

Schedule of HMWC2019

2019-4-28

9:00-9:10 Welcome Speech

9:10-10:30 Paper Session #1

- **A Deep Neural Network Method For Automatic Modulation Recognition In OFDM With Index Modulation**
Yu Zhou, Fang Liu, Yuanan Liu, Beijing University of Posts and Telecommunications
- **Low Complexity Detection Algorithms for OTFS under Rapidly Time-varying Channel**
Lingjun Li, Yu Liang, Pingzhi Fan, Southwest Jiaotong University;
Yongliang Guan, Nanyang Technological University
- **Evaluation of Age of Information for LDPC Coded Transmission over AWGN Channels**
Mangang Xie, Qianfan Wang, Jie Gong, Xiao Ma, Sun Yat-sen University
- **LTE and Millimeter Waves for V2I Communications: an End-to-End Performance Comparison**
Marco Giordani, Andrea Zanella, Michele Zorzi, University of Padova
- **Transform Domain Equalization for Doubly Selective Channels**
Xiqian Luo, Zhaoyang Zhang, Zhejiang University

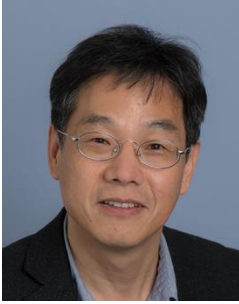
10:30-11:00 break

11:00-11:40 Keynote

Title: Uplink NOMA for Short Packet Transmissions

Keynote Speaker: Jinho Choi (Deakin University)

Abstract: Since non-orthogonal multiple access (NOMA) can provide a higher spectral efficiency than orthogonal multiple access (OMA), it has been extensively studied. In this talk, we discuss the application of NOMA to uplink transmissions after presenting fundamentals of NOMA. In particular, we focus on short-packet transmissions for ultra-reliable and low-latency communication (URLLC) and machine-type communication (MTC) and demonstrate that how NOMA can be employed in URLLC and MTC. A design approach with short packets is presented for coded uplink NOMA. NOMA is combined with ALOHA for MTC and it is shown that how the throughput can be improved to support more devices in MTC.



Jinho Choi was born in Seoul, Korea. He received B.E. (magna cum laude) degree in electronics engineering in 1989 from Sogang University, Seoul, and M.S.E. and Ph.D. degrees in electrical engineering from Korea Advanced Institute of Science and Technology (KAIST) in 1991 and 1994, respectively. He is with the School of Information Technology, Deakin University, Burwood, VIC 3125, Australia, as a Professor. Prior to joining Deakin in 2018, he was with Swansea University, United Kingdom, as a Professor/Chair in Wireless, and Gwangju Institute of Science and Technology (GIST), Korea, as a Professor. His research interests include the Internet of Things (IoT), wireless communications, and statistical signal processing. He authored two books published by Cambridge University Press in 2006 and 2010. Prof. Choi received the 1999 Best Paper Award for Signal Processing from EURASIP, 2009 Best Paper Award from WPMC (Conference), and is Senior Member of IEEE. Currently, he is an Editor of IEEE Trans. Communications and IEEE Wireless Communications Letters and had served as an Associate Editor or Editor of other journals including IEEE Communications Letters, Journal of Communications and Networks (JCN), IEEE Trans. Vehicular Technology, and ETRI journal.

11:40-12:30 Paper Session #2

- **Deep MIMO Detection Scheme for High-Speed Railways with Wireless Big Data**
Zhongkang Chen, Dapeng Li, Youyun Xu, Nanjing University of Posts and Telecommunications
- **Energy-Efficient Power Optimization and Transmission Mode Selection for Distributed Antenna System in HSR Communications**
Jinling Hu, Xiaoming Wang, Youyun Xu, Nanjing University of Posts and Telecommunications
- **Key Technologies of Broadband Wireless Communication for Vacuum Tube High-speed Flying Train**
Chencheng Qiu, Liu Liu, Ye Liu, Zheng Li, Jiachi Zhang, Tao Zhou, Beijing Jiaotong University

12:30-14:00 Lunch

14:00-15:30 6 Paper Session #3

- **A Contract-Stackelberg Offloading Incentive Mechanism for Vehicular Parked-Edge Computing Networks**
Yuwei Li, Bo Yang, Zhijie Chen, Cailian Chen, Xinping Guan, Shanghai Jiao Tong University
- **SMDP Based Cross-Area Resource Management for Vehicular Cloud Networks**
Zhuyue Yu, Jiayou Xie, Xiamen University; Tang Yuliang, Liang Xiao, Xiamen University

- **A Pricing Strategy for D2D Communication from a Prospect Theory Perspective**
Yichao Chen, Zhejiang University; Fen Hou, University of Macau; Shibo He, Zhejiang University
- **Cooperative V2X for High Definition Map Transmission Based on Vehicle Mobility**
Fangfei Wang, Dong Guan, Long Zhao, Kan Zheng, Beijing University of Posts and Telecommunications
- **Intelligent Prediction of Mobile Vehicle Trajectory Based on Space-Time Information**
Dong Guan, Hui Zhao, Long Zhao, Kan Zheng, Beijing University of Posts and Telecommunications
- **Wireless Charging Lane Deployment in Urban Areas Considering Traffic Light and Regional Energy Supply-Demand Balance**
Tian Wang, Bo Yang, Cailian Chen, Xinping Guan, Shanghai Jiao Tong University

15:30-16:00 break

16:00-16:30 Paper Session #4

- **Cluster-based resource selection scheme for 5G V2X**
Jiaqi Zhao, Xinxin He, Beijing University of Posts and Telecommunications;
Wang Huan, Zheng Xufei, DOCOMO Beijing Communication Laboratories, Co. Ltd.;
Jie Lv, Tao LUO, Beijing University of Posts and Telecommunications;
Xiaolin Hou, DOCOMO Beijing Communications Laboratories Co. Ltd
- **Clustering based Resource Management Scheme for Latency and Sum Rate Optimization in V2X Networks**
Fakhar Abbas, Gang Liu, Zahid Khan, Southwest Jiaotong Univeristy;
Kan Zheng, Beijing University of Posts and Telecommunications;
Pingzhi Fan, Southwest Jiaotong Univeristy
- **Research on LTE-V2X Sidelink Multi-carrier Resource Selection Mechanism**
Jinling Hu, Chenxin LI, Fang Jiayi, Li ZHAO, China Academy of Telecommunication Technology (CATT);
Yan Shi, Beijing University of Posts and Telecommunications