

2016 - 2017

**DISTINGUISHED  
SPEAKER SERIES**



**DR. YAFENG YIN**

Dr. Yafeng Yin is a Professor at Department of Civil and Environmental Engineering, University of Michigan. He works in the area of transportation systems analysis and modeling, and has published over 90 refereed papers in leading academic journals. One of his papers won the 2016 Stella Dafermos Best Paper Award and the Ryuichi Kitamura Paper Award from Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine. Dr. Yin is the Editor-in-Chief of Transportation Research Part C: Emerging Technologies and Associate Editor of Transportation Science. He is a member of Transportation Network Modeling Committee, Transportation Economics Committee, and International Cooperation Committee of Transportation Research Board. Dr. Yin received his Ph.D. from the University of Tokyo, Japan in 2002, his master's and bachelor's degrees from Tsinghua University, Beijing, China in 1996 and 1994 respectively. Prior to his current appointment at the University of Michigan, he was a faculty member at University of Florida between 2005 and 2016. He worked as a postdoctoral researcher and then assistant research engineer at University of California at Berkeley between 2002 and 2005. Between 1996 and 1999, he was a lecturer at Tsinghua University.



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## **MODELING AND ANALYSIS OF DYNAMIC PRICING OF RIDE-SOURCING SERVICES**

### **YAFENG YIN**

Professor at Department of Civil and Environmental Engineering, University of Michigan

**Friday, April 14, 2017, Noon-1 p.m.**

**Hamburg Hall 2003** Lunch will be provided.

Ride-sourcing companies such as Uber, Lyft and Didi Chuxing are transforming the way people travel in cities. The services these companies offer have enjoyed huge success but also created many controversies. One of them centered on dynamic (surge) pricing. In this talk, we present an aggregate, equilibrium modeling framework for ride-sourcing markets with a focus on evaluating temporal and spatial effects of dynamic pricing. Our modeling framework features the equilibration of demand and supply, while explicitly capturing the advanced matching technology that a ride-sourcing platform adopts to match customers and drivers. The framework can be tailored to addressing key modeling considerations in different dimensions such as the spatial distribution of vacant vehicles and drivers' work scheduling behaviors. The tradeoffs in the welfare of different market players under dynamic pricing and possible management policies will be discussed based on the equilibrium outcomes.