CSE 597: Advanced Topics in Wireless Networks and Mobile Computing

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Office Hours: TR 3:15 - 4:15 PM  
Class Web page: http://www.cse.psu.edu/~gcao/teach/597

Course Summary: This course will cover recent progresses in the field of wireless networks and mobile computing, especially on topics related to smartphones. Through this course, students will learn both fundamentals and applications of wireless networks and mobile computing, and obtain hands-on experiences through research projects (e.g., protocol design, wireless and mobile device development). The course will also help students understand the challenges and opportunities, and identify potential research problems in this field.

Prerequisite: CSE 514

Textbook: There is no textbook for the course. Lecture notes, handouts, and research papers will be distributed during the class.

Course Outline:

1. Wireless networks  
   - basic routing protocols for wireless networks  
   - power saving techniques  
   - disruption tolerant networks  
   - security and privacy issues
2. Vehicular networks and applications
3. Mobile crowdsourcing
4. Mobile cloud and edge computing
5. Activity recognition
6. Mobile video

Course Grading:

- Exam: 20%
- Assignment: 20%
- Class participation: 15%
- Course project: 45%

Academic Integrity Statement: Dishonesty of any kind will not be tolerated in this course. Dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Students who are found to be dishonest will receive academic sanctions and will be reported to the University (see Senate Policy G-9). The CSE Department has its statement on Academic Integrity (http://www.eecs.psu.edu/students/resources/EECS-CSE-Academic-Integrity.aspx)

Accessibility: Penn State welcomes students with disabilities into the University’s educational programs (see http://equity.psu.edu/student-disability-resources)

Counseling & Psychological Services (CAPS): Students who experience personal issues that interfere with their academic performance can seek assistance from CAPS center (http://studentaffairs.psu.edu/counseling).