



RESEARCH SEMINAR

## A Tale of Connecting Massive Things to a Cyber World



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**Online via ZOOM**

### Abstract

Internet-of-Things (IoT) envision ubiquitous and massive connections of physical things to network, which can empower devastating innovations like digital twins and metaverse to reshape the human society. Recently, Low-Power Wide Area Network (LPWAN) has emerged as a new-generation technology to turn IoT visions into reality. LPWANs promise to provide long-range IoT connections without the need to replace battery of IoT devices for years. Despite that, how to interconnect an ever-increasing number of IoT devices in densely populated metropolises such as Hong Kong imposes tremendous challenges due to the scalability, energy efficiency and security issues. Dr. Xia has continuously devoted efforts to researches on LPWANs, aiming to providing longer ranges, larger capacity, lower power consumption and higher security to IoT connections. In this talk, I will give a brief introduction of the recent progress of LPWAN researches. Some possible directions for future research will be discussed.

### About the Speaker

Dr Xianjin Xia is currently a Research Assistant Professor of the Department of Computing, PolyU. He received the BSc, MSc, and PhD degrees in Computer Science from Northwestern Polytechnic University, Xi'an, China, respectively. Before joining PolyU as an RAP, he worked as a Postdoc at the Hong Kong Polytechnic University during Sep 2018—Feb 2021. Dr Xia's research interests include Internet of Things (IoT), wireless communications, Low-Power Wide-Area Networks (LPWANs), mobile computing, localization, etc. He has published papers in top-rank conferences and journals, such as ACM MobiCom, ACM SenSys, IEEE INFOCOM, IEEE/ACM Transactions on Networking, etc.