Self-Driving Cars: Technology and Ethics
Session Co-chairs: Christoffer Heckman, University of Colorado at Boulder, and Hae Jong Seo, Nvidia

Self-driving cars are already taking to the roads, but the technology behind them is still far from fully understood or developed. The challenges ahead for researchers and industry are complex. To overcome them, scientific and engineering breakthroughs combined with fundamental changes in how the public perceives transportation as a service are required. The potential effects on infrastructure, the economy, and society are challenging to quantify due to the number of ways transportation factors into daily life. In response to recent high-profile disasters involving self-driving vehicles including those that have led to loss of life, there has been an intensified focus on these vehicles' capabilities. Simultaneously, the ethical implications of handing off safety-critical applications to increasingly sophisticated autonomy algorithms has become the subject of intense debate.

In this session, our first speaker, TaeEun Choe (Baidu), will introduce the concept of self-driving vehicles and how they are being developed at scale. Then, JianXiong Xiao (AutoX Inc.) will discuss how academics and startups are participating in the growing technological boom that has been commensurate with these vehicles' development. Next, John Basl (Northeastern) will give a detailed discussion as to the conversations in philosophy and ethics that are surrounding the aggressive development of self-driving cars and the technologies that support them. The session will close with a talk by Dorsa Sadigh (Stanford), who will talk about humans, their interactions with autonomous and intelligent systems, and the societal interactions of those interactions.