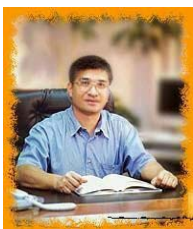
Jun Zhang, Guangdong University of Business Studies, China. Email: Zhangjundan123@yahoo.com.cn

Guangxue Yue, Jiaying University, China. Email: guangxueyue@yahoo.com.cn



Fei Yu was born in Ningxiang, China, on February 06, 1973. Before Studying in Peoples' Friendship University of Russia, Russia, He joined and worked in Hunan University, Zhejiang University, Hunan Agricultural University, China. He has wide research interests, mainly information technology. In these areas he has published above 50 papers in journals or conference proceedings and a book has published by Science Press, China (Fei Yu, Miaoliang Zhu, Cheng Xu, et al. Computer Network Security, 2003). Above 30 papers are indexed by SCI, EI. He has won various awards in the past. He served as many workshop chair, advisory committee or program committee member of various international ACM/IEEE conferences, and chaired a number of international conferences such as IITA'07, ISIP'08, ISECS'08 ISIP'09, ISECS'09 and ISISE'08. He have taken as a guest researcher in State Key Laboratory of Information Security,

Graduate School of Chinese Academy of Sciences, Guangdong Province Key Lab of Electronic Commerce Market Application Technology, Jiangsu Provincial Key Lab of Image Processing and Jiangsu Provincial Key Laboratory of Computer Information Processing Technology.



Chin-Chen Chang was born in Taichung, Taiwan on Nov. 12th, 1954. He obtained his Ph.D. degree in computer engineering from National Chiao Tung University. He's first degree is Bachelor of Science in Applied Mathematics and master degree is Master of Science in computer and decision sciences. Both were awarded in National Tsing Hua University. Dr. Chang served in National Chung Cheng University from 1989 to 2005. His current title is Chair Professor in Department of Information Engineering and Computer Science, Feng Chia University, from Feb. 2005.

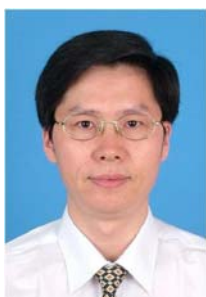
Prior to joining Feng Chia University, Professor Chang was an associate professor in Chiao Tung University, professor in National Chung Hsing University, chair professor in National Chung Cheng University. He had also been Visiting Researcher and Visiting Scientist to Tokyo University and Kyoto University, Japan. During his service in Chung Cheng, Professor Chang served as Chairman of the Institute of Computer Science and Information Engineering, Dean of College of Engineering, Provost and then Acting President of Chung Cheng University and Director of Advisory Office in Ministry of Education, Taiwan.

Professor Chang has won many research awards and honorary positions by and in prestigious organizations both nationally and internationally. He is currently a Fellow of IEEE and a Fellow of IEE, UK.



Wen Chen was born in 1967 in Anhui, China. He received his PhD from the University of Electro-Communications, Tokyo, Japan in 1999. He was a researcher with Japan Society for the Promotion of Sciences from 1999 through 2001. Then he joined University of Alberta, Canada, starting as a post-doctoral fellow in Information Research Lab and continuing as a research associate in Department of Electrical and Computer Engineering. Since 2006, he has been a full professor in Department of Electronic Engineering, Shanghai Jiaotong University, China, where he is also the director of Institute for Signal Processing and Systems. Dr. Chen was awarded the Ariyama Memorial Research Prize in 1997, the PIMS Post-Doctoral Fellowship in 2001. He received the honors of “New Century Excellent Young Researcher in China” in 2006 and “The

Pujiang Excellent Investigator in Shanghai” in 2007. He is elected the vice general secretary of Shanghai Institute of Electronics in 2008. He is in the editorial board of the “International Journal of Wireless Communications and Networking”, and serves IEEE Communications Society as a Technical Committee member of Communication Theory. He is the TPC chair for IEEE-ICCSC2008 and a special session chair for IEEE-SIPS2007. He has published more than 30 papers in IEEE journals and conferences. His interests cover cooperative communications and networks.



Jun Zhang was born in Sichuan, China in 1966. He received his Ph.D degree in computer science from Huazhong University of Science & Technology, China in 2003 and his M.Sc. degree in Mathematics from Lanzhou University in 1993. He had been a visiting postdoctoral Researcher in University College London, UK under Prof. Ingemar Cox's supervision. Now, he is the rector of Information Science School, Guangdong University of Business Studies. His research interest is information security such as data hiding, watermarking and privacy protection. In this field, He has published more than 30 papers. Moreover he had been in charge of some projects sponsored by National Natural Science Foundation of China and Guangdong Natural Science Foundation. He served as many workshop chairs, advisory committee or program committee member of various international IEEE conferences, and chaired a number of international conferences such as ISECS'08, ISECS'09 and ISIP'09.



Guangxue Yue was born in 1963, Guizhou, China. He obtained his master in Hunan University. Professor, the College of Mathematics & Information Engineering, Jiaying University, China. His main research interests include Distributed Computing & Network, Network Security, and Hybrid & Embedded Systems. In these areas he has published above 30 papers in leading journals or conference proceedings, above 20 papers are indexed by SCIE, EI. He served as many workshop chairs, advisory committee or program committee member of various international IEEE conferences, and chaired a number of international conferences such as ISECS'08, ISIP'09, ISECS'09 and ISISE'08. He have taken as a guest researcher in Jiangxi University of Science and Technology, Jiangsu Polytechnic University, State Key Laboratory for Novel Software Technology at

Nanjing University, Graduate School of Chinese Academy of Sciences, Guangdong Province Key Lab of Electronic Commerce Market Application Technology.