CSE 498: Advanced Topics in Networking

Spring 2003
Tuesdays/Thursdays 1:10-2:25pm PL258

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http://www.cse.lehigh.edu/~brian/course/advanced-networking/
Advanced Topics in Networking

- Seminar course
- No textbook – all papers
- No exams – paper critiques (20%), presentations (20%), participation (20%), and projects (40%)

Prerequisite:
- a prior computer networks course
Topics to cover

- Peer-to-peer networks
  - architectures and implementations
- Content networking
  - Web content distribution
  - Scalable services
  - Traffic measurement and modeling
- Classic networking
  - old and new
Initial Course Approach

- Except for today, each paper will have:
  - a student presentation
    - 15 minutes max, 5 slides max
  - a student critic (devil's advocate)
    - 5 minutes to say why the paper should never have been published, or at least why it is not useful now
  - class discussion, followed by a quick vote
    - about 15 minutes
Approach, cont.

- In each class
  - we will plan to present and discuss two papers.
  - you will need to write one review/critique of the paper of your choice.
- The paper presentation and best review will be posted online.
Semester Research Project

- Individual, or groups of two (that will be asked to grade each other).
- Should be the beginning of what could be a publishable project.
- Some networking-oriented topic.
- Write a scientific paper at the end.
  - Publish as a technical report if not more.
- Present project at the end of the semester.
Why read scientific papers?

- Also, how to read scientific papers?
Why review papers?
How to write good papers?
What will networking be like:

- In ten years?
- Twenty?
- What will computers be like?
- Should they be connected using the technologies in today's Internet?
Homework

- Read meta papers for today
- Read two papers for next class
- Write one review (your choice of paper)
  - No length guidelines
  - Technical writing – clear, concise, citations, etc.
  - Assume it will be published – high quality
  - Use historical perspective when appropriate
- Turn in paper copy at next class