

**Title:**

Bringing Intelligence into Internet of Things

**Abstract:**

Dramatically increased smart terminals and network access diversities are the development trend of Internet of Things. To face the challenge of 1,000 times increased mobile data traffic and up to 10Gbps for the rate of end-user demand, many novel essential enabling technologies have been studied, e.g., non-orthogonal multiple access. Furthermore, Artificial intelligence is playing a growing role in IoT applications and deployments. Venture capital investments in IoT start-ups that are using AI are up sharply. The IoT is getting smarter. Researchers are incorporating artificial intelligence—in particular, machine learning—into their Internet of Things applications and seeing capabilities grow, including improving operational efficiency and helping avoid unplanned downtime. The key is finding insights in data. The powerful combination of AI and IoT technology is helping enhancing performance, increase operating efficiency, enable new products and services, and enhance risk management.

The goal of this workshop is to bring together state-of-the-art research contributions, tutorials, and position papers that bring intelligence into various aspects of analysis, design, optimization, implementation, and application of smart Internet of Things.

**Scope and Topics:**

Original contributions previously unpublished are solicited in relevant areas including (but not limited to) the following:

- ✧ Intelligent cloud-support communications
- ✧ Intelligent spectrum allocation
- ✧ Intelligent energy-aware/green communications
- ✧ Intelligent software defined flexible radios
- ✧ Intelligent cooperative networks
- ✧ Intelligent massive MIMO communication systems
- ✧ Intelligent home networking
- ✧ Positioning and navigation systems
- ✧ Intelligent cooperative/distributed coding
- ✧ Next-generation smart wearables
- ✧ Machine learning algorithm & cognitive radio networks
- ✧ Machine learning and information processing in smart sensor networks
- ✧ Data mining in heterogeneous networks

- ✧ Decentralized computing for wireless communication systems
- ✧ Smart communication in unmanned aircraft systems and internet of vehicles
- ✧ Intelligent non-orthogonal multiple access

### **Program Committee Chairs:**

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Professor Bing Chen is currently the dean of College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China. He received his Ph.D. degree from the same university. His research interests include SDN, cognitive radio networks, wireless networking. He is the PI of several research projects and has won several awards. He has served as reviewer for several journals.

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Dr. Kun Zhu is currently a Professor in the School of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China. He is also a Jiangsu specially appointed professor. He received his Ph.D. degree in 2012 from School of Computer Engineering, Nanyang Technological University, Singapore. He was a research fellow with the Wireless Communications, Networks, and Services Research Group in University of Manitoba, Canada. His research interests include resource allocation in 5G, wireless virtualization, and self-organizing networks. He has served as TPC for several conferences and reviewer for several journals.

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Dr. Xiangping Zhai is an Assistant Professor of the College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China. He was a Post-Doctoral Fellow with the City University of Hong Kong. He received the Bachelor degree in Engineering from Shandong University in 2006 and the Ph.D. degree from City University of Hong Kong in 2013. Previously, he was a software engineer in NEC China Co.,Ltd. from 2006 to 2009 and a senior software engineer in Thunder soft Software Technology Co., Ltd. from 2009 to 2010. Dr. Zhai's general research interests include resource optimization, mobile computing, Internet of Things and next generation wireless networks. He has been actively involved in organizing and chairing sessions, and has served as a member of the Technical Program Committee (TPC) in a number of international conferences and workshops. Including IEEE Globecom, Chinacom, IEEE MSMN etc.

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Dr. Dinh Thai Hoang is currently a lecture in the University Technology Sydney, Australia. He received his Ph.D. degree in 2016 from School of Computer

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