

## **CE 890 Graduate Seminar**

**SPEAKER:** Nishitha Bezwada (Dr. Dissanayake's M.S. student)

**TOPIC:** "Characteristics and Contributory causes for Fatal Truck Crashes in the United States"

**DATE:** September 9, 2009

**TIME:** 4:00 p.m. (refreshments at 3:45 p.m.)

**PLACE:** 2144 Fiedler Hall

### **ABSTRACT**

One-ninth of all traffic fatalities in the United States have resulted from large trucks in the past five years although trucks contributed to only 3% of the registered vehicles and 7% of the vehicle miles travelled. This contrasting proportion indicates that truck crashes in general tend to be more severe than other crashes though they constitute to a smaller sector of the vehicles on roads. To study this issue, fatal crash data procured from the Fatality Analysis Reporting System (FARS) was used to analyze the characteristics and factors contributing to truck involved crashes. Driver, vehicle and crash related contributory factors were identified and as an extension the likelihood of occurrence of these factors in truck involved crashes with respect to non-truck crashes was evaluated using Bayesian Statistical approach. The likelihood ratios for factors like stopped or unattended vehicles or improper following have greater probability in truck crashes than in non-truck crashes. Other factors such as cellular usage, failure to yield right of way, inattentiveness and failure to obey traffic rules also have a greater probability in truck crashes. Inadequate warning signs and poor shoulder conditions were also found to have greater predominance in contributing to truck crashes than non-truck crashes.

Several other factors have been observed for the better understanding of the characteristics and contributory factors for fatal truck crashes. By addressing these factors through the implementation of appropriate remedial measures the overall truck crash rate can be reduced, which can help in improving the overall safety of the transportation system.