

2011-2012

Graduate Seminar Series

The Department of Mechanical Engineering – Engineering Mechanics

Proudly Presents

Assistant Professor Birsen Donmez

**Director of the Human Factors and Applied Statistics Laboratory (HFASt)
Mechanical and Industrial Engineering Department
University of Toronto**



Birsen Donmez is an assistant professor at the University of Toronto, Mechanical and Industrial Engineering Department and the director of the Human Factors and Applied Statistics Laboratory (HFASt). She also holds a research fellow position at the Massachusetts Institute of Technology (MIT) AgeLab. Dr. Donmez received her B.S. in mechanical engineering from Bogazici University in 2001, her M.S. (2004) and Ph.D. (2007) in industrial engineering, and her M.S. in statistics (2007) from the University of Iowa. Before joining the University of Toronto faculty, she spent two years as a postdoctoral associate at the Humans and Automation Laboratory at MIT.

Dr. Donmez's research interests are centered on understanding and improving human behavior and performance in multi-task and complex situations, using a wide range of statistical techniques. She is particularly interested in designing in-vehicle systems and feedback mechanisms that enhance driver performance, behavior, and satisfaction as well as building statistical models to identify vehicular crash risk factors. She also has an interest in human-automation interaction as it relates to operator workload and attention, decision support design, and metric selection methodologies.

Thursday, Dec. 1, 2011

4:00 – 5:00 p.m.

Room 112, MEEM

Lane changing and lane choice across different age groups under multiple levels of cognitive demand

Previous research suggests that drivers change lanes less frequently during periods of heightened cognitive load. However, lane changing behavior of different age groups under varying levels of cognitive demand is not well understood. Moreover, the majority of studies which have evaluated lane changing behavior under cognitive workload have been conducted in driving simulators. Consequently, it is unclear if the patterns observed in these simulation studies carry over to field driving. In this talk, I will present the results of an on-road study in which three age groups (20-29, 40-49, and 60-69) were monitored in an instrumented vehicle under varying levels of cognitive demand to determine the effects of age and cognitive demand on lane choice and lane changing behavior.