



Robotics SEMINAR

FRIDAY, October 30, 2015

6115 GATES HILLMAN CENTER

3:30-4:30 pm

This is a joint RI/FRC Seminar



Ryan Eustice

Associate Professor

University of Michigan

University of Michigan's Work Toward Autonomous Cars

ABSTRACT: Self-driving test vehicles have become a reality on roadways and there is an ever present push toward making them a consumer product in the not so distant future. In this talk, I will give an overview of some of our on-going work (in collaboration with Ford Motor Company) in full-scale automated driving. In particular, we'll look at some of our successes in high definition map building and precision localization, including our recent work in cross-modality localization using vision within a priori LIDAR maps. We'll also review our work in multipolicy decision making in dynamic environments and discuss our new unique Mcity test facility for connected and automated driving.

BIO: Ryan M. Eustice is an Associate Professor in the Department of Naval Architecture and Marine Engineering at the University of Michigan where he additionally holds joint appointments in the Department of Electrical Engineering and Computer Science, and the Department of Mechanical Engineering. He is the Director of the Perceptual Robotics Laboratory (PeRL), a mobile robotics laboratory focused on algorithm development in the areas of robotic perception, navigation, and mapping. His active research projects include applications to autonomous underwater ship hull inspection, multi-vehicle cooperative underwater navigation, benthic high-resolution mapping, and automotive active safety and self-driving capabilities. Prior to joining the University of Michigan in 2006, he was a Postdoctoral Scholar at the Dynamical Systems and Controls Lab at The Johns Hopkins University and holds a B.S. degree in Mechanical Engineering from Michigan State University (1998) and a Ph.D. in Ocean Engineering from the MIT/WHOI Joint-Program (2005). He is recipient of a NSF CAREER Award and ONR Young Investigator Award, and is an Associate Editor for IEEE Transactions on Robotics, IEEE Robotics and Automation Letters, and IEEE Journal of Oceanic Engineering. His work on self-driving cars is in cooperation with Ford Motor Company on the Next Generation Vehicle project.

Host: Michael Kaess

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