SPECIAL ISSUE ON

Machine Learning and Intelligent Communications

Overview:

With the advent of the fourth industrial revolution and the fast development of virtual/augmented reality, the number of high quality wireless services is exponentially increasing. According to the prediction of Cisco VNI Mobile Forecast 2017, global mobile data traffic will increase sevenfold between 2016 and 2021, and the speed of mobile network connections will increase threefold to 20.4 megabits per second (Mbps) by 2021. Hence, there is still a big gap between the future requirements and current communications technologies, even using 4G/5G. This motivates the researchers to improve the system performance by integrating the limited wireless resources with some intelligent algorithms/schemes.

As an emerging discipline, machine learning is a subfield of computer science that evolves pattern recognition and computational learning theory in artificial intelligence, which can be further used to make predictions on complicated scenarios. In communication systems, the previous/current radio situations and communication paradigms should be well considered to obtain a high quality of service, such as high communication rate, energy saving, consumption reducing, and the robust of communications for high mobility especially in large scale networks. **We hope that integrating machine learning algorithms into communication systems will improve the systems to be smarter, more intelligent, and more efficient.** Thus, this is a good time to call for intelligent solutions that can be applied to future mobile communications and networks.

This Special Issue aims to explore intelligent/machine-learning algorithms for mobile communication networking systems. Expected contributions call upon a wide range of novel modeling as well as algorithmic and computational frameworks related to intelligent optimization or machine learning. This special issue welcomes the papers from all the areas which are related to mobile communication networking systems.

Topics

Topics of interests include, but are not limited to, the following scope:

− Intelligent cloud-support communications	− Power and Spectrum Allocations
− Intelligent software defined networks	− Energy-aware/green communications
− Intelligent cooperative networks	− Smart antennas design and configuration
− Intelligent cooperative/distributed coding	− Smart MIMO communication systems
− Intelligent wireless communications	− Smart positioning and navigation system
− Intelligent wireless sensor networks	− Smart underwater sensor networks

− Intelligent satellite communications	− Information processing in sensor networks
− Machine learning for multimedia	− Decentralized learning for wireless communication systems
− Machine learning for Internet of Things	− Smart unmanned vehicular technology
− Data mining in heterogeneous networks	− Smart sensing for human activity
− Dynamic Spectrum Price and Access	
− Machine learning & cognitive radio	

Important Dates

- **Manuscript submission deadline: September 1, 2019**
- Notification of acceptance: October 15, 2019
- Submission of final revised paper: November 15, 2019
- Publication of special issue (tentative): Spring, 2020

Submission Procedure

Authors should follow the MONET Journal manuscript format described at the journal site. Manuscripts should be submitted on-line through http://www.editorialmanager.com/mone/.

A copy of the manuscript should also be emailed to the Guest Editors at the following email address(es) : blueicezhaixp@nuaa.edu.cn; licongd@mail.sysu.edu.cn; liukai0807@gmail.com.

Authors need to register to submit their papers.

Guest Editors:

Dr. Xiangping Bryce Zhai, Nanjing University of Aeronautics and Astronautics, China

Xiangping Bryce Zhai (*M'15, IEEE*) received the B.Eng. degree in Computer Science and Technology from Shandong University in 2006, and the Ph.D. degree in Computer Science from City University of Hong Kong in 2013. Previously, he was a Postdoctoral Fellow at the City University of Hong Kong. He is currently an Associate Professor of the College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China. His research interests are in the area of Internet of Things, power control, edge computing, resource optimization and unmanned aerial vehicle. He has been actively involved in organizing and chairing sessions, and has served as reviewer for several journals and TPC for several international conferences.

Dr. Congduan Li, Sun Yat-sen University, China

Congduan Li (*S'11-M'15, IEEE*) received the B.S. degree from the University of Science and Technology Beijing, China, in 2008, the M.S. degree from Northern Arizona University, Flagstaff, AZ, USA in 2011, and Ph.D. degree from Drexel University, Philadelphia, PA, USA in 2015, respectively, all in Electrical Engineering. From Oct 2015 to Aug 2018, he was a postdoctoral research fellow in the Institute of Network Coding at the Chinese University of Hong Kong and the Department of Computer Science at City University of Hong Kong. He is currently an Associate Professor in School of Electronics and Communications Engineering at the Sun Yat-sen University. His research interests lie in information theory, network coding, wireless communications, and machine learning, etc.

Dr. Kai Liu, Chongqing University, China

Kai Liu (*S'07–M'12*) Kai Liu received his Ph.D. Degree in Computer Science from the City University of Hong Kong in 2011. From December 2010 to May 2011, he was a Visiting Scholar with the Department of Computer Science, University of Virginia, USA. From 2011 to 2014, he was a Postdoctoral Fellow with Singapore Nanyang Technological University, City University of Hong Kong, and Hong Kong Baptist University. He is currently an Assistant Professor with the College of Computer Science, Chongqing University, China. His research interests include Internet of Vehicles, Mobile Computing, Pervasive Computing and Big Data.