

## Program 5<sup>th</sup> Networks Training Week October 30 – November 3, 2017

### Monday October 30, 2017

- 12:00 – 12:30 Arrival
- 12:30 – 13:30 Lunch
- 13:30 – 14:30 Session 1: Optimization and control of network traffic
- Jaap Storm: Analysis of a roundabout model
  - Abishek: A novel approach to analyze unsignalized intersections: How to incorporate driver behavior and heterogeneous traffic
  - Liron Ravner: A strategic model of job arrivals to a single machine with earliness and tardiness penalties
- 14:30 – 14:40 Short break
- 14:40 – 15:40 Session 2: Network structure
- Alessandro Garavaglia: Results and open problems on citation networks
  - Debankur Mukherjee: Phase transitions of extremal cuts for random graphs
  - Margriet Oomen: Spatial populations on hierarchical graphs with seed-bank
- 15:40 – 16:00 Break
- 16:00 – 17:00 Open problem session
- 17:00 – 18:00 Research session: work in small groups
- 18:30 Dinner

### Tuesday October 31, 2017

- 07:30 – 09:00 Breakfast
- 09:00 – 10:15 Mini-course on Expansion properties of networks: Viresh Patel
- 10:15 – 10:45 Break
- 10:45 – 12:00 Mini-course on Random walks, forests and network analysis: Luca Avena
- 12:00 – 13:30 Lunch
- 13:30 – 14:50 Session 3: (Geometric) Graph Algorithms
- Jesper Nederlof: Using graph decompositions algorithmically via matrix rank
  - Astrid Pieterse: Optimal data reduction for graph coloring using low-degree polynomials
  - Bart Jansen: TBA
  - Mark de Berg: Geodesic spanners for points on a polyhedral terrain
- 14:50 – 15:20 Break
- 15:20 – 18:00 Research session: work in small groups
- 18:30 Dinner

### Wednesday November 1, 2017

- 07:30 – 09:00 Breakfast
- 09:00 – 10:15 Mini-course on Expansion properties of networks: Viresh Patel
- 10:15 – 10:45 Break
- 10:45 – 12:00 Mini-course on Random walks, forests and network analysis: Luca Avena
- 12:00 – 13:30 Lunch
- 13:30 – 14:10 Session 4: Dynamics on random graphs
- Jan Nagel: Random walks in barely supercritical random environments
  - Hakan Guldás: Mixing times for random walks on dynamic random graphs
  - Pieter Kleer: Shapley cost-sharing in clustering games on (random) graphs
- 14:10 – 14:30 Break
- 14:30 – 16:30 Research session: work in small groups
- 16:30 – 21:00 Social activity and dinner

**Thursday**      **November 2, 2017**

07:30 – 09:00      *Breakfast*  
09:00 – 10:15      Mini-course on Expansion properties of networks: Viresh Patel  
10:15 – 10:45      *Break*  
10:45 – 12:00      Mini-course on Random walks, forests and network analysis: Luca Avena  
12:00 – 13:30      *Lunch*  
13:30 – 14:50      Session 5: Queueing and more

- Matteo Sfragara: Transition time asymptotics of queue-based activation protocols in random-access networks
- Nicos Starreveld: A network of M/M/infty queues with connection failures
- Fiona Sloothaak: Cascading failures on a connected configuration model

14:50 – 15:20      *Break*  
15:20 – 18:00      Research session: work in small groups  
18:30                  *Dinner*

**Friday**              **November 3, 2017**

07:30 – 09:00      *Breakfast*  
09:00 – 10:00      Session 6: Decision making and performance analysis

- Stella Kapodistria: Decision making in a Bayesian framework
- Madelon de Kemp: Appointment scheduling
- Murtuza Ali Abidini: Performance analysis of optical networks

10:00 – 10:30      *Break*  
10:30 – 12:00      Closing session  
12:00 – 13:30      *Lunch*

**Location:**

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