

### **Connecting E-hailing to Mass Transit Platform**

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Despite their strong appeal, the likes of Uber and Bridj still largely rely on the niche market of door-to-door services. To scale up and succeed as a mass transport platform, greater ride consolidation (both temporally and spatially) and tradeoff between efficiency and level-of-service must be considered. One idea is to integrate e-hailing services into public transportation networks by using e-hailing as a demand-responsive feeder for existing transit service. The purpose of this talk is to explore and analyze design options for such an integration. The main question asked here is how a transit operator can best allocate its resources to fixed-route and e-hailing services in order to meet demand. It is worth noting that the current line of thinking about integration appears to occur mainly in one direction, where e-hailing services are matched against the operations of fixed-route services. In contrast, the premise of our approach is that significant improvement in system efficiency can only be gained when the design and operation of both services are tightly coordinated. In essence, this means that the fixed-route services have to be re-designed in light of enhanced accessibility associated with e-hailing.

Dr. Marco Nie is currently an Associate Professor of Civil and Environmental Engineering at Northwestern University. He received his B.S. in Structural Engineering from Tsinghua University, his M.S. from National University of Singapore and his Ph.D. from the University of California, Davis. Dr. Nie's research covers a variety of topics in the areas of transportation systems analysis, sustainable transportation, transportation economics and traffic flow theory and simulation. Dr. Nie is currently a member of the TRB committees on Transportation Network Modeling (ADB30) and Traffic Flow Theory and Characteristics (AHB45). He also serves as an Associate Editor for Transportation Science, an Area Editor for Networks and Spatial Economics, and is a member of the Editorial Advisory Board for Transportmetrica-B and Transportation Research Part B. Dr. Nie's research has been supported by National Science Foundation, Transportation Research Board, US Department of Transportation, US Department of Energy, and Illinois Department of Transportation.

**Thursday, October 27, 2016**  
**CEE Conference Room A230**  
**4:00 p.m. – 5:00 p.m.**