

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