# TEXAS
## TRANSPORTATION

# ANALYZING AND OPTIMIZING SHARED MOBILITY FLEET IMPACTS



Ridesourcing fleets such as Uber & Lyft enable activities, but the air emissions and traffic they create are unpriced externalities that may constitute a market failure. This presentation summarizes three studies of that market failure and potential policy responses. One study applies optimization to fleet powertrain decisions and vehicle dispatch to assess whether Uber & Lyft should use more electric vehicles for the social good. Similarly, the second study asks whether fleets should pool more riders into shared rides for the social good using a city-scale ride matching optimization. The third study applies econometrics to assess whether Chicago's 2020 downtown congestion charge met its goals of reducing solo rides and increasing shared rides. These studies highlight potential roles of public policy to improve shared transportation outcomes.

## MATTHEW BRUCHON

### POSTDOCTORAL RESEARCHER AT CARNEGIE MELLON UNIVERSITY

Matt Bruchon is a postdoctoral researcher in Carnegie Mellon University's Vehicle Electrification Group, where he completed a PhD in Engineering and Public Policy. He investigates the social impacts of transportation and energy use and assesses policy interventions using optimization, econometrics, and machine learning. Prior to this, he completed MS degrees in Technology & Policy and in Electrical Engineering & Computer Science at MIT. He also has worked as a machine learning consultant for federal government and private sector clients. .

.

**WHEN:**
## April 12th, 2022
## 1:00pm - 2:00pm

**LOCATION:**
## ECJ 3.406



*Add to calendar*