CSC2231: Internet Systems

http://www.cs.toronto.edu/~stefan/courses/csc2231/05au

Stefan Saroiu
Department of Computer Science
University of Toronto
What this class is about

• **A course in modern Internet systems**
  – Class discussion and paper summaries
  – Internet systems: a broad spectrum of interesting topics
    • Clusters, wide-area distributed systems (P2P), content distribution, Internet security, Web systems

• **A primer on Internet systems research**
  – Helps you read and review papers
  – Helps you understand how others evaluate your work
  – Helps you publish a piece of work
What your role in the class will be

• You have four jobs this term
  1. Read and synthesize 1 or 2 papers per class
     – Submit review two-hours before class
  2. Actively participate in class discussions
     – Come to class with questions and ideas
  3. Work on a research report
     – Write one (in pairs) and evaluate others
  4. Work on a research project
     – Leads to a publishable piece of work
What my role in the class will be

• I also have a few jobs:
  – Present the papers focusing on the take-away points
    • What’s important vs. what’s not
  – Participate in reviewing the research report
    • You are on your own for researching and writing
  – Help you with the project
    • Make sure you don’t get stuck, keep making progress
    • Seek my help
Why you should take it

• You’ll learn a lot about Internet systems
  – This is a clearly the direction in which our field is going
    • Over 50% of OSDI and SOSP papers
  – Fertile ground for research projects/Master’s thesis
    • For your project, you can benefit a lot from my time and my effort in getting you started for a thesis
    • Any of the suggested projects can turn into a thesis
  – You’ll be prepared to collaborate with sys/net researchers
  – Get first-hand experience on how others see your work
How to submit reviews

- handout
- demo
Research Report

• Form pairs
  – Deadline is on Thursday at noon!!!!

• Choose a topic (create your own one)
  – Deadline is next Monday at noon!!!!

• Start early and have fun
  – Don’t serialize reading and writing; parallelize them

• Submit report blindly to instructor <-- DUE in 1 MONTH
  – Five two-column pages (see course web page)

• Read other’s reports and write-up reviews

• Grade: 50% based on others + 50% based on instructor
Research Report Instructions

- **Describe fundamental problems in an area**
  - Constraints on practical systems
- **Rough timeline of the area**
  - Key results and developments
  - Rich playground for comparison of the approaches
- **Outline key research challenges**
  - You need to start to build this muscle

- **NO original research**
Research Project

• Form groups
  – Deadline is next Monday

• Choose a project topic (create your own one)
  – Deadline in two weeks

• Create project Web page early next month
  – Containing a “project proposal”

• Submit progress report early November
  – The goal is to make sure you’re on the right track

• Presentation early December

• Final report
Administrivia

• Class times and location
  – Mon and Thu 1pm -- 2pm in BA5256

• Office hours
  – ???

• Grades
  – Paper summaries 15%
  – Participation 10%
  – Report 25%
  – Project 50%
The topics…
Next class

• **Paper review**
  – A Case for NOW, Tom Anderson, David Culler, David Patterson, IEEE Micro, February 1995
  – Review due at 11am

• **E-mail research report teams**
  – Also due at 11am

• **Next class in Bahen room 5256!!!**