

# Welcome to the **Computer Science (Joint Degree with VU)** *Meet & Ask session during the UvA Master's Week.*



We start in a few minutes.



## **Questions:**

Please only ask them in the Q&A (not in the chat).



The session is not being recorded this time.



*Some time to spare? Take a quick look at our Instagram account @uva\_science for interesting facts and activities at our Science Park. (but be back on time....)*

# Master Introduction

Computer Science, Joint Degree VU-UvA



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*program director Master CS*  
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## Your hosts today:

- Zoltan Mann
  - UvA scientific coordinator of the CS MSc program
  - Associate professor, UvA
  - z.a.mann@uva.nl
- Alban Ponse
  - Former UvA scientific coordinator of the CS MSc program
  - Associate professor, UvA
- Chih-Chieh Lin
  - Master student CS, track BDE
- Casper van Ek
  - Master student CS, track FCC

This presentation:

<https://surfdrive.surf.nl/files/index.php/s/n3b2vQEPAPqFnXF>

## Welcome to Amsterdam!

As a Computer Science student you are offered the best of two universities within a single Master program.

- ◆ Vrije Universiteit Amsterdam, Dept. of Computer Science
- ◆ University of Amsterdam, Informatics Institute

You will take courses by lecturers from both universities, at both locations (VU campus and Science Park).

# COMPUTER SCIENCE JOINT DEGREE

Joint degree: one diploma issued by both universities

Larger selection of courses

More research opportunities for graduation projects and world-class researchers at your fingertips

More of everything...

But you'll need to travel between two campuses and cope with two different administrative systems

# FACT SHEET

2 years program

120 ECTS credits

taught in English

international student population

excellent job perspective in industry (in NL and abroad)

stepping stone for a career in industry or academia

# COMPUTER SCIENCE PROGRAM

## 5 different tracks

- ◆ 5 (or 4) compulsory courses per track
- ◆ Master core (for all tracks)
- ◆ constrained choices
  - ◆ programming
  - ◆ software engineering
  - ◆ security
  - ◆ foundations
  - ◆ mathematics
  - ◆ societal context
- ◆ free choices (some courses are pre-approved)

# BIG DATA ENGINEERING (BDE)

**Focus:** How to cope with the enormous amounts of data on e.g. the Internet and social media and in companies

## Compulsory courses:

Web Services and Cloud-based Systems

Data Mining Techniques

Web Data Processing Systems

Large Scale Data Engineering





# FOUNDATIONS OF COMPUTING AND CONCURRENCY (FCC)

**Focus:** Apply formal methods in computing and concurrency

## **Compulsory courses:**

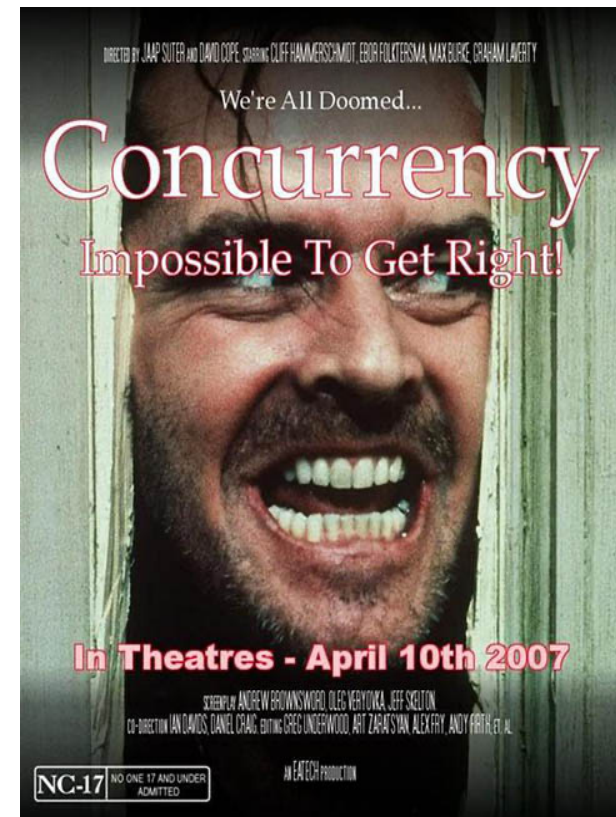
Protocol Validation

Logical Verification

Advanced Logic

Term Rewriting Systems

Distributed Algorithms



# INTERNET AND WEB TECHNOLOGY (IWT)

**Focus:** Technology for Internet and Web

**Compulsory courses:**

Advanced Computer Networks

Distributed Systems

Distributed Algorithms

Storage Systems

Web Services and Cloud-based Systems



# PARALLEL COMPUTING SYSTEMS (PCS)

**Focus:** Large-scale parallel computing  
(clusters, grids, clouds, mainframes)

## **Compulsory courses:**

Parallel System Architectures

Programming Large-scale Parallel Systems

Parallel Programming Practical

Programming Multi-core and Many-core Systems

Performance Engineering



# SOFTWARE ENGINEERING AND GREEN IT (SEG)

**Focus:** Mastering complex software systems for a sustainable digital society

**Compulsory courses:**

Green Lab

Service Oriented Design

Digital Architecture

Software Testing

Fundamentals of Adaptive Software



# MASTER CORE

Constrained choice, social context of computer science:

- ***History of Digital Cultures*** on history of computing
- ***ICT for Development*** on ICT in developing countries
- ***ICT4D in the Field***, an ICT project in a rural community
- ***E-commerce Law*** on legal issues for on-line business
- ***Entrepreneurship in AI and CS*** on starting a company

**Literature Study**

**Master Project** (30 ECTS)



# CONSTRAINED CHOICE

Ensuring breadth of each individual study program

Constrained choice modules (18-24 ECTS):

- \* *programming*
- \* *software engineering*
- \* *security*
- \* *foundations*
- \* *mathematics*

Each to be chosen from a predefined set of choices

Partially covered by your track's core

# FREE CHOICE

## **Free choice (24-30 ECTS):**

Courses from other tracks and other courses from constrained choices are pre-approved

Any course from a pre-approved list of suggestions

Other courses (at Master-level) from Computer Science, Computational Science, Artificial Intelligence, Bioinformatics, Logic, ... *(to be approved by the exam committee)*

# YOU CAN TAILOR YOUR STUDY PROGRAM

## **Do you want to develop your own study program ?**

Devise your own *free* Master program and get it approved by the exam committee

## **Want to go to industry ?**

Do your graduation project as an internship with a company (or do an *Industrial Internship* for 6 ECTS)

## **Want to go for a larger research project ?**

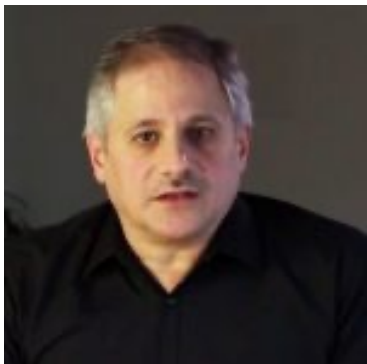
Combine *literature study, research project, and Master project* into a scientific research project of up to 42 ECTS



# Track coordinators

- **CS tracks:**

- BDE: *Dr. Adam Belloum*      [a.s.z.belloum@uva.nl](mailto:a.s.z.belloum@uva.nl)
- FCC: *Dr. Femke van Raamsdonk*      [femke@cs.vu.nl](mailto:femke@cs.vu.nl)
- IWT: *Dr. Lin Wang*      [lin.wang@vu.nl](mailto:lin.wang@vu.nl)
- PCS: *Dr. Jacopo Urbani*      [j.urbani@vu.nl](mailto:j.urbani@vu.nl)
- SEG: *Dr. Ivano Malavolta*      [i.malavolta@vu.nl](mailto:i.malavolta@vu.nl)



# DOUBLE DEGREE

Double degree programs for MSc students (e.g. GSEEM for the SEG Track)

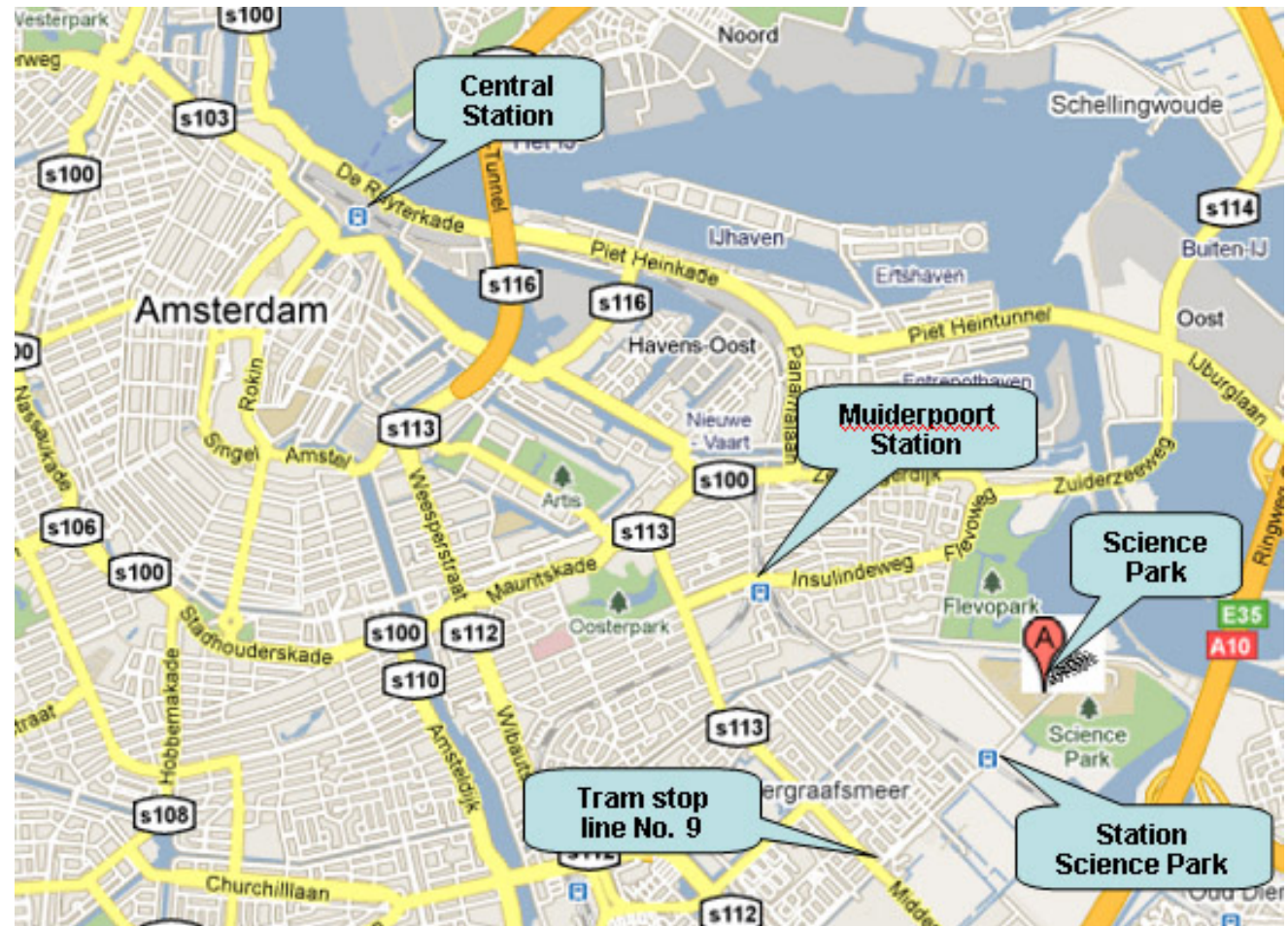
- You follow year 1 of the program at the VU
- You follow year 2 of the program at the partner university



# COURSES AT THE UNIVERSITY OF AMSTERDAM

Several courses are at Science Park

Beware to register for UvA courses and exams in time





# MSc Computer Science

## Your courses at the University of Amsterdam (UvA)

Location: SCIENCE PARK AMSTERDAM

<https://www.amsterdamsciencepark.nl/contact/getting-there/>

Course-registration@UvA (theory):

1. you will receive a UvA-net-ID from the (UvA) Central Registration Office
2. then you can register for courses via <https://datanose.nl/#masterenrol>

Following courses@UvA (practice):

1. visit UvA-classes that you want/have to; timetable at <https://rooster.uva.nl/schedule>
2. your registration is completed in 2 weeks

Contact person for your UvA-courses:

[dr. Zoltan Mann](mailto:z.a.mann@uva.nl)

[z.a.mann@uva.nl](mailto:z.a.mann@uva.nl)

