Network Programming
Languages

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Introductions
About Me

Robert Soulé
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Research on networks, languages, distributed systems, and databases

Brown
1995–1999 BA CS, Art-Semiotics

NYU
2004–2006 MS CS
2006–2012 PhD CS

Cornell
IBM
2008–2011
Data Intensive Systems group
2012–2014 Postdoc

Lugano
2014-present
Assistant Professor
About You

Hello
my name is
This Course
Overview

Seminar-style, Ph.D. level course

Goals

- Learn about research at the intersection of PL and Networking
- Develop your (technical) communication skills

Methodology

- Reading, reviewing, and discussing papers
- Lead discussions on research topics
- Small programming exercises to get “hands-on” experience
Papers
Process

- Everyone reads the papers, answers the following:
  - What is the problem and why does it matter?
  - What is the solution, and how is it new or different?
  - What are the contributions and limitations

- Write a one paragraph review (per paper)
  - One sentence summary
  - Key strengths and weaknesses
  - Anything else important to you
Process (continued)

- Submit the review by email (by 8am on day of class)
  - usi-netpl-2015sp@googlegroups.com
- Give me a hard copy if you want feedback
- Read other students’ reviews
- Come prepared to participate in class discussion
Process (continued)

- One person per week:
  - Prepares summary slides
  - Presents the papers to the class
  - Leads the discussion on the topic
Hand-On Experience
Process

- Use Mininet to simulate networks
- Use Frenetic to implement network functionality
  - *This is a research project, there will be bumps*
- Goal is to get experience and learn, not to evaluate
  - If there is something cool you want to look at, let’s do it!
Grading

- Reviews will get a 0, 1, or 2. No extensions.
  - 1 is the normal case.

- Presentations will get a 0, 1, or 2.
  - 1 is the normal case.

- Life happens.
  - Every person may miss 1 set of reviews, no questions asked.
Topics

- Networking Basics
- Software-Defined Networks
- Distributed Protocols
- Verification
- Open to other ideas
Details

Web site:


Mailing list:

usi-netpl-2015sp@googlegroups.com