# Spring 2006 ETCS Colloquium Series

Monday, March 27, 2006
12:00 – 1:15 PM
KT 146

ALL FACULTY, STAFF, STUDENTS AND COMMUNITY INDIVIDUALS ARE INVITED.

## Enabling Communication in Unusual Environments
### *– Challenges and Applications of Delay Tolerant Networks*

BY

ASSISTANT PROFESSOR CHAO CHEN

**Abstract:** Delay Tolerant Networks (DTNs) refer to a wide range of challenged networks where network partitioning is frequent and delay can be tolerated. Examples of DTNs include deep-space satellite networks, military ad hoc networks in battlefield, sensor networks with energy constraint, and nomadic community networks. The DTNs are very different from the traditional Internet where the latter has some well-known assumptions: continuous network connectivity, reasonably low propagation delay, and reliable packet transmission. In consequence, the existing protocols will not be able to handle the data communication in DTNs. New protocols and algorithms need to be developed. In this presentation, we provide an overview of the current state of the art of DTNs, including the challenges and applications of DTNs, and proposed solutions for different types of DTNs. Open research issues in this area will be pointed out as well.

**Biography:** Dr. Chen received her Bachelor of Engineering and Master of Engineering degrees from Shanghai Jiao Tong University, Shanghai, China in July 1998 and April 2001. She then received the Master of Science and Ph.D. degrees from Georgia Institute of Technology in December 2003 and August 2005, respectively. She has been a member of the IPFW Department of Engineering since August 2005. Dr. Chen's research interests focus on wireless communication networks, including mobile ad hoc networks, sensor networks, and space-based communication networks.

**Pizza and drinks will be furnished, compliments of Dean Voland.**

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