

**MECHANICAL ENGINEERING DEPARTMENT  
ME/IE 8773-8774**

**DESIGN & MANUFACTURING SERIES  
Topic: TRANSPORTATION  
Hosts: Rajesh Rajamani and Max Donath**

**Information-Rich Vehicular Safety System**

by

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**Wednesday, May 3, 2006**

**3:30 p.m.**

**Room 1130 ME**

**Coffee and refreshments will be available at 3:15 p.m. in Room 1130 ME before the seminar**

**ABSTRACT** — The convergence of control, communications, and computation is profoundly impacting the future of automobiles. Wireless spectrum has recently been allocated for vehicle-to-vehicle safety applications, spawning considerable research and standardization activity. Cooperative, distributed safety applications are under development involving car makers and governments in Japan, US, and the EU. On-board computational power makes complex risk-assessment and advice possible in real-time. This talk explores the what, why, and how of information-rich vehicular systems, with an emphasis on distributed vehicle safety systems leveraging wireless communications.

**BIO** — **Ken Laberteaux** is a Principal Research Engineer for the Toyota Technical Center in Ann Arbor, MI. Ken's research focus is information-rich vehicular safety systems, focusing on architecture and protocol design for vehicle-to-vehicle and vehicle-to-roadside wireless communication. He is one of the founders and two-year (2004, 2005) General Co-Chair of the "Vehicular Adhoc Networks" (VANET) workshop, a highly-selective, international research workshop. Ken also serves on the Editorial Board of "Transportation Research: Emerging Technologies" journal, as well as several other technical review responsibilities. In addition, Ken serves as Toyota's technical lead for various ITS standards efforts and multi-company demonstration projects.

Before joining Toyota, Ken spent ten years as a researcher at the Tellabs Research Center, a leading North American telecommunications lab. While working full-time at Tellabs, Ken earned his M.S. (1996) and Ph.D. (2000) degrees in Electrical Engineering from the University of Notre Dame, focusing on adaptive control for communications.

Informal Faculty Luncheon: Wednesday, May 3, 2006, 12:00 noon. Meet in 1100 ME and walk to lunch with other faculty. Dr. Laberteaux will be able to attend.