Racing Towards the Car of the Future

Professor Chris Gerdes
Associate Professor
Department of Mechanical Engineering
Stanford University

2:30 – 3:30 p.m.
Friday, March 30th
E001, Scott Lab

Bio:

Professor Gerdes' research centers on the application of dynamic modeling to problems in nonlinear control, estimation and diagnostics. Specific areas of interest include the development of driver assistance systems for lanekeeping and collision avoidance, modeling and control of novel combustion processes for IC engines and automotive drive-by-wire systems.

Prior to joining Stanford, Professor Gerdes was the project leader for vehicle dynamics at the Vehicle Systems Technology Center of Daimler-Benz Research and Technology North America. His work at Daimler focused on safety analysis and simulation-based design of heavy trucks for the Freightliner Corporation.

Abstract:

Who will be driving on the highway of the future? Will our cars do the driving while we text or will we engage in a new driving experience coupling human and machine? This talk looks at these questions through the lens of two research projects at Stanford University. In the first, we are instrumenting vintage vehicles and their drivers to gain a better understanding of the experience of driving at the limits of a car's capability and the skills required to do so. In the second project, we are using this understanding to develop Shelley, an Audi TTS capable of racing autonomously around a track like a professional race car driver. Through this work we hope to unlock some of the secrets of the best drivers and use this knowledge to design cars that can work with us to achieve peak performance or confidently take control if we desire.

Hosted by: Professor Junmin Wang; 247-7275; Wang.1381@osu.edu
For information on ME 888 seminars contact Nick Breckenridge at 292-7163 or Breckenridge.17@osu.edu