

Guest Editorial Preface

Special Issue on Smart and Connecting Technologies Using Internet of Things

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CONTENT OF THE ISSUE

This special issue contains six articles on issues related to Internet of Things technologies. The first three articles by the first two guest editor are related to theme of Smart Technology using Internet of Things based on the network combination of the Internet, telecommunications network, broadcast network, wireless broadband network and other sensors networks. The explosive growth of Smart Technologies and Internet of Things applications creates many scientific and engineering challenges that call for ingenious research efforts from both academia and industry, especially for the development of efficient, scalable, and reliable Smart Technology based on IoT. New protocols, architectures and services are in dire needs to respond for these challenges.

The lead article in this first part of the special issue is titled as “Heuristic based Coverage aware Load Balanced Clustering in WSNs and Enablement of IoT”, by Surjit Singh and Rajeev Mohan Sharma. It is based on a heuristic approach named, coverage aware load balanced clustering, have been developed in order to increase the lifespan of the WSNs. The result shows that the network lifespan has increased and simultaneously energy consumption is reduced as compared to the other existing techniques.

The second article titled as “A MapReduce-based User Identification Algorithm in Web Usage Mining”. In this paper, authors have developed a MapReduce-based User identification algorithm that deals with the above mentioned three issues related to User identification methods. Moreover, the experiment on the real Web server log shows the effectiveness and efficiency of the developed algorithm.

The last paper is titled as “A Novel Approach for Multi Cloud Storage for Mobile Devices” by Rajeev Kumar Bedi, Jaswinder Singh and Sunil Kumar Gupta. This paper aims to present a novel approach for multi cloud storage for mobile devices that will remove the limitations of previously discussed systems.

The second part of this special issue with the last two guest editor contains the following three best papers presented to the ICIoTCT “International Conference on Internet of things and connected technologies (ICIoTCT) 2017”:

- Big Data handling over Cloud for Internet of Things;
- Security against Network Layer Attacks for Hierarchal Mesh Environments;
- PowKMeans: A Hybrid Approach for Gray Sheep Users Detection and their Recommendations.

The lead articles, Big Data handling over Cloud for Internet of Things, presents a discussion about the correlation between Internet of Things and expansion of big data. A short reference on the evolution, features, lifecycle, and implementation of Big Data from IoT over the cloud has also been discussed.

In the second article, authors present a secure routing mechanism by doing some amendments in previously proposed efficient secure routing (ESR) protocol against networking layer attacks in mesh networking environments. The proposed mechanism is validated over conventional routing mechanisms against packet loss and network delay parameters in the presence of black hole and grey hole routing attacks.

Finally, the last paper discusses gray-sheep users' problem as an outlier detection problem, where the similarity between a user and the closest centroid is used to isolate the gray-sheep users. It proposed a novel, hybrid method; PowKMeans based on collaborative filtering and content-based filtering for detection and recommendation for gray-sheep users.

All submitted papers to the conference went through strict refereeing and examination resulting in a current rejection rate of 69.2%. We are delighted to say that this is in no small part due to the hard work the editorial board and reviewers, in not only refereeing the papers submitted but raising the standard of the quality of papers that we will publish.

In this regard, the guest editors of ICIoTCT 2017 submissions thank all people who have worked with us in planning and organizing technical arrangements. In particular, we are thankful to program chairs for their support; the program committee for their timely reviewing of papers.

ACKNOWLEDGMENT

The guest editors warmly thank all the reviewers for sparing time from their busy schedule and provide timely and valuable comments to improvise the original versions of the papers towards these extended papers. They also would like to thank Prof. (Dr.) Ghazi Alkhatib, Editor-in-Chief, International Journal of Information Technology and Web Engineering for his extended support. Last but not the least sincere thanks to all learned authors for their kind cooperation and contribution.

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