



**Summer Program on Transportation Statistics  
August 14-18, 2017**

**Lecture:** *Modeling the Impact of Driverless Cars on Traffic and Parking*

**Speaker:** Galen Reeves

**Abstract:**

We explore some potential tradeoffs for parking and traffic in urban settings with driverless cars. Suppose that a driverless car could drop off passengers at a desired destination and then park in a remote location that is less crowded. While such a strategy could reduce the parking load, it would also increase congestion on the roads. To understand the overall impact, we introduce an asymmetric simple exclusion process (ASEP) to model the interaction between through traffic and parking traffic. By focusing on the steady state behavior, we are able to characterize achievable rate regions based on the number of the vehicles and their behaviors.