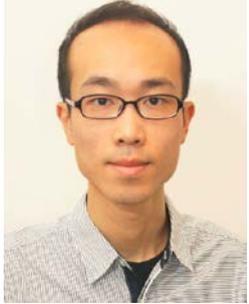




## 学术报告会 Seminar

题目	Efficient Information Dissemination of 3D Mapping Data for Autonomous Vehicles	
报告人	<b>Professor Ivan Wang-Hei Ho</b> Department of Electronic and Information Engineering, The Hong Kong Polytechnic University	
时间	2018年6月29日(星期五)下午 14:00-15:00	
地点	上海科技大学, 信息学院 1 号楼 C 区 502 会议室 (上海雾计算实验室)	

**Abstract:** Information exchanges play a vital role in enabling autonomous driving by overcoming the limitation of perception and decision of a single autonomous vehicle. For assuring safety, facilitating regulations, and enhancing intelligent decisions, it is critical to enable a detailed global view of mapping data (that describes the road environments and roadside objects) to be synchronized and exchanged dynamically among autonomous vehicles, roadside infrastructure, and traffic control center. Central to autonomous driving is the mapping data in form of 3D point cloud that is commonly utilized by LIDAR (laser-based) perception systems, which can accurately represent physical objects in 3D space, but usually takes up a large volume of data. Therefore, the efficiency of 3D point cloud mapping data dissemination is crucial to practical realization of autonomous driving. In this paper, we present 3D-MADS, an efficient information dissemination system of 3D point cloud mapping data for autonomous vehicles, roadside units and a mapping data repository, considering heterogeneous transmission options, such as cellular network unicast and short-range local broadcast transmissions.

**Bio:** Ivan Wang-Hei Ho is currently a Research Assistant Professor at the Department of Electronic and Information Engineering, The Hong Kong Polytechnic University. He received the B.Eng. and M.Phil. degrees in Information Engineering from The Chinese University of Hong Kong, and the Ph.D. degree in Electrical and Electronic Engineering from Imperial College London, UK. He worked on the MESSAGE project funded by EPSRC and Department for Transport, UK, and the ITA project funded by the US Army Research Laboratory and UK Ministry of Defence during his Ph.D. studies. In 2007, Ivan spent a summer working at the IBM T. J. Watson Research Center, Hawthorne, NY, USA. After his Ph.D. graduation, he was

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with the System Engineering Initiative at Imperial College as a Postdoctoral Research Associate. In Sept 2010, he co-founded P2 Mobile Technologies Limited at Hong Kong Science Park and served as the Chief R&D Engineer. He primarily invented the MeshRanger series wireless mesh embedded system, which won the Silver Award in Best Ubiquitous Networking at the Hong Kong ICT Awards 2012. Ivan is an Associate Editor for IEEE Access and IEEE Transactions on Circuits and Systems II, and TPC member for IEEE conferences (ICC, WCNC, PIMRC, etc.). His research interests are in wireless communications and networking, specifically in vehicular ad-hoc networks (VANET), intelligent transportation systems (ITS), Internet of things (IoT), and physical-layer network coding.

**Contact:** 王昆仑, 博士, kunlun.wang@wico.sh, 13167056213

**地图:** 上海科技大学-上海雾计算实验室

**Map:** Shanghai Institute of Fog Computing Technology (SHIFT) @ ShanghaiTech

