Preface

Peter Han Joo Chong

Network Technology Research Centre,
School of EEE, Nanyang Technological University,
50 Nanyang Drive, Singapore 637553
E-mail: ehjchong@ntu.edu.sg

Biographical notes: Peter Han Joo Chong received the BE Degree in Electrical Engineering from Dalhousie University, Canada, in 1993, and the MASc and PhD Degrees in Electrical Engineering from the University of British Columbia, Canada, in 1996 and 2000, respectively. He is currently an Assistant Professor with the School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore. His research interests include wireless and mobile communications systems including channel assignment schemes, radio resource management, multiple access, and mobile ad hoc networks.

With the success of the First Mobility Conference held in Singapore in 2004, the Second Mobility Conference was held in Guangzhou, China, in 2005. The objective of this conference is to provide a platform to introduce new mobile technologies that would shape the next generation of mobile systems and technology platforms. The conference brings together academicians from universities and experts from industries to promote, and encourage exchange and sharing of knowledge and ideas to boost growth in the mobility industry. The Second Mobility Conference is a three-day event comprising of keynote speeches by leading researchers and industrial experts, technical oral presentation and poster sessions.

Recently, mobile ad hoc network (MANET) has become an indispensable technique for next generation wireless networks to provide a solution to establish a large-scale wireless network without relying on existing network infrastructures. In addition, with the presence of pervasive computing in mobile wireless devices, our daily way of life is heavily influenced by the rapid evolving wireless communication technologies. *International Journal of Ad Hoc and Ubiquitous Computing* (IJAHUC) is the official journal for Second Mobility Conference to cover these issues. In this Special Issue of IJAHUC, we would like to present five selected best papers that address to MANET and mobile computing for future wireless technologies.

The first paper, 'A secure mobile communication approach based on information hiding', authored by Yun-Feng Chen et al., introduces a new model to characterise multiple aspects of legitimate nodes. The model is derived based on hidden semi-Markov process. The second paper, 'On network coding in wireless ad-hoc networks', authored by Jingyao Zhang and Pingyi Fan, applies a modified Ford-Fulkerson algorithm to get the maximum flow and encoding nodes in undirected graph for wireless ad-hoc multicast network. The third paper, 'Routing protocol for ad hoc mobile networks using mobility predication', authored by Werner Creixell and Kaoru Sezaki, proposes a Geographical Routing Protocol to make a routing decision based on the current and future node's position. The fourth paper, 'Detailed DoS attacks in wireless networks and countermeasures', authored by Lawan A. Mohammed and Biju Issas, first describes some of the major vulnerabilities associated with wireless networks and then presents different methods of achieving denial of service (DoS) attacks for wireless networks. The last paper, 'Simulation study of some PRMA-based protocols with channel reservation for data traffic', authored by Xue Jun Li and Peter H.J. Chong, investigates the performance of packet reservation multiple access (PRMA) protocols with channel reservation for integrated packet voice and packet data traffic in a TDMA-based cellular environment. The PRMA technique can be considered as one of the possible MAC protocols for use in MANET.

We like to express our gratitude to members of the Second Mobility Conference technical program committee who organised and chaired sessions at the conference. We also feel deeply appreciated to many anonymous reviewers for their help in assisting us with the evaluation of the submitted papers. Finally, we would like to thank IJAHUC for giving us the opportunity to make the development and publication of this Special Issue possible.