

## **Chris Urmson, “The Urban Challenge and the Promise of Autonomous Vehicles”**

The Urban Challenge was a robotic vehicle race through a simulated urban environment. Full size autonomous vehicles were required to complete a 60 mile course, while independently reasoning about other autonomous and human driven vehicles. The vehicles were required to safely handle intersections, multi-lane roads, parking lots and unusual situations. Teams from around the world attempted the competition with eleven qualifying for the final challenge.

In this talk I describe the Urban Challenge and Boss, the vehicle that won the challenge. Boss is a modified Chevy Tahoe that fuses data from many sensors to interpret the world around it and drive safely. I will highlight how Boss incorporates radar and lidar data to track moving vehicles and how this information is used. I will also speculate on the future of autonomous vehicles and the critical open challenges.