

DAY 1 – WEDNESDAY 18 APRIL 2018 – LEIDEN

<u>09:30 – 10:00</u>	ARRIVAL AND RECEPTION
<u>10:00 – 10:30</u>	GENERAL INTRODUCTION, SCHEDULE AND SPEAKERS
<u>10:30 – 10:45</u>	INTRODUCTION TO NETWORKS
<u>10:45 – 11:00</u>	GROUP ACTIVITY
<u>11:00 – 11:45</u>	FIRST LECTURE – CLARA STEGEHUIS – SOCIAL NETWORKS
<u>11:45 – 12:30</u>	DISCUSSION – EXERCISES AND DISCUSS LECTURE MATERIAL
<u>12:30 – 13:30</u>	LUNCH
<u>13:30 – 14:30</u>	READING SESSION AND QUESTIONS
<u>14:30 – 15:15</u>	SECOND LECTURE – JANUSZ MEYLAHN – NEURAL NETWORKS
<u>15:15 – 15:45</u>	DISCUSSION – EXERCISES AND DISCUSS LECTURE MATERIAL
<u>15:45 – 16:15</u>	HOMEWORK ASSIGNMENT
<u>16:15 – 17:00</u>	DISCUSSION, QUESTIONS, EXPECTATIONS AND FEEDBACK, GROUP PHOTO!

DAY 2 – MONDAY 23 APRIL 2018 - AMSTERDAM

<u>09:30 – 10:00</u>	ARRIVAL AND RECEPTION
<u>10:00 – 10:15</u>	OVERVIEW OF FIRST DAY, SCHEDULE AND SPEAKERS
<u>10:15 – 10:30</u>	INTRODUCTION TO NETWORKS
<u>10:30 – 11:00</u>	DISCUSS HOMEWORK ASSIGNMENT
<u>11:00 – 11:45</u>	FIRST LECTURE – BIRGIT SOLLIE - CHEMICAL NETWORKS
<u>11:45 – 12:30</u>	DISCUSSION – EXERCISES AND DISCUSS LECTURE MATERIAL
<u>12:30 – 13:30</u>	LUNCH
<u>13:30 – 14:30</u>	READING SESSION – PRESENTATION - DISCUSSION
<u>14:30 – 15:15</u>	SECOND LECTURE – JAN-PIETER DORSMAN – MARKOV CHAIN
<u>15:15 – 15:45</u>	DISCUSSION – EXERCISES AND DISCUSS LECTURE MATERIAL
<u>15:45 – 16:15</u>	OVERVIEW OF THE EVENT, DISCUSSION AND QUESTIONS
<u>16:15 – 16:30</u>	CLOSING

Networks theory is an emerging research area which has received a lot of attention in the last years. Various fascinating phenomena can be described and understood using networks! During this two day event our goal is to present some applications of networks and the mathematics behind them!

SPEAKERS

During this two day event four speakers will share their research interests with us.

Clara Stegehuis: Clara is a PhD candidate in mathematics at the University of Technology Eindhoven. Her research focuses on mathematical models used in analysing networks. She is mostly interested in social networks and communication networks.

Janusz Meylahn: Janusz is a PhD candidate in mathematics at Leiden University. His research focuses on mathematical models used in physics and biology. His main interest lies in neural networks.

Birgit Sollie: Birgit is a PhD candidate in mathematics at the VU University Amsterdam. Her research focuses on mathematical models used in biology with emphasis in interaction networks between cells.

Jan-Pieter Dorsman: Jan-Pieter is an assistant professor at the University of Amsterdam, where he works on topics in applied probability and stochastic operations research with an emphasis in queueing theory.

All four speakers are members of the NETWORKS project (<https://www.thenetworkcenter.nl/>)!

GROUP ACTIVITY

An interactive activity to see how networks can describe real life situations!!

READING SESSION

We have prepared four short scientific papers explaining some mathematical models that appear in various fields. During the first day the students will read the papers in groups and we will discuss them all together. In the second day each group will give a short presentation about the paper they read!

HOMEWORK ASSIGNMENT

After the first day we will give a small assignment to all students and they should try to answer some questions. It is more a game than a mathematical assignment!

Location Details

Day 1

On **Wednesday 18** of April the first part of the masterclass will take place in **Leiden**, at the **Snellius Building (Niels Bohrweg 1, 2333 CA)**. The morning session will be held in room 174 and the afternoon session in room 405. The reception will be informed about the arrival of the students and there will be signs to find the room. Lunch will be provided from the program.

Travel details: The Snellius building is easily reached by bus from Leiden central station. It is next to the bus stop “Niels Bohrweg” or five minutes walking from bus stop “Universiteitsterrein”. By bike it is approximately twenty minutes from Leiden central station.

Day 2

On **Monday 23** of April the second part of the masterclass will take place in **Amsterdam**, at the **Science Park (Science Park 107, 1090 GE Amsterdam)**. More precise information concerning the lecture rooms will be provided. The reception will be informed about the arrival of the students and there will be signs to find the room. Lunch will be provided from the program.

Travel details: The Science Park is easy to reach by bus and train. There is a train station, Science Park Amsterdam, close by. It can be reached by bus from station Amsterdam Amstel (bus numbers 40 and 240). Exact information will be given to the students on the 18th of April.

We are really looking forward to this event!!

Marta Maggioni and Nicos Starreveld