

92846 CSCI-6965-01 Special Topics on WIRELESS AD HOC NETWORKS
- Spring 2008
W 10:00-10:50AM, LOW 3112

Description: This is a course designed for graduate students or senior undergraduate students who are with computer networks background and would like to study the fundamental disciplines as well as state-of-the-art technologies in wireless ad hoc networks. It is a research-oriented course. The goal is to provide students with a broad perspective on the research work in wireless ad hoc networks, and in the process to lead them toward exploring their own research experiences. Addition to the introduction of the active research issues in the area, this course will focus on several special topics, such as broadcasting and topology control in ad hoc networks.

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Office Hours: By appointment.

Reference Books:

1. Mobile Ad Hoc Networking, S. Basagni, M. Conti, S. Giordano, I. Stojmenovic, eds., IEEE Press/Wiley, August 2004.
2. Handbook of Theoretical and Algorithmic Aspects of Ad Hoc, Sensor, and Peer-to-Peer Networks, J. Wu, Auerbach Publications, 2006.

Objectives:

1. To enhance the students' problem solving abilities.
2. To provide a working knowledge of localized algorithm in wireless ad hoc networks.
3. To present students the most popular research topics and existing solutions in this field.
4. To get students familiar with the network simulations tools.

Prerequisites by Topics:

Data Structures, Discrete Math, Familiar with C or C++ programming.

Topics:

1. Introduction of mobile ad hoc networks and wireless sensor networks
2. Localized algorithm in wireless ad hoc networks.
3. Broadcasting in wireless ad hoc networks.
4. Coordination and connectivity issues.
5. Network simulations and tools.
6. New trends in this field.

Grading policy:

1. In class presentation: 50%
2. Final (report or project): 50%.

Other information (Please take the time to read the documentation. You are responsible for the information outlined in it):

1. Cheating: Students are required to adhere to the policy on academic irregularities contained in the student handbook. Cheating will not be tolerated in this class. All project assignments are to be the individual work of each student and are not a collaborative effort. If some assignments are substantially equivalent, all involved parties will be punished to the fullest extent, up to and including assignment of a failing grade for the course.

2. Penalty for late submission of homework and project: Assignments submitted after the due date will be subject to a penalty of up to 5 points per day late, up to a maximum of 50%.

3. Attendance policy and missed tests: It is the students' responsibility to attend each and every class, but if for some reason he or she cannot attend, he or she is still responsible for all material presented in class. No makeup will be given, except with documentation from a Doctor. Special arrangements for situations involving business travel should be made 2 weeks in advance.

5. Course information: All information about this course will be posted on the instructor's webpage. Please visit it occasionally.