

Guest Editorial

Special Issue for SICBS 2017

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The purpose of 2017 International Conference on Security with Intelligent Computing and Big-data Services with joined workshops, Workshop on Information and Communication Security Science and Engineering and Workshop on Security in Forensics, Medical, and Computing Services and Applications, is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Security related areas. It also aims at strengthening the international academic cooperation and communications, and exchanging research ideas. We invite some outstanding accepted papers in their extended versions and open for other submissions to this special issue. Each paper submitted to this special issue was rigorously reviewed by at least two reviewers in its corresponding research area. Finally, after conscientious selection, we accept 6 papers for this special issue.

The first paper in the collection, entitled “*A New Aesthetic QR Code Algorithm Based on Salient Region Detection and SPBVM*” is by Li Li, Bing Wang, Jianfeng Lu, Shanqing Zhang and Chin-Chen Chang. This paper proposed a new aesthetic QR code algorithm, based on salient region detection and selectable positive basis vector matrix. It can display the whole salient region completely and is more flexible for the selection of background image. The results show that the proposed algorithm can produce more accurate salient area and achieve a better visual effect.

The second paper, entitled “*A Study on Blockchain-Based Circular Economy Credit Rating System*” and authored by Hsin-Te Wu, Yi-Jen Su and Wu-Chih Hu, presented a credit rating system using the concept of decentralization to reduce third-party broker fees, which provides effective credit rating of public economic entities. The proposed system can create a better transaction environment for the sharing economy and enable the buyer and seller to choose better business counterparties through transparent credit ratings.

The third paper, entitled “*Storage-Saving Bi-Dimensional Privacy-Preserving Data Aggregation in Smart Grids*” and authored by Chun-I Fan, Yi-Fan Tseng, Yi-Hui Lin, and Fangguo Zhang, proposed the first privacy-preserving bi-dimensional data

aggregation scheme, where the bi-dimensional data contains both user-based and time-based data. For this proposed scheme, the storage cost only linearly increases with the number of time units and is independent of the number of users.

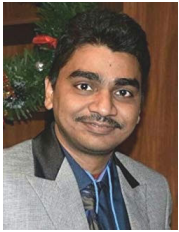
The fourth paper, entitled “*An Efficient and Secure RFID Authentication Scheme for C1G2 Standard*” and authored by Chen-Yang Cheng, Cheng-Ta Huang, Luon-Chang Lin, and Hung-Huei Hsu, proposed an improved lightweight authentication scheme which compliant to C1G2 standard. By comparing with a previous scheme, this proposed scheme can achieve high security level and efficient performance.

The fifth paper, entitled “*Integration of Information Hiding and Compression for Biomedical Signals*” and authored by Yan-Hong Hu, Yu-Hai Li, and Ming Zhao, proposed a method to reduce the carrying amount of Electrocardiogram (ECG) network transmission while preserving the original characteristics of ECG and protecting personal privacy. The integration method not only protect the security of the ECG transmission but also reduce the amount of ECG transmission.

The sixth paper, entitled “*Characteristics of Basil in Aspects of Digital Information Retrieval and Data Mining*” and authored by Varin Chouvatut and Ekkarat Boonchieng, presented a novel process for classifying two types of basil, which have different species but share common genus, based on main characteristics of their leaves. From the measured results, the proposed methods for digital information retrieval from the two basil-species sharing a common genus have been proved that the applied techniques in feature extraction and the selected basil’s dominant features provide almost perfect success in categorizing the two basil-species.

Finally, we would like to express our sincere appreciation to all reviewers for their expertise and efforts in making helpful comments and suggestions. We also would like to express our thanks to 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. Thanks also go to all authors for their significant contributions. Without their hard work, this special issue would not be possible.

Guest Editors



Nilanjan Dey is an Assistant Professor in Department of Information Technology at Techno India College of Technology, Kolkata. He has completed his PhD. in 2015 from Jadavpur University. He is a Visiting Fellow of Wearables Computing Laboratory, Department of Biomedical Engineering University of Reading, UK, Visiting Professor of Duy Tan University, Vietnam. He has held honorary position of Visiting Scientist at Global Biomedical Technologies Inc., CA, USA (2012-2015). He is the Editor-in-Chief of International Journal of Ambient Computing and Intelligence, IGI Global, series Co-Editor of Springer Tracts in Nature-Inspired Computing, Springer, Advances in Ubiquitous Sensing Applications for Healthcare (AUSAH), Elsevier and the series editor of Intelligent Signal processing and data analysis, CRC Press. He has authored/edited more than 40 books with Elsevier, Wiley, CRC and Springer, and published more than 350 research articles. His main research interests include Medical Imaging, Machine learning, Bio-inspired computing, Data Mining etc. He is a life member of Institute of Engineers (India).



Sheng-Lung Peng is a Professor of the Department of Computer Science and Information Engineering at National Dong Hwa University, Hualien, Taiwan. He received the BS degree in Mathematics from National Tsing Hua University, and the MS and PhD degrees in Computer Science from the National Chung Cheng University and National Tsing Hua University, Taiwan, respectively. He is now the dean of the office of Library and Information Services of NDHU and an honorary Professor of Beijing Information Science and Technology University of China. He is a secretary general of Institute of Information and Computing Machinery (IICM) in Taiwan. He is now the Dean of the Library and Information Services Office of NDHU, an honorary Professor of Beijing Information Science and Technology University of China, and a visiting Professor of Ningxia Institute of Science and Technology of China. He serves the regional director of the ACM-ICPC Contest Council for Taiwan, a director of Institute of Information and Computing Machinery, of Information Service Association of Chinese Colleges and of Taiwan Association of Cloud Computing. He is also a supervisor of Chinese Information Literacy Association, of Association of Algorithms and Computation Theory, and of Interlibrary Cooperation Association in Taiwan. His research interests are in designing and analyzing

algorithms for Bioinformatics, Combinatorics, Data Mining, and Networks. Dr. Peng has edited several special issues at journals, such as Soft Computing, Journal of Internet Technology, Journal of Computers, MDPI Algorithms, and so on. He published over 100 international conferences and journal papers.



Shiuh-Jeng Wang was a visiting scholar of Computer Science Dept. at Florida State University, USA in 2002 and 2004. He also was a visiting scholar of Dept. of Computer and Information Science and Engineering at University of Florida in 2004, 2005, 2010 and 2011. He served the editor-in-chief of the journal of Communications of the CCISA in Taiwan from 2000-2006, and the directors in Chinese Cryptology and Information Security Association (CCISA) from 2000-2015. He was, then, with the Vice-President of CCISA in 2012-2015. Dr. WANG academically toured the CyLab with School of Computer Science in Carnegie Mellon University, USA, in 2007 for international project collaboration inspection. He is also the authors of 14 books (in Chinese versions): Information Security, Cryptography and Network Security, State of the Art on Internet Security and Digital Forensics, Eyes of Privacy –Information Security and Computer Forensics, Information Multimedia Security, Computer Forensics and Digital Evidence, Computer Forensics and Security Systems, Computer and Network Security in Practice, Image Processing with Applications, Digital Forensics in Mobile Service with Evidence Investigations, and SCIENCE BOOK in Fundamental in Cryptography Learning, all published in 2003, 2004, 2006, 2007, 2009, and 2012, 2013, 2015, 2016, respectively. Prof. WANG has published over 300 papers in referred Journals/Conference proceedings/Technique reports so far. He is a full professor and a member of the IEEE, ACM. He served a lot of academic and reputable journals in the position of guest-editors, including the lead guest editor at the issue of Advances in Digital Forensics for Communications and Networking - IEEE Journal on Selected Areas in Communications, and the issue of Security and Privacy Information Technologies and Applications for Wireless Pervasive Computing Environments - INFORMATION SCIENCES. Prof. WANG is currently with the President of E-Security Analysis and Management Association, the Editor-in-Chief of Journal at JITAS and the chairs with ICCL (Information Cryptology and Construction Lab.) and SecForensics (Intelligence and Security Forensics Lab.).