
Editorial

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Biographical notes: Ming Li has been a faculty in the Department of Computer Science, California State University, Fresno, since August 2006. He received his MS and PhD degrees in Computer Science from The University of Texas at Dallas in 2001 and 2006, respectively. His research interests include QoS strategies for wireless networks, robotics communications, and multimedia streaming over wireless networks. He is a member of ACM and IEEE.

Hui Chen studied Geophysics and Computer Science, and worked in related industry. He is currently with Department of Mathematics and Computer Science, Virginia State University. He primarily works in the area of computer networking. He served as journal guest editors and various IEEE conference programme committees, and publishes frequently. He is members of IEEE and ACM.

Pervasive Computing (or Ubiquitous Computing) can be viewed as an information model that enables data to be accessed and processed anytime and anywhere. While many pervasive computing models and protocols have been proposed to enable the integration of various computing and networking domains, much less attention is given to the design and implementation of such systems and infrastructures in real applications. Without real implementation, it is difficult to evaluate the performance of existing models and protocols and discover further issues for additional improvement. This workshop features recent advances in pervasive computing systems and tools, with a focus on building and performance evaluation of infrastructures and testbed. The workshop was held in conjunction with the 5th International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom 2009), in Washington DC, USA, 6 April 2009.

The extensions of four excellent papers published in the workshop were selected and included in this special issue.

In the paper entitled 'Collaborative defence as a pervasive service: architectural insights and validation methodologies of a trial deployment', Eve M. Schooler et al. described their experience in developing a distributed, scalable anti-malware trial system. Their system takes measurement-everywhere

approach to achieve collaborative defence among multiple interconnected systems. Nevertheless, the collaborative defence with the adaptive underpinnings is viewed as a pervasive service.

In the paper entitled 'Design of large-scale agricultural wireless sensor networks: email from vineyard', C. Jardak et al. discussed their design and implementation of a wireless sensor network consisting of 64 wireless sensors deployed in a vineyard. The wireless sensor network can provide precise measurement of soil conditions near plants to farmers. Their work demonstrated that wireless sensor networks can be used in agriculture monitoring and are very efficient over traditional solutions.

In the paper entitled 'A testbed for large mobile social computing experiments', Ahmed Alazzawe et al. presented their work in mobile social computing. They compared several mobile platforms and described their experience in developing an Android-based mobile social computing testbed that can be used to perform research in security, privacy and context-awareness policies and mechanisms appropriate for a wide range of applications.

In the paper entitled 'MRL-CC: a novel cooperative communication protocol for QoS provisioning in wireless sensor networks', Xuedong Liang et al. proposed MRL-CC,

a Multi-agent Reinforcement Learning based multi-hop mesh Cooperative Communication mechanism, in an aim to investigate the use of cooperative communications for quality of service in resource-constrained wireless sensor networks.

All selected papers have gone through rigorous reviews to maintain high quality. We believe this special issue can

be a good reference for researchers, practitioners and students who are interested in pervasive computing systems and infrastructure.

In the end, we appreciate the contribution of all authors and reviewers that made the PCSI 2009 a successful event. We are also grateful to the organisers of the TridentCom 2009 with which the PCSI 2009 is co-located.