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## Editorial

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**Biographical notes:** Fangfang Zhou is an Assistant Professor in School Information Science and Engineering, Central South University. Her research interests are mainly on the visualisation and visual analyst, and cyber security visualisation. She is the author of about 50 papers in international journals and proceedings of conferences.

Moon Ho Lee is a Professor of Division of Electronic and Information Engineering and the Head of the Institute of Information and Communication in Chonbuk National University. His research interests include image processing, mobile communication and high speed communication networks and information and algebra coding theory. He is the author of about 175 SCI papers, 105 patents and 44 books, also inventor of Jacket matrices. He is a Korea Engineering Academy member and Guest Editor of *IEEE Communication* magazine in 2007.

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Frontier of computer science and technology is intended to facilitate effective communication and exchanges in the entire world. It will not only reflect the significant advances that are currently being made in computer science and technology, but also represents a powerful and unique forum for discussing innovative, cutting-edge advances in all aspects of computer science and technology from researchers and practitioners in academia, government and corporate institutions around the globe. The special issue on *selected topics in computer science and technology* is organised to show some of the recent research results, with the aim to foster and stimulate future innovations within the research community in designs and methodologies. The scope covers various aspects of computer science and technology from both the research community as well as the industry, such as parallel and distributed computing; trust, security and privacy; multimedia systems and networks; embedded computing and systems; emerging software techniques; and so on. Through a rigorous double-blind review process, 15 papers are selected for publication in this issue.

The first paper, 'Game-theoretic resource allocation and decoding order control in OFDMA based multihop networks', proposes a game-theoretic decoding order and transmission power control scheme based on iterative multi-unit second price auction, and updates the auction value based on the difference between current and target bidding efficiency.

In the second paper, 'A formal aspect-oriented method to model and analyse secure service composition', Petri nets are used to precisely describe the different components of service composition in service-oriented computing (SOC), and the dynamic matching strategy of service composition is proposed.

The third paper, 'A kind of slope stability evaluation model based on SVM-DS method', provides a recognition method based on support vector machine and D-S evidence theory to get the state of the slope stability timely and accurately.

In the fourth paper, 'Multi-source intrinsic colourisation', a novel scheme combined with example-based colourisation and scribble-based colourisation is presented according to differences of illumination eliminated between the target image and multiple reference images.

In the fifth paper, 'On distributed polarising relay transmission system with successive interference cancelation decoding in frequency selective fading channels', the authors address a system design issue by switching to polarising frequency selective fading (FSF) channels while transmitting symbols in a source-relay destination MIMO-OFDM system, and a polar-and-forward (PF) relay scheme is proposed to provide an alternative solution for transmitting symbols with a higher reliability than the conventional relay schemes.

In the sixth paper, 'An objective assessment method for image defogging effects', two new methods to assess defogging effects are proposed. Compared with other existing methods, the proposed methods efficiently assess defogging effects from generated synthetic images and human visual perceptions.

The seventh paper, 'An efficient clustering ensemble selection algorithm', proposes a new selective clustering ensemble algorithm. The algorithm uses clustering validity evaluation to evaluate all available clustering ensemble partitions and selects the best quality as reference partition.

The eighth paper, 'Selective partial recovery optimisation strategy for SSL connection migration', presents a set of techniques for providing recovery strategy for secure socket layer (SSL) connection migration across the replica servers. The proposed selective partial recovery (SPR) optimisation strategy for SSL connection migration can be used to speedup SSL recovery session by reducing the recovery time.

The ninth paper, 'An environment-aware routing protocol for underwater wireless sensor networks', presents an environment-aware routing protocol (ERP) for UWSNs, which performs different routing operations according to the water depth in UWSNs.

In the tenth paper, 'An outlier mining algorithm based on approximate outlier factor', the algorithm, called outlier mining algorithm based on approximate outlier factor (OMAAOF), based on approximate outlier factor is proposed. It provides a heuristic pruning strategy to reduce the suspect candidate sets to decrease the computational complexity.

The 11th paper, 'Orthogonal matching pursuit-based incremental locally linear embedding algorithm', deals with an incremental locally linear embedding based on orthogonal matching pursuit (ILLE-OMP), which remedies the drawback of the traditional method.

The 12th paper, 'KFTrust: P2P trust model based on evaluation rank using Kalman filter', designs an evaluation rank-based trust model according to the different recommended trust values. This model computes the trust value by combining the similarity between the nodes and the time decaying features. In the mechanism of finding recommended nodes, a trust-based Kalman filter algorithm is implemented to reduce the system overhead.

In the 13th paper, 'FLIP: enforcing IP mobility to the cellular network edge', a flat IP mobility management approach (FLIP) is proposed. It enforces IP mobility to the cellular network edge with the help of the distributed gateways.

In the 14th paper, 'Medical image fusion using optimal feature selection methods based on second generation contourlet transform', a novel fusion method for multimodal medical images based on second generation contourlet transforms (SGCT) is proposed. Compare with the-state-of-the-art methods, the new strategy for attaining image fusion with satisfactory performance.

The last paper, 'A layer-based algorithm for the construction of connected dominating set in WSNs', divides the network into multiple layers according to the hop counts from a selected source node, and proposes a layer-based algorithm for the construction of connected dominating set (LCDS).

The editors would like to thank the reviewers and authors, who, in different ways, have contributed to this special issue. We would like to acknowledge all the other authors who have submitted their contributions for this issue.