

Title:

Mobile Edge Computing and Future Networking

Abstract:

By pushing the cloud computing and services to the network edge, mobile edge computing (MEC) emerges as a promising alternative to provide a diversity cloud services to the users. Different from traditional centralized cloud computing, MEC servers are usually geo-distributed and therefore can directly provide applications and services to the users nearby, potentially lowering the latency and improving the quality-of-service (QoS) and quality-of-experience (QoE). The promising features of MEC have attracted much attention from the academia, industry and standard development organizations (e.g., ETSI). At we are still in the early stage of MEC, there are still many challenges that need to be addressed before fast development and vast deployment.

On the other hand, MEC intends to seamlessly integrate the disciplines of wireless communications and mobile computing so as to facilitate the flexible and fine-grain management of MEC resources. Recently, many future networking (FN) technologies like software-defined networking (SDN), network function virtualization (NFV) and cloud radio access networks (CRAN) have been proposed and widely investigated. It is natural to jointly discuss the integration of MEC and FN, especially on they interact with, and benefit, each other.

The purpose of the 2018 International Workshop on Mobile Edge Computing and Future Networking (MEC-FN 2018) is to provide a forum for practitioners and researchers from diverse backgrounds to exchange and discuss their recent ideas, research achievements, design and implementation experiences in MEC and FN.

Scope and Topics:

Topics of interest include (but are not limited to):

- ✧ Innovative techniques for IoT infrastructure security
- ✧ Mobile edge computing and future networking architecture
- ✧ Cross-layer resource management and optimization
- ✧ Computation and communication offloading in mobile edge computing
- ✧ Function and service allocation in mobile edge networks
- ✧ Security and privacy challenges in mobile edge networks
- ✧ Service placement, replication and migration models in mobile edge networks
- ✧ Application- and service-aware resource management
- ✧ Virtual network embedding algorithm in mobile edge computing
- ✧ QoS/QoE in mobile edge computing
- ✧ Cloud radio access networks in mobile edge computing
- ✧ Network function virtualization in mobile edge computing

- ✧ Inter-service communications in mobile edge networks
- ✧ Service function chaining in mobile edge computing
- ✧ Software-defined networking in mobile edge computing
- ✧ Traffic orchestration in mobile edge computing
- ✧ Theoretical models on mobile edge computing and future networking
- ✧ Prototype design, implementation and deployment experience
- ✧ Experimental evaluations on mobile edge computing
- ✧ Intelligence in mobile edge computing
- ✧ Slicing and multi-tenancy of future networks for mobile edge computing

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Song Guo received his Ph.D. in computer science from University of Ottawa. He is currently a full professor at Department of Computing, The Hong Kong Polytechnic University. Prior to joining PolyU, he was a full professor with the University of Aizu, Japan. His research interests are mainly in the areas of big data, cloud computing, green communication and computing, wireless networks, and cyber-physical systems. He has published over 350 conference and journal papers, including 80+ IEEE/ACM Transactions papers, in these areas and received 5 best paper awards from IEEE/ACM conferences. His research has been sponsored by JSPS, JST, MIC, NSF, NSFC, and industrial companies. Dr. Guo has served in editorial boards of several prestigious journals, including IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Emerging Topics in Computing, IEEE Transactions on Sustainable Computing, IEEE Transactions on Green Communications and Networking, and IEEE Communications. He is an active volunteer as General/TPC Chair/Co-Chair for 20+ international conferences and Chair/Vice-Chair for several IEEE Technical Committees and SIGs. Dr. Guo is a senior member of IEEE, a senior member of ACM, and an IEEE Communications Society Distinguished Lecturer.

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Zhangjie Fu received his PhD in computer science from the College of Computer, Hunan University, China, in 2012. He is currently an Associate Professor at School of Computer and Software, Nanjing University of Information Science and Technology, China. He was a research fellow of Computer Science and Engineering at State University of New York at Buffalo from March, 2015 to March, 2016. His research interests include Cloud Security, Outsourcing Security, Digital Forensics, Network and Information Security. His research has been supported by NSFC, PAPD, and GYHY.

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