

Title

Toward Internet of Things with Endogenous Intelligence

Speaker

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Abstract

The Internet of Things (IoT) has been widely recognized as the kernel technology for sensing the physical environments and providing smart services further. At the same time, the rapid development of Artificial Intelligence (AI), from traditional Machine Learning, Deep Learning to Large Model Learning, brings many opportunities to IoT. In this talk, first, we will introduce the long-term challenges of the development of IoT. Combining AI theory, then we will present some explorations and recent research progresses on intelligent sensing, intelligent transmission, and intelligent service in the IoT environment. In the future, endogenous intelligence will drive the revolution of IoT, we will discuss the open issues on IoT area, such as the theories and key technologies of human-like sensing, concise and intelligent networking for heterogeneous wireless network, and cognitive service. The breakthrough for solving the above problems will promote the innovative development of Internet of Things.



Biography Dr. Huadong Ma is a Professor of School of Computer Science, and Vice-Chair of Academic Committee, Beijing University of Posts and Telecommunications (BUPT), China. He is also Director of Beijing Key Lab of Intelligent Telecommunications Software and Multimedia, BUPT. He received his PhD degree in Computer Science from the Institute of Computing Technology, Chinese Academy of Science in 1995. He is Chief Scientist of the project “Basic Research on the Architecture of Internet of Things” supported

by the National 973 Program of China from 2010 to 2013. His current research focuses on Internet of things, multimedia computing, Artificial Intelligence and he has published over 400 papers in journals or Conferences and 5 books on these fields. As a co-author, he got the 2019 Prize Paper award of IEEE Transactions on Multimedia and the 2018 Best Paper Award from IEEE MultiMedia. He was awarded National Funds for Distinguished Young Scientists in 2009, the First-Class Natural Science Award of the Ministry of Education, China in 2017, CCF WangXuan Award in 2023. He was/is an Editorial Board Member of the IEEE Transactions on Multimedia, IEEE Internet of Things Journal, and ACM Transactions on Internet of Things. He serves for Chair of ACM China Council. He is IEEE/CCF/CAAI Fellow.