



RESEARCH SEMINAR

## AI Powered Edge Scheduling



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### Abstract

Mobile Edge Computing (EC) is a flexible architecture to support distributed domain-specific applications with cloud-like quality of service. However, current MEC still lacks the mobility support mechanism when facing many mobile tasks with diversified quality requirements. Such mobility-quality support mechanism can be critical for industrial internet and smart city applications. Due to the features of lightweight and easy deployment, the use of containers has emerged as a promising approach for MEC. Before running the container, an image composed of several layers must exist locally. However, it has been conspicuously neglected by existing work that task scheduling at the granularity of the layer instead of the image can significantly reduce the task completion time to further meet the real-time requirement and resource efficiency in resource-limited MEC. Based on the observations, this talk will introduce our recent investigations on novel offline and online task/ container/image/layer scheduling algorithms in heterogeneous MEC environments with AI technology.

### About the Speaker

Prof. Weijia Jia serves as the Director of AI and Future Networking Research Institute of Beijing Normal University (BNU, Zhuhai), Guangdong, China. He also serves as the VP for Research at BNU-HKBU United International College (UIC). Prior joining BNU/UIC, he served as the Deputy Director of State Key Laboratory of Internet of Things for Smart City at the University of Macau (2018-2020) and was Zhiyuan Chair Professor at Shanghai Jiaotong University (2014-2018). He worked in City University of Hong Kong as a professor (1995-2103). His contributions have been reconganized as smart edge computing, optimal network routing and deployment; vertex cover; anycast and QoS routing, and sensors networking; knowledge relation extractions and NLP. He has over 600 publications in the prestige international journals/conferences and research books and book chapters. He has received many science-tech awards and served as area editor for various prestige international journals, chair and PC member/keynote speaker for top international conferences. He is the Fellow of IEEE and the Distinguished Member of CCF.