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- Fourth International Conference on Future Generation Communication Technologies
(FGCT 2015)
- Tenth International Conference on Digital Information Management
(ICDIM 2015)

Communication and Information Systems of today are going through profound changes due to the co-existence of various communication and information processing technologies, including Cloud, P2P, Mobile, Wireless Networking and Internet of Things systems. This growing digital eco-system is indeed posing many challenges related to the design and implementation of efficient communication systems, ranging from service-oriented protocols to evolution algorithms.

We are pleased to present to readers eight papers addressing some important research issues on secure communication and information processing, selected following a rigorous process with the help of many reviewers. The papers of the special issue are arranged as follows.

D'Auria *et al.* presented an interaction system based on spatialized sounds in the paper "A 3D Audio Augmented Reality System for a Cultural Heritage Management and Fruition"[1]. In the second paper entitled "Differential Evolution Enhanced with Composite Population Information Based Mutation Operators"[2], Liao *et al.* proposed a DE framework with composite population information based mutation operator (DE-CPI) for global numerical optimization. Little attention has been paid on how to identify the malicious peers in distributed P2P environment. In the third paper "A Malicious Peers Detection Framework for Peer-to-Peer Systems" [3], Wei *et al.* presented a general frame work for detecting malicious peers in reputation-based P2P systems.

Due to the recent popularization of IP multicast, the continuous broadcasting of audio or video media data has attracted great attention. A division based broadcasting system for webcast was presented in the paper "Implementation and Evaluation of Division Based Broadcasting System for Webcast" [4] by Yusuke *et al.* They evaluate the effectiveness of reducing the waiting time and the interruption time using conventional methods. The fifth paper by Fisher and Hancke entitled "DTLS for Lightweight Secure Data Streaming in the Internet of Things" [5] shows that datagram transport layer security (DTLS) is a capable alternative to transport layer security when it comes to streaming data across the Internet from connected wireless sensor networks.

In the sixth paper "Providing Mobile Traffic Analysis as-a-Service: design of a service-based infrastructure to offer high-accuracy traffic classifiers based on hardware accelerators"[6], Mario *et al.* proposed a two-tier service-based traffic analysis infrastructure which based on the implementation of a decision tree-based traffic analyzer on a Xilinx Zynq7000 architecture and present an overview of the service layer by referring to a cloud infrastructure for its implementation.

One important research issue on wireless-sensor networks is how to design topology structure with high reliable and survivability. In the seventh paper entitled "The Research of Scale-Free Sensor Network Topology Evolution Based on Cloud Computing" [7], He *et al.* proposed a topology evolution strategy based on scale-free network with energy efficient. Their simulation shows that network topology form the evolution algorithm have good robustness regardless of deliberate and random attack. In the last paper entitled "The Wavelength Division Multiplexing Passive Optical Network Breakpoint Precision Detection System Based Broadband Chaos Light" [8], Zou *et al.* gave a method which can be highly accurate positioning WDM-PON branch breakpoint location, spatial resolution of 7cm and independent of the detection distance. The last three papers deal with innovation management, knowledge management and biomedical informatics.

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