

EDITORIAL PREFACE

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The second issue of the sixth volume comprises four articles, selected after a careful review process, and is organized as follows.

In the first article, Matsuo et al., focus on the limited natural resources that require efficient methods and systems for recycling and processing of the wastes and specifically on kitchen garbage, for a better environment. Authors propose and have implemented a waste management robot system, which can change the kitchen garbage to compost. Then, the compost can be mixed with the ground and used for growing of vegetables and other plants. The proposed system uses the information network, sensor technology and robot technology. In this paper, authors do present the implementation of the proposed system and evaluate its performance by experimental results.

In the second article, Trovati is concerned with the topological and dynamical properties of real-world networks. In this paper, authors discuss the evaluation of a method as part of ongoing research which aims to mine data to assess whether their associated networks exhibit properties comparable to well-known structures, namely scale-free, small world and random networks. A large dataset containing information on the seismologic activity recorded by the European-Mediterranean Seismological Centre is used. Initial results show that the proposed method provides an accurate, agile, and scalable tool to extract useful information.

In the third article, Elmazi et al., focus on cluster formation and cluster head selection as problems affecting the network's communication energy dissipation. In this paper, in order to deal with this problem, authors propose a power reduction algorithm for WSNs based on Fuzzy Logic (FL) and Number of Neighbour Nodes (3N). Authors evaluate their proposed system using several experiments with those results being positive. The performance of F3N system is evaluated for three different parameters including Remaining Battery Power of Sensor (RPS), Degree of Number of Neighbour Nodes (D3N) and Distance from Cluster Centroid (DCC).

In the fourth paper, Liu et al., are interested on JXTA-Overlay, a middleware built on top of the JXTA specification, which defines a set of protocols that standardize how different devices may communicate and collaborate among them. In this paper, authors improve the reliability of their JXTA-Overlay P2P platform by implementing a new fuzzy-based Peer Reliability (PR) system. In their system, authors considered three input parameters: Local Score (LS), Security (S) and Number of Interactions (NI). Authors have evaluated JXTA-Overlay platform for medical applications and reliability. The experimental results show that by using JXTA-Overlay is possible to decide the situation of the patients. The simulation results have shown that the proposed system has a good performance and can choose reliable peers to connect in JXTA-Overlay platform.

The editor wishes to thank the authors for their contribution to this issue and the reviewers for their useful suggestions and feedback to the authors. I wish readers found this issue useful in their research and academic activity.

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Nik Bessis is currently a Director of Distributed and Intelligent Systems (DISYS) research centre, a Professor and a Chair of Computer Science in the School of Computing and Mathematics at University of Derby, UK. He obtained a BA (1991) from the TEI of Athens, Greece and completed his MA (1995) and PhD (2002) at De Montfort University (Leicester, UK). His research interest is the analysis, research, and delivery of user-led developments with regard to trust, data integration, annotation, and data push methods and services in distributed environments. These have a particular focus on the study and use of next generation and grid technologies methods for the benefit of various virtual organizational settings. He is involved in and leading a number of funded research and commercial projects in these areas. Prof. Bessis has published over 200 papers, won 4 best paper awards and is the editor of several books and the Editor-in-Chief of the International Journal of Distributed Systems and Technologies (IJDST). In addition, Prof. Bessis is a regular reviewer and has served several times as a keynote speaker, conferences/workshops/track chair, associate editor, session chair and scientific program committee member.