Network Programming Languages

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Introductions
About Me

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

Brown
1995–1999 BA CS, Art-Semiotics

NYU
2004–2006 MS CS
2006–2012 PhD CS

Cornell
2012–2014 Postdoc

IBM
2008–2011
Data Intensive Systems group

Lugano
2014-present Assistant Professor
My Research

- **Software-defined networks**
  - Languages for expressing traffic engineering policies

- **Distributed systems**
  - Languages for describing consistency policies, gossip protocols

- **Databases**
  - Graph query optimization, streaming language optimization
About You

Hello
my name is
This Course
Overview

Goals

- Recognize when developing a language can be a useful strategy for solving a problem
- Learn about research at the intersection of PL and Networking
- Develop hands-on experience with tools

Structure (roughly)

- Half-day lecture
- Half-day programming exercises
Please write your name on the sign-in sheet every day.

PoliMi students are required to have an exam.

Exam format is yet-to-be-determined.
Schedule

- **Monday**: Introduction, OpenFlow programming
- **Tuesday**: Control plane languages
- **Wednesday**: Data plane languages
- **Thursday**: Verification tools
- **Friday**: Use-cases, Exam (for PoliMi students)
Resources

- Course web site:

- Google group:
  netpl-polimi-2015@googlegroups.com