My Research Background

• General problems that I am interested:

  • decision making under uncertainty - resilient infrastructure planning/design; traffic management/operation in stochastic a network

  • data acquisition, integration, and correction - where to collect data in a network to ensure better system identification quality; how to infer global network state based on heterogeneous data pieces
Potential of CAVs

I am confident in technology advancement, but I am not sure…

• will CAV technology be a solution to many of the transportation-related problems that we currently face?

• maybe CAVs will serve only as one of the many modes in an urban transportation system.
Some Worthy Research Directions

• Address data issues

• Resilient control methods that can adapt to disruptions

• Effective coordination among decentralized decision entities

These are fundamental research questions that a successful autonomous transportation system will rely on, but have much broader applications in smart and resilient infrastructure systems beyond autonomous driving.