

To discuss

- Excursion
- Schedule

## Monday

\* 9:00-9:30am Organizers welcome (Nikolaj)

- name, where from, what work on
- why are we here
  - PL to hear about networking
  - networking to hear about PL/formal methods
  - concrete use cases
- Announcements / homework
  - Excursion -- haven't decided
  - If you want to give a talk, be ready at any time and informal is fine. In fact, avoid conference-style talks! -- these tend to provide more answers than questions. Instead, ask participants to bring questions, show their current ideas and insights, not all the details.
  - **Bring an open problem on Tue**
  - **Upload abstracts**
  - **If there's something you want to hear a talk about, write it down**
  - **Debate / panel topics**

\* 9:30-10:00 Aditya Akella (Wisconsin)

abstractions for network functions

Chair: Nikolaj

\* 10:00-10:30am Swarat Chaudhuri (Rice)

network software synthesis

Chair: Nikolaj

\* 10:30-11:00am

coffee break

\* 11:00am-11:30am Arjun Guha (UMass)

machine-verified controllers

Chair: Brighten

\* 11:30-12:15pm

discussion: What are you hoping to get out of the seminar?  
Chair: Brighten

\* 12:15-2:00pm  
lunch

\* 2:00pm-2:45pm Jennifer Rexford (Princeton)  
SDN use cases and challenges  
Chair: Nate

\* 3:00 - 3:30 Chip Elliott

\* 3:30pm-4:15pm  
tea + cake

\* 4:15 - 4:35 Haagen Woesner

\* 4:35 - 5:05pm [Tim Nelson \(Brown\)](#)  
[policy analysis in Margrave](#)  
Chair: Nate

\* 4:45pm-6pm Unstructured breakout time

## Tuesday

Brighten chair...

\* 9:00am-9:45am Pamela Zave (AT&T)  
cloud computing models

\* 9:45am-10:15am Achim Brucker (SAS)  
verification challenges in industry

\* 10:15-11:00am  
coffee break

\* 11:00am-11:30am Kristin Rozier (NASA)  
verification challenges in aerospace

\* 11:30am-12:15pm  
open problems and discussion

\* 12:15pm-2:00pm  
lunch

Pamela chair . . .

\* 2:00pm-2:30pm Marco Canini (UCL)  
distributed SDN controllers

\* 2:30pm-3:00pm Cole Schlesinger (Princeton)  
next-generation SDN architectures

\* 3:00pm-3:30pm David Rosenblum (NUS)  
probabilistic model checking

\* 3:30pm-4:15pm  
tea + cake

\* 4:15pm-4:45pm  
Limin Jia  
Verifying protocols in Network Datalog

## Wednesday

\* 9:00-10:00am  
Mooly Sagiv (Tel Aviv)  
Aurojit Panda (UC Berkeley)  
verification of stateful networks

\* 10:00 - 10:30 Vijay Ganesh  
The Impact of Community Structure on SAT Solver Performance

\* 10:30-11:00  
coffee

11:00 - 11:15  
Robert Soulé, University of Lugano, CH  
Online Data Center Modeling

11:15 - 11:45 Aaron Gember  
Management Plane Analytics

11:45 - 12:15 Ratul Mahajan, Microsoft Corp. - Redmond, US  
Control plane verification: The (last?) missing link in network verification

\* 12:15-2pm  
lunch

\* 2:00pm-6:00pm  
outing

## Thursday

9:00 - 9:30 Sharon Shoham  
9:30 - 10:00 Karthik Jayaraman  
10:00 - 10:30 David Walker

10:30-11:00 Coffee

11:00 - 12:15 Discussion. Candidate topics:

- What does industry need?
- What are the right abstractions for network programming? How do you capture intent?
- How do we build decomposable control abstractions?
- How do we extract semantics from the network?
- What are the right algorithmic mechanisms for data plane verification?
- How can we bridge SDN and traditional verification, e.g. hybrid config and program-based net? ("multilingual" verification)
- Is network verification different than traditional hardware/software verification?
- Formal foundations beyond verification

12:15 - 14:00 Lunch

14:00 - 14:15 Panagotios  
14:15 - 14:30 Yifei  
14:30 - 14:45 Andrey  
14:45 - 15:00 Nuno Lopes  
15:00 - 15:30 Evgeny

15:30 - 16:00 cake

16:00 Cakeout session

## Friday

9:30 - 10:00 Pavol

10:00 - 10:30 Discussion

10:30 - 11:00 coffee

11:00 - 12:15 discussion