

The Department of Electrical and Computer Engineering at Colorado State University is pleased to present a seminar by

**Dr. Timothy X Brown, Associate Professor, Interdisciplinary Telecommunications, Electrical and Computer Engineering, University of Colorado, Boulder**

**Title: “The Role of Controlled Mobility in Wireless Networks”**

**Monday, February 19, from 4:10 to 5:10pm, Engineering Building, Room B101**

**Abstract:** Traditional wireless network models assume that node mobility is exogenous to communication. We consider networks which can move helper nodes to support communication. How can such controlled mobility be exploited and what are its limits? We will discuss a framework for communication that smoothly transitions from direct communication, communication through positioned helper relays, to helpers that physically carry information. We describe these different modes of communication, the conditions under which each mode is used, and the performance in the limit of infinite helpers. These results have several implications to standard networking including point-to-multipoint communication and multiple access. We describe our work with unmanned aircraft to implement this type of communication for sensor data collection and for delay tolerant networking.

**Short Bio:** Timothy X Brown received his B.S. in physics from Pennsylvania State University and his Ph.D. in electrical engineering from California Institute of Technology in 1990 when he joined the Jet Propulsion Lab. In 1992 he joined Bell Communications Research. Since 1995 he has had a joint appointment with the Department of Electrical and Computer Engineering and the Interdisciplinary Telecommunications Program at the University of Colorado, Boulder. He is currently an Associate Professor. His research interests include adaptive network control, wireless communications systems, and spectrum policy. He is a recipient of the NSF CAREER Award. In 2003 he was chosen the Global Wireless Education Consortium's (GWEC) wireless educator of the year.

Refreshments will be served.

Please contact Prof. Branislav Notaros, [notaros@colostate.edu](mailto:notaros@colostate.edu), with any questions.