Editors' Introduction to the Special Issue on "The Sixth International Symposium on Information and Communication Technology – SoICT 2015"

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This Special consists of a selection of the best papers from the 6th International Symposium on Information and Communication Technology - SoICT 2015. Since 2010, SoICT has been organised annually. The symposium provided an academic forum for researchers to share their latest research findings and to identify future challenges in computer science. In 2015, SoICT was held in Hue Royal city, Vietnam, during December 3-4th, 2015. SoICT 2015 was an international symposium that covered four major areas of research including Artificial Intelligence and Big Data, Network and Security, Human-Computer Interaction, Software Engineering and Applied Computing.

In 122 submissions from 18 countries, 49 papers were accepted for presentation at SoICT'2015. Among them, 4 papers were carefully selected, after further extension and additional review, for inclusion in this Special Issue.

The first paper by N.H.T. Dang, S. Dvoenko and S. Dinh "A Mixed Noise Removal Method Based on Total Variation" is about removing noise from biomedical images. The paper proposes a novel method to remove mixed noise using the idea of the total variation of an image intensity (brightness) function.

The second paper by Q.V. Bui, K. Sayadi, M. Bui "A Multi-Criteria Document Clustering Method Based on Topic Modeling and Pseudoclosure Function" addresses the problem of document clustering. The paper proposes a novel unsupervised clustering method based on the structural analysis of the latent semantic space. The authors perform a structural analysis on the latent semantic space using the Pretopology theory that allows them to investigate the role of the number of clusters and the chosen centroids, in the similarity between the computed clusters. Their method has been applied to and evaluated on Twitter data.

The third paper by K.V. Nguyen, P.L. Nguyen, H. Phan is entitled "A Distributed Algorithm For Monitoring An Expanding Hole In Wireless Sensor Networks". Holes in sensor networks are regions that have no operating nodes and may occur due to several reasons, including cases caused by natural obstacles or disaster suffered areas. Determining the location and shape of holes can help to make smart, early routing decisions for circumventing a hole. Many hole determination algorithms have proposed in the literature, however, they consider mainly networks with static holes i.e. with stable boundary nodes. Moreover, most of these are designed in a centralized manner, which is not suitable to the unstable situation of networks with an expanding hole. This paper proposes an algorithmic scheme not only for determining the initial shape but also for monitoring and quickly reporting about the area of a hole gradually expanding.

The last paper by D.L.Truong, E. Ouro and T.C. Nguyen "Protected Elastic-tree topology for Survivable and Energy-efficient Data Center" starts from the observation that data centers currently consume too much energy. They propose to reduce energy consumption by turning off certain switches in data centers, and study the effect on the connectivity of the network and data center. They then propose to tailor the topology using a path protection method to ensure that all connections in the data center retain survivability upon any single failure.

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