

SEMINAR

Co-Sponsored by the University of California Transportation Center (UCTC)

**Monday, October 10, 2011
2:30 – 3:30 pm**

Seminar Room 4080 AIR Building

TRANSPORTATION SYSTEMS AND EXTREME WEATHER EVENTS

Kenneth Kuhn

**Department of Civil and Natural Resources Engineering
University of Canterbury**

This presentation will describe ongoing research to analyze the impacts of extreme weather (and other) events on transportation systems and to develop decision support tools for system operators. The Desert Road in New Zealand, prone to snowy and icy conditions, volcanic eruptions, lahars, and seismic events, will be used as a case study. The recent Christchurch earthquakes and their impact on transport will also be discussed. The presentation will also examine opportunities for providing decision support to pilots, airlines, and air traffic controllers during periods of convective weather. One of the themes of the presentation will be the motivation for, as well as the setup and solution of, multicriteria transportation system management problems. Often overlooked objectives of such a problem include minimizing risk, inequity, and environmental impacts. There will also be some discussion of the importance of simulation for managing road networks during extreme weather events and the danger of taking simulation results at face value, particularly in aviation systems research.

Kenneth Kuhn is a Lecturer in the Department of Civil and Natural Resources Engineering at the University of Canterbury in Christchurch, New Zealand. His research interests include infrastructure management, logistics and supply chain management, and aviation systems. Prior to moving to New Zealand, Kenneth worked for two years for the National Aeronautics and Space Administration in California. He graduated from UC Berkeley with a Ph.D. in Civil Engineering in 2006, having written a dissertation under the supervision of Professor Samer Madanat.