CSC 7290: Advanced Computer Networking
Winter 2015

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Class reference number: 28026 (web section: 28027)
Class timings: MW 3:00pm-4:20pm
Class webpage: http://www.cs.wayne.edu/~hzhang/courses/7290b/7290b.html

Overview

This course is designed for students who are interested in the foundation, algorithms, and systems techniques for network design and optimization. Topics span three broad areas: 1) Foundation of network modeling and optimization: linear programming, mixed-integer programming, stochastic heuristic methods, convex programming, multi-commodity flow optimization, etc; 2) Case studies of classical network design problems: location and topological design, shortest-path routing, fairness, network resilience, etc; 3) Case studies of emerging network design problems: network design problems in vehicular networks, sensor networks, and wireless networks.

In short, the objective of this course is to help students understand the foundational principles and techniques of network design and optimization, to help students appreciate both classical and emerging network design problems, and to build up students’ capability in enhancing the state of the art in computer networking.

Prerequisites

Basic knowledge of computer networks (e.g., materials covered in CSC 4992/6290 or equivalent), calculus, linear algebra. Or consent of instructor.

For more information, please visit the class webpage or contact Hongwei Zhang (hongwei@wayne.edu).