Course: EECS4070
Term: Summer 2020
Topic title: Introduction to Mobile Ad Hoc Networks
Supervisor name (email): Suprakash Datta (datta@eecs.yorku.ca)
Student name: Sadman Sakib
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Topic Description and Course Learning Outcomes

This course is an upper year introduction to Mobile Ad Hoc Networks or MANETs. This topic is not covered in depth in our undergraduate courses. However the area is very important because of the work on the Internet of Things in general and Vehicular Networks in particular.

Upon completion of this course the student will:

1. Describe the basic problems in MANETs
2. Explain the reasons why many problems solved in wired networks need to be solved again for MANETs
3. Critique existing work in the area
4. Discuss emerging areas like IoT and vehicular networks

Background Requirements

Prerequisite courses: EECS 3214.

Readings

The required text is Algorithms and Protocols for Wireless, Mobile Ad Hoc Networks, Boukerche and Azzedine, John Wiley & Sons, 2009. The text is available online from the York University Libraries. We will cover most of the book, leaving out Ch 11 and 12 (power control in MANETs).

The student will also read the following article.

M. Kamel, W. Hamouda and A. Youssef, "Ultra-Dense Networks: A Survey," in IEEE Communications Surveys & Tutorials, vol. 18, no. 4, pp. 2522-2545, Fourth quarter 2016

Evaluation

The grades breakdown is as follows:

Weekly meetings: 40%

Survey paper 1 (on an area of the student's choice), due July 10: 30%

Survey paper 2 (on an area of the student's choice): 30%.

The weekly meetings and final presentation will be scored on depth of knowledge demonstrated. Each survey paper should be 6-10 pages of single spaced 12-point font text. The survey papers will be graded on clarity, depth of knowledge and extent of coverage of the area.

Schedule

The student will meet with the supervisor weekly via video conferencing. Each week, he will report on the assigned readings and answer questions asked by the supervisor.

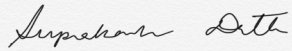Survey paper 1 is due July 10.

Survey paper 2 is due at the end of the term.

Signatures

Student

Supervisor

Course Coordinator