Stanford University
Departments of Mathematics and Statistics

PROBABILITY SEMINAR

4:15pm, Monday, November 12, 2012
Sequoia Hall Room 200
Cookies served at 3:45pm, 1st Floor Lounge.

Speaker: Devavrat Shah, LIDS, Department of EECS, MIT

Title: Queue-size scaling in switched networks

Abstract:
We consider a switched (queueing) network in which there are constraints on which queues may be served simultaneously; such networks have been used to effectively model input-queued switches, wireless networks and more recently data centers. The scheduling policy for such a network specifies which queues to serve at any point in time, based on the current state or past history of the system. Designing a scheduling policy with optimal average queue-size for switched network has been a question of interest for a while now. As the main result, we shall discuss a new class of online scheduling policies that achieve optimal scaling for average queue-size for a class of switched networks including input-queued switches.

This is joint work with Neil Walton (University of Amsterdam) and Yuan Zhong (UC Berkeley).