Editorial

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Biographical notes: Fatos Xhafa received his PhD in Computer Science from the Department of Languages and Informatics Systems (LSI) of the Technical University of Catalonia (UPC), Barcelona, Spain. He was a Visiting Professor at the Department of Computer Science and Information Systems, Birkbeck, University of London (UK) during academic year 2009 to 2010 and Research Associate at the College of Information Science and Technology, Drexel University, Philadelphia, USA during academic year 2004/2005. He has widely published in peer reviewed international journals, conferences/workshops, book chapters and edited books and proceedings in the field. He has an extensive editorial and reviewing service as Editor-in-Chief and Associate Editor/Editor of several international scientific journals and Guest Editor of many special issues of international journals. He is actively participating in the organisation of several international conferences. His research interests include parallel and distributed algorithms, combinatorial optimisation, approximation and meta-heuristics, networking and distributed computing.

Xiaofeng Chen received his PhD in Cryptography from the Xidian University in 2003. He is currently a Professor at the School of Telecommunications Enginnering, Xidian University. He has widely published in peer reviewed international journals, conferences/workshops, book chapters and edited books and proceedings in the field. He is actively participating in the organisation of several international conferences. His research interests include public key cryptography, financial cryptography and cloud computing security.

The explosion in the interest towards cloud computing architectures is fuelled by tangible savings in power consumption, higher resource utilisation, and abstraction of platforms from technical infrastructure, scalability and business models of 'computing as a utility'. However, it is evident that our existing understanding of distributed computing is already tested by new and exciting use cases such as the private and secure use of public cloud resources, trusted data sources and storage, authentication, encryption, etc. This special

issue presents research findings on emerging trends in secure, transparent use of cloud computing and advanced intelligent methods for encryption, security and authentication.

The special issue comprises six, carefully selected based on their originality, significance, technical soundness, and clarity of exposition. The papers in this special issue are organised as follows.

In the first paper, Wang et al. present cloud-based patient health record system to securely store and share personal health records of patients in a flexible way by using ciphertext-policy attribute-based encryption mechanism.

Zhang et al. in the second paper deal with the issue of protecting the privacy of the receiver in anonymous receiver encryption scheme. The authors present two improved methods to achieve the anonymity of the receivers. Additionally, improved computational cost of the methods is achieved.

In the third paper, Fu et al. show the usefulness of the ring signatures to achieve the anonymity of the users who want to sign documents not only in the authenticated way but also in the confidential way. A security designated verifier ring signature scheme is proposed from bilinear pairing and a designated verifier ring signcryption scheme for the new scheme.

Zhang et al. in the fourth paper show some issues in recent research results for multi-user unidirectional CCA-secure proxy re-encryption scheme. Some concrete attacks has been presented to show the limitations of the multi-user unidirectional CCA-secure proxy re-encryption scheme as well as hierarchical identity based proxy re-encryption scheme without random oracles.

The fifth paper by Zhu and Li addresses the problem of clustering activities captured in surveillance videos for the applications of online normal activity recognition and anomaly detection. The authors have presented a novel framework for automatic activity modelling and anomaly detection. The outcome is a robust and reliable anomaly detection and normal activity recognition at the shortest possible time.

In the last paper, Collotta et al. address the challenge of real-time information in intelligent transportation systems (ITS) to improve vehicular traffic management. The authors propose an innovative distributed architecture based on a wireless sensor network with a network coordinator providing remote and ubiquitous authentication module for managing unexpected events.

I hope that the readers will find this special issue useful in their research and academic activity.

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