
Preface

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Biographical notes: Qun Jin is a Tenured Full Professor in the Networked Information Systems Laboratory, Department of Human Informatics and Cognitive Sciences, Faculty of Human Sciences, Waseda University, Japan. He has been engaged extensively in research work in computer science, information systems, and social and human informatics. He seeks to exploit the rich interdependence between theory and practice in his work with interdisciplinary and integrated approaches. His recent research interests include ubiquitous computing, human-centric computing, cyber-physical-social computing, human-computer interaction, behaviour and cognitive informatics, life logs and big data, data integration and information fusion, user modelling, social network analysis, information search and recommendation, e-learning, e-health, and computing for well-being.

Jason C. Hung is an Associate Professor of Department of Information Management at Overseas Chinese University, Taiwan. His research interests include multimedia computing and networking, distance learning, e-commerce, and agent technology. He received his PhD in Computer Science and Information Engineering from Tamkang University in 2001. He has published over 100 papers and book chapters, as well as participated in many international academic activities, including the organisation of many international conferences. He is the Founder and Workshop Chair of International Workshop on Mobile Systems, E-commerce, and Agent Technology. He is also the Associate Editor of the *International Journal of Distance Education Technologies*, published by Idea Group Publishing, USA.

Social networks have played an important role in different domains for about one decade, particularly involved in a broad range of social activities like user interactions, establishing friendships, relationships, sharing and recommending resources, suggesting friends, creating groups and communities, commenting friends' activities and opinions and so on. In recent years, rapid progress has been made in the study of social networks for diverse applications, such as user profiling in Facebook and group recommendation via Flickr. Nowadays, smart handheld devices are very popular; and many applications have been developed for Google Android and Apple iPhone platforms. The future research trend will be focused on applications combining handheld devices, social networks, web services and sensors. Specialised topics in the fields of ubiquitous computing and social networks have been targeted and covered in this special issue. Seven papers were invited or accepted to this issue.

The first article entitled 'The best learning order inference based on blue-red trees of rule-space model for social network' discusses how to use the rule-space model to infer reasonable learning effects of blue-red trees and their definitions through analysing all learning objects of courses within the system. Chen and Deng defined all part learning of sub-binary trees from a course and derived all learning paths from each part learning of sub-binary tree based on the premise that nine learning groups of social network grouping algorithms had been inferred. The authors also defined the relation weight of every learning object associated with the other learning objects, and separately calculated the confidence level values between two adjacent learning objects from all learning paths.

In the second paper entitled 'Privacy preserving social networking', Dr. Korra Sathya Babu, Dr. Jhalak Hota and Dr. Sanjay Kumar Jena discussed individual privacy in social networks. Sensitivity can be measured by the relative

importance of the user on the basis of degree centrality and prestige rank. This paper proposed a set of algorithms to automatically generalise the nodes for preserving privacy.

Efficient tag recommendation systems are required to help users in the task of searching, indexing and browsing appropriate blog contents. The third paper entitled 'Topic ontology-based efficient tag recommendation approach for blogs' by Dr. V. Subramaniaswamy and Dr. S. Chenthur Pandian proposed a novel approach based on topic ontology for tag recommendation. The proposed approach intelligently generates tag suggestions to blogs. In this paper, the authors constructed the ontology based on Wikipedia categories and WordNet semantic relationship to make the ontology more meaningful and reliable. The proposed approach may offer effective solutions to tag spamming, sentiment analysis and popularity.

Prof. Deepa Anand and Kamal K. Bharadwaj proposed a solution to the sparsity problem in the fourth paper entitled 'Exploring graph-based global similarity estimates for quality recommendations'. Graph-based techniques, for estimating transitive similarity between entities not directly connected, are exploited to bring the entities closer thus facilitating collaboration. They also proposed a combined user-item graph approach for exploiting the similarity between users preferring similar items.

'An efficient flooding algorithm for improving network performance in optical WDM networks' written by Dr. M. Arunachalam and Dr. V. Rajamani illustrated the lazy flooding algorithm, which has been analysed and simulated by comparing the performance of all-flooding method and threshold flooding. The simulation results shows that the proposed flooding method achieves reduced blocking probability with increased throughput thereby increasing the scalability of the network.

In the sixth paper entitled 'An extending description logic for action formalism in event ontology', Dr. Wei Liu et al. proposed a new event-based ontology model for the representation of human knowledge with a higher granularity. In order to describe and reason about event-based knowledge effectively, this paper gives a framework of event ontology and proposes an action formalism based on extended description logic that could describe actions with temporal information. Finally, a case study of social web verifies the feasibility of this method of knowledge representation.

In the last paper entitled 'Annotation-based document classification using shuffled frog leaping (SFL) algorithm', Prof. C. Kavitha, G. Sudha Sadasivam and M.A. Priya use annotation retrieval wisdom to improve the accuracy of the document retrieval based on semantic relatedness. Shuffled frog leaping (SFL) algorithm promotes the idea of efficient document classification. Annotation uses singular value decomposition (SVD) which helps to obtain a semantic relationship among documents.

Finally, we like to take this opportunity to extend our great gratitude to all the authors for submitting their works for this special issue. We would also like to express our sincere appreciation to all the reviewers for their invaluable time, constructive suggestions for the authors to improve their papers. We thank Prof. Kuan-Ching Li, the Editor-in-Chief of this journal, for providing us the opportunity to organise and edit this issue.