Abstract: Over 50% of the world’s population currently lives in cities. The ever-growing urban population entails economic opportunities as well as major challenges to sustainable development. Enabled by latest technological advances, the Smart City approach has emerged as a potential strategy to overcome these grand challenges and unlock new business opportunities. In this talk, I shall discuss my recent teaching and research activities in this area. First, I shall share about the development of an MBA course on Smart City Analytics at Oxford. Then, I shall present a working paper on the potential of crowdshipping as an omnichannel retail strategy.

The same-day shipping segment has become the key battleground in online and omnichannel retail. Enabled by rapid development of the sharing economy, the strategy of crowdshipping has been adopted by a number of retailers to tackle the notorious last-mile delivery problem in urban markets. In this work, we study the novel operations of peer-to-peer (P2P) crowdshipping, i.e., enlisting in-store shoppers to deliver online orders in their vicinity, on the marketing-operations interface for an omnichannel retailer. In particular, P2P crowdshipping not only offers the retailer an opportunity to improve delivery efficiency, but also an additional lever for price discrimination. When these two effects interact, we find that the favorability of crowdshipping, from the retailer’s and consumers’ perspectives, heavily depend on how shopper-deliverers are reimbursed and product characteristics. For necessity goods, a cost-based reimbursement scheme could lead to a win-win outcome in both the retailer’s profit and consumer surplus; for higher-end products, reimbursing deliverers a premium on top of their incurred delivery costs would be favorable.

Bio: Ho-Yin Mak is Associate Professor in Management Science at the Saïd Business School, University of Oxford. Prior to joining Oxford, he was an Assistant Professor at the Department of Industrial Engineering & Logistics Management (IELM), Hong Kong University of Science & Technology, from 2009-2015. He obtained his Ph.D. and M.S. degrees from the University of California at Berkeley, and a B.S. degree from Northwestern University. His recent research interests are on operations management and business analytics problems arising in smart city settings, with a particular focus on the transportation and energy domains, as well as the interfaces with supply chain management and the sharing economy.