

Guest Editorial

Special Issue for SICBS 2018

Ching-Nung Yang, Suresh Chandra Satapathy

With the proliferation of security with intelligent computing and big-data services, the issues of information Security, big data, intelligent computing, blockchain technology, and network security, have attracted a growing number of researchers. The purpose of 2018 International Conference on Security with Intelligent Computing and Big-data Services (SICBS 2018) is to provide research community a chance to exchange new ideas and application experiences face to face, to establish business or research relations, and to find global cooperation in the above security related areas. We invite some outstanding accepted papers in their extended versions to this special issue. Each paper submitted to this special issue was rigorously reviewed by at least two reviewers in the corresponding research areas. Finally, we have five papers for this special issue. A summary of the papers is outlined below.

In the paper entitled “*Efficient Pairing-Free Provably Secure Scalable Revocable Identity-Based Signature Scheme*” by Chang-Ji Wang, Hui Huang, and Yuan Yuan, the authors refined the security model of revocable identity-based signature scheme by considering the signing key exposure attack. Meanwhile, they proposed a scalable revocable identity-based signature scheme with signing key exposure resistance, and proved that their scheme is existentially unforgeable against adaptively chosen message and identity attacks under the standard discrete logarithm assumption in the random oracle model.

In the paper entitled “*Arbitrary Style Transfer of Facial Image Based on Feed-forward Network and Its Application in Aesthetic QR Code*” by Shanqing Zhang, Shengqi Su, Li Li, Jianfeng Lu, and Ching-Chun Chang, they presented an arbitrary style transfer of facial image based on feed-forward network as a preprocessing algorithm for an aesthetic QR code. The deep characteristics of content image and style image were unified in the same layer of convolutional neural networks in the proposed style transfer network. Styles were changed. The result of style transfer was restricted with semantic segmentation result, color uniform regularization of facial image, and repeating restriction similarity constraints. Experimental results demonstrated that both the decoding rate and the visual effect of QR code were guaranteed when the proposed

method was used in background preprocessing.

The paper entitled “*A Fast Adaptive Blockchain Consensus Algorithm via Wlan Mesh Network*” by Mingzhe Liu, Xin Jiang, Feixiang Zhao, Xuyang Feng, and Ruili Wang, they presented a decentralized and fast adaptive blockchain’s consensus algorithm with maximum voter privacy using Wlan mesh network. Their algorithm was suitable for consortium blockchain and private blockchain, and was implemented by smart contract using Hyperledger Fabric. This approach is the first implementation that does not rely on any trusted authority to compute the tally or to protect the voter’s privacy. The algorithm was an adaptive protocol, and each voter was in control of the privacy of their own vote such that it could only be breached by a full collusion involving all other voters.

In the paper entitled “*Unified Identity Authentication Based on D-S Evidence Theory*” by Jiawei Wang, Zhenjiang Zhang, Shih-Chen Wang, Sheng-Lung Peng, and Yuqun Rui, they presented a unified identity authentication method based on D-S evidence theory for merging several kinds of authentication methods to complete the identity authentication. The result shows that the proposed method performs better than the three most used methods, namely, account password, fingerprint, and USB key.

In the paper entitled “*Development of a Web-based Sexual Risk Behavior Prevention Database with the Benefit of 4G LTE by Using Community Participation*” by W. Boonchieng, S. Settheekul, W. Fongkaew, V. Chouvatut, and E. Boonchieng, they developed a web-based sexual risk behavior prevention database in order to find the needs for sexual risk behavior prevention in the community. Results from implementing the database among adolescents and parents showed that 85% of the adolescents had a boyfriend/ girlfriend and 25% of them engaged in sexual intercourse. In addition, most of the participants revealed that the use of the web-based sexual risk behavior prevention database with newly 4G LTE wireless network technology was comfortable and provided a sense of confidentiality, and the data output was helpful for presenting sexual risk behavior situation in the community.

Finally, we would like to express our sincere gratitude to all reviewers and authors for their expertise and efforts in making helpful comments and significant

contributions, respectively, for this special. Without their hard work, the special issue would not be possible. Also, we want to thank Dr. Han-Chieh Chao, the Editor-in-Chief of JIT journal, for his encouragement and support to publish this special issue and to Ms. Sharon Chang, the Assistant Editor, for her professional help during the preparation of this special issue.

Guest Editors



Ching-Nung Yang obtained his Ph.D. degree in Electrical Engineering from National Cheng Kung University. His B.S. and M.S. degrees, both were awarded in Department of Telecommunication Engineering from National Chiao Tung University. Dr. Yang served in National Dong Hwa University since 1999. His current title is Professor in Department of Computer Science and Information Engineering. He had been Visiting Professor to University of Missouri Kansas City, University of Milan, and University of Tokyo. He is currently a Fellow of IET (IEE) and an IEEE senior member. Professor Yang has done extensive researches on visual cryptography and secret image sharing, and is the chief scientist in both areas. In fact, a very important innovation of visual cryptography, the probabilistic visual cryptography, was firstly proposed by Professor Yang. His areas of interest include error correcting code, multimedia security, cryptography, and information security. He has authored two books and has published over 200 (including more than 100 SCI-indexed papers) professional research papers in the areas of information security and coding theory. In the meantime, he has served/is serving in international academic organizations. He serves as technical reviewers for over 40 major scientific journals in the areas of his expertise, and serves as editorial boards and editors of special issues for some journals. Also, he was invited as chairs, keynote speakers, and members of program committees for various international conferences. He is the recipient of the 2000, 2006, 2010, 2012, and 2014 Fine Advising Award in the Thesis of Master/PhD of Science awarded by Institute of Information & Computer Machinery.



Suresh Chandra Satapathy is a Ph.D in Computer Science Engineering, currently working as Professor of School of Computer Engg at KIIT (Deemed to be University), Bhubaneswar, Odisha, India. He held the position of the National Chairman (Educational and Research) of Computer Society of India and is also a senior Member of IEEE. He has been instrumental in organizing more than 30

International Conferences in India as Organizing Chair and edited more than 40 Book Volumes from Springer LNCS, AISC, LNEE and SIST Series as Corresponding Editor. He is quite active in research in the areas of Swarm Intelligence, Machine Learning, Data Mining. He has developed two new optimization algorithms known as Social Group Optimization (SGO) published in Springer Journal and SELO (Social Evolution and Learning Algorithm) published in Elsevier. He has delivered number of Keynote addresses and Tutorials in his areas of expertise in various events in India and abroad. He has more than 120 publications in reputed journals and conf proceedings. Dr. Suresh is in Editorial board of IGI Global, Inderscience, Growing Science journals and also Guest Editor for Arabian Journal of Science and Engg published by Springer. He is the Editor-in-Chief of IJIDSS from Inderscience and Associate Editor of KES Journal from IOS press.