

Workshop on Applications of Delay Tolerant Networking (A-DTN)

Technical Program

April 7, 2013 Shanghai, China

Delay tolerant networking (DTN) has become an active field of research during the past decade. It addresses scenarios where traditional communication protocols fail because of delayed transmissions, or because of the absence of continuous end-to-end connectivity in the network.

This workshop provides a forum for academic researchers and industry professionals to present and discuss their latest research results on fundamental problems and applications of DTN system. The program of the workshop is as following:

A-DTN Workshop Program 4/7/2013 14:00~17:30 Room: 3E	
Timeslot	Content
14:00~14:10	Welcome Speech: <i>Zhongwen Guo</i> (Workshop Chair, Ocean University of China)
14:10~14:50	Keynote Speech: Networking of Smarter Vehicles <i>Minglu Li</i> (Shanghai Jiao Tong University, P.R. China)
Session I: Fundamental problems on DTN Chair: Feng Hong (Ocean University of China) - First Part	
14:50~15:10	Paper Presentation 1. Dynamic Pricing Strategy for Delay Tolerant Service Aggregation Multicast in Wireless Networks <i>Xiaoming Tao, Jianhua Lu</i> (Tsinghua University, P.R. China)
15:10~15:30	Paper Presentation 2. A Performance Comparison of DTN Protocols for High Delay Optical Channels <i>Paul Daniel Muri, Janise McNair</i> (University of Florida, USA)
15:30~16:00	Coffee Break
Session I - Last Part	
16:00~16:15	Paper Presentation 3. A Price-based Interactive Data Queue Management Approach for Delay-Tolerant Mobile Sensor Networks <i>Jie Li, Qiyue Li</i> (Hefei University of Technology, P.R. China)
16:15~16:30	Paper Presentation 4. Mobile Agent Based Topology Control Algorithms for Wireless Sensor Networks <i>Lu Hong</i> (Weifang University, P.R. China)
Session II: Marine and VANET DTN Applications Chair: Zhongwen Guo (Ocean University of China)	
16:30~16:45	Paper Presentation 5. Analysis on Communication Capability of Vessel-based Ocean Monitoring Delay Tolerant Networks <i>Dan Wang, Feng Hong, Bozhen Yang, Yongtuo Zhang, Zhongwen Guo</i> (Ocean University of China, P.R. China)

16:45~17:00	Paper Presentation 6. Distributed Cooperative Transmission for Underwater Acoustic Sensor Networks <i>Tan Do, Tung Le, Dong Sung Kim</i> (Kumoh National Institute of Technology, Korea)
17:00~17:15	Paper Presentation 7. Large Delay Underwater Sensor Networks Clock Synchronization with Mobile Beacon <i>Ying Guo, Wei Hai Cui, Wen Si</i> (Qingdao University of Science and Technology, P.R. China)
17:15~17:30	Paper Presentation 8. A Decentralized Adaptive TDMA Scheduling Strategy for VANET <i>Weidong Yang</i> (Xidian University, P.R. China)

Abstract of Keynote Speech

Vehicular Ad hoc Networks (VANETs) are emerging as a new landscape of mobile ad hoc networks, aiming to provide a wide spectrum of safety and comfort applications to drivers and passengers. In VANETs, vehicles equipped with wireless communication devices can transfer data with each other as well as with the roadside infrastructure. Combined with various sensors, such as image/video sensor, accelerometer, GPS receiver and radar, and an embedded processing unit, vehicles appear “smarter” than ever, having a better understanding about the surrounding environment and other vehicles on the move. Both the new sensing and wireless communication technologies enable the promising applications of VANET in the future with respect to safety, efficiency of infrastructure and comfort. Foreseeing this trend, both academia and industry put great efforts in investigating the new possibilities that can be brought by VANETs. In this talk, we will present our recent research work on VANETs, ranging from mobility models to mobile sensing applications based on three large-scale vehicular traces. During the talk, future directions will also be discussed.

Bio of Keynote Speaker



Minglu Li graduated from the College of Electronic Technology, University of Information Engineering, in 1985 and received the PhD degree in computer science from Shanghai Jiao Tong University (SJTU) in 1996. Now, he is a full professor and the vice dean of School of Electronic Information and Electrical Engineering, and the director of Network Computing Center of SJTU. Currently, his research interests include cloud computing, services computing, wireless sensor networks and internet of things. He has presided over 20 projects supported by the National Natural Science Foundation, 863 Program, 973 Program, and Science and Technology Commission of Shanghai Municipality. He has published more than 200 papers in academic journals and international conferences. He is on the editorial board of Elsevier’s Journal Computer Communications, and the Executive Committee of the Technical Committee on Services Computing, and the Technical Committee on Parallel Processing of the IEEE Computer Society.