**Abstract:** This paper examines how platform recommendation algorithms based on demand-side tastes affect supply-side small scale entrepreneurs. It addresses three vital questions: (1) What is the effect of implementations of popularity or personalization platform recommendation algorithms on seller revenue? (2) How do changes of platform algorithms incentivize sellers in the sharing economy? (3) For which sellers the platform algorithms are more beneficial? Through natural quasi-experiments and rich proprietary datasets from a major food-sharing platform, the analysis finds significant increases of seller revenues after the platform implements either algorithm. But, the pathways to these revenue increases differ. As the review popularity recommendation (RPR) platform algorithm helps buyers to find sellers with high review ratings more easily, sellers are incentivized to adopt a specialization focus on the quality reputation of current products. By contrast, as the boiter personalization recommendation (BPR) algorithm enables buyers to find sellers with more customized cuisines, sellers respond by adopting an innovation focus on introducing more new products to suit the diverse customer tastes. Consistent with the specialization pathway, RPR is more beneficial for sellers who have a concentrated product assortment. In contrast and in line with the innovation pathway, it is younger and newer entrepreneurs that reap more benefits from BPR. Surprisingly, each algorithm has unintended outcomes: RPR impedes innovation and BPR inhibits specialization. However, the platform manager can leverage a machine learning causal forest technique to learn sellers’ heterogeneous responses to RPR and BPR and craft an optimal targeting rule, which maximizes algorithms’ benefits and minimizes their negative effects for the sharing platform.

**Bio:** Xueming Luo is the Charles Gilliland Distinguished Chair Professor of Marketing, Professor of Strategy and Management Information Systems, and Founder/ Director of the Global Center for big data in mobile analytics in the Fox School of Business at Temple University. He is a thought leader in mobile marketing, customer analytics, digital innovations, sharing economy platforms, and social responsibility strategies with machine learning, big data, and large-scale field experiments. He specializes on how engineering models and field experimentation can contribute to customer insights, marketing analytics, and business strategies. His current research focuses on mobile customer analytics, deep learning for personalized promotions, competitive pricing, omnichannel, social media networks advertising, artificial intelligence and platform algorithms, and financial value of customer metrics. Xueming has worked with leading global companies in mobile communications, banking, retailing, health care, pharmaceutical, and petroleum industries. His work has been featured by most top ranking journals in Marketing, Strategy, Information Systems, and Management, as well as popular trade press such as the Wall Street Journal, ScienceDaily, Forbes, Financial Times, Harvard Business Review, MIT Sloan Management Review, and others.