Welcome to CMPSCI 653

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College of Information & Computer Sciences
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Course Goals

Advanced, fundamental networking principles

- foundational material: long half life
- mix of theory and practice
- a second course: i.e., assumes a first course
Course Topics

- **review**: networking review
- **common themes**: control/data plane separation, signaling, indirection, virtualization, multiplexing, randomization, scalability, optimization
- **routers and routing**: router architecture, scheduling, routing, traffic engineering
- **network control**: congestion control, TCP
- **content centric networking**: CDNs, names vs addresses, network caches
- **wireless networking**: physical layer and how it affects networking
Course mechanics

- class www site: www-net.cs.umass.edu/cs653
- class notes: posted on www site
  - suggestion: print-and-annotate
  - class video on web site also
- textbook: none
  - papers, all posted on www site
  - class videos, posted on website
- TA for class: Chang Liu
Course mechanics (cont.)

- class email list: cs653@cs.umass.edu
- prereq: previous course in networking
  - some knowledge of probability, optimization theory, algorithms
- workload:
  - 5 homeworks - moodle
  - 1 midterm, 1 final
- times: MW 9:05 - 10:20, some Fridays
  - check website