INSTITUTE OF TRANSPORTATION STUDIES | UCIrvine

# SEMINAR

**Thursday, July 17, 2008**

**10:00 am – 11:30 am**

**ITS Seminar Room 4080 AIR Building**

**10:00 am: Refreshments will be served**

**10:30 am – 11:30 am: Seminar**

## HARNESSING WIRELESS COMMUNICATIONS TO IMPROVE SURFACE TRANSPORTATION

**Dr. Brian L. Smith**
**University of Virginia**
**Department of Civil and Environmental Engineering**
**Center for Transportation Studies**

**ABSTRACT**

Advances in wireless communications have significantly impacted the everyday life of individuals. This has already had an impact in transportation – simply consider, for example, the proliferation of navigation systems, and the problem of driver inattention due to the use of wireless devices (as addressed by the new California law banning the use of cellular phone handsets while driving). A significant challenge to the transportation engineering community is to harness the capabilities provided by wireless communications to move beyond traveler "convenience" applications, to create better system operations tools to provide improved mobility. At a fundamental level, wireless communications provides transportation engineers two critical capabilities that offer high potential.

(1) The ability to collect system status data over links as opposed to points.
(2) The ability to exchange data with targeted, mobile vehicles.

This seminar will detail research and findings in three emerging transportation areas supported by wireless communications: probe-based traffic monitoring, managed lanes, and vehicle infrastructure integration (VII).

*Dr. Brian Smith is an Associate Professor of Civil Engineering at the University of Virginia, specializing in transportation systems engineering. Dr. Smith is also the university director of the Smart Travel Laboratory. His research focuses on intelligent transportation systems (ITS), particularly in advanced transportation management. Dr. Smith has published ITS-related research in the areas of vehicle infrastructure integration, probe-based traffic monitoring, statistical modeling, traffic flow theory, data mining, geographic information systems (GIS), and artificial intelligence.*