Welcome to the Master's Week!

We will start the information session shortly.

While you wait, why not have a look at instagram.com/uva_science?

UNIVERSITEIT VAN AMSTERDAM

UvA Masterweek
4 - 8 november
Let's figure it out together.

uva.nl/masterweek

Security and Network Engineering
UvA Master's Week Presentation

SNE Homepage: `www.os3.nl`
UvA Study Guide: `www.tinyurl.com/sne-uva`

Security & Network Engineering

SNE History

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- ▶ You will get to ask questions to the SNE staff and students

Network Engineering

- What is Network Engineering?

Network Engineering

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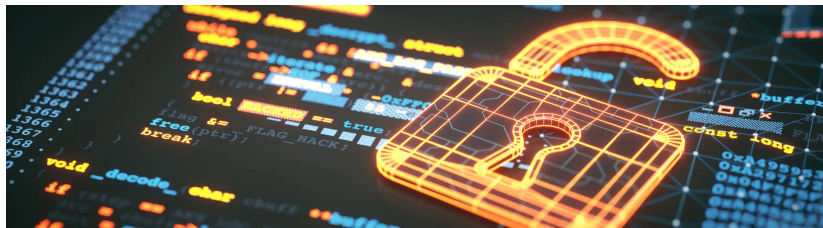

▶ Computer Networks form the entire backbone of our digital society
▶ The SNE MSc aims to teach you how to tackle the complexity of the modern, world-spanning communication infrastructure

Security Engineering

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- Secure network communications? Mathematical cryptography? Software vulnerabilities? Hardware tampering? Data privacy?

Security Engineering

- What is Security Engineering? One question, multiple answers!

- Secure network communications? Mathematical cryptography? Software vulnerabilities? Hardware tampering? Data privacy?
- Computer Security is a very fragmented subject, yet SNE aims to teach you how to navigate this turbulent field

Joining the SNE Master's

"Of course we'll make a decision ...
once we have considered the 5243 factors."

Prospective Students

Whom should consider joining the SNE?

- ▶ Bachelors of Science in Computer/Computing Science, Informatics or related field (WO)
- ▶ Bachelors of Technical Informatics or related field (Polytechnic HBO)

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- Intake procedure (written assessment + interview) is required for all students
- You need to be well motivated for this study program!

SNE Focus

What is the main focus of the SNE?

- Middle ground between abstract science and professional application
- SNE combines theory and practice with a strong focus on the applied and the professional world

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- ▶ Academic side: abstraction power, scientific knowledge, research skills
- ▶ Professional side: innovative solutions, presentation skills, collaborative abilities

Study Location

Where will I study?

- You will study in person, in the Science Park 904, located in East Amsterdam
- SNE has three physical, dedicated classrooms in the Science Park
- The location is easy to reach, even outside Amsterdam, via the 'Amsterdam Science Park' train station
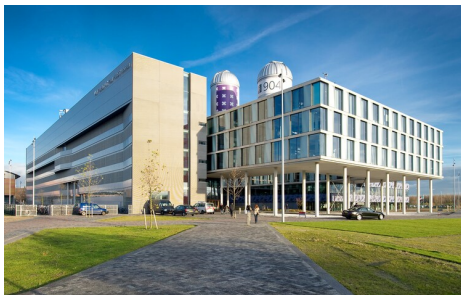
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- ▶ You will spend most time in the lecture (main) room and the lab rooms
- ▶ You will access the server room which houses servers and network devices and is directly connected to SURFnet [`www.surf.nl/en`]

Study Location

Where will I study?

- You will spend most time in the lecture (main) room and the lab rooms
- You will access the server room which houses servers and network devices and is directly connected to SURFnet [www.surf.nl/en]
- All students get their own desk, desktop PC and server to use for lectures, lab assignments and research projects
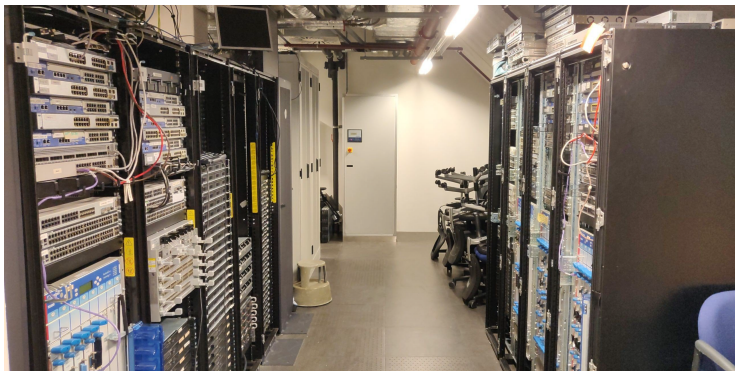
Server room

Quality Assurance

Is SNE a good study program?

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- ▶ SNE has been accredited by the NVAO (Accreditation Organisation of the Netherlands and Flanders) [`www.nvao.net/en`]

- ▶ In the "Keuzegids Masters", SNE has been ranked repeatedly as a "Top rated program" and "Best IT Master" [`www.keuzegids.nl`]

Research & Development

Is interesting research carried out in SNE?

- ▶ The SNE Master's program is backed by the SNE Research Cluster with multiple active researchers
    - ▶ SNE-MNS: MultiScale Networked Systems [www.mns-research.nl]
    - ▶ SNE-PCS: Parallel Computing Systems [www.pcs-research.nl]
    - ▶ SNE-CCI: Complex Cyber-Infrastructures [www.cci-research.nl]

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- Several ongoing Research Grants and collaborations
    - Intelligent for networks and 6G communications [www.desire6g.eu], [www.futurenetworkservices.nl]
    - NWO Gravitation for CyberSecurity [www.tinyurl.com/zk-research-grant]
    - Responsible Internet [www.catrin.nl]

Study Duration

How long is SNE and can I study part-time?

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How long is SNE and can I study part-time?

- If you decide to study full-time then the SNE is an intense 1-year study program
- If you decide to study part-time then SNE can be completed in 2 years

Career Prospects

Will I be able to find a job?

- ▶ We offer very good career perspectives
- ▶ Companies are actively scouting for SNE graduates
- ▶ The Ministry of Finance and the Hague Security Delta have identified a gap in the current job market for IT and security professionals and expect increased demand in the future [`www.tinyurl.com/hsd-report`]

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Which organizations could hire me?

- Networking organizations like AMS-IX and SURF
- Security companies like Fox-IT, Secura and Riscure
- Research organizations like UvA and NLnetLabs, RIPE NCC
- Government institutes like NCSC
- Consulting firms like KPMG, Deloitte, SUE
- Many others

SNE Curriculum

What will I study in SNE?

- ▶ Total of 7 courses, each with 6 ECTS
- ▶ The courses include examinations and group projects
- ▶ A 3-month-long research thesis for 18 ECTS

$$7 * 6 + 18 = 60 \text{ ECTS}$$

- ▶ You must decide if you study full-time (1 year) or part-time (2-years)

Weekly Schedule

How does a typical week look in SNE for a full-timer?

- **SNE has mandatory presence**
- Approx. 24 fixed work hours
  i.e. 4 days times 6 hours per day
- 24 fixed work hours
  i.e. 8 hours of lectures per week plus 16 hours of labs per week
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- Finally, SNE also includes educational (and fun!) excursions to places like
  Bletchley Park in UK, Hack.lu in Luxembourg and others

Admissions Procedure

How can I apply to the SNE?

- ▶ **Important links:**
  www.os3.nl/info/admission
  www.tinyurl.com/sne-admission

- ▶ **Important deadlines:**
  Non-EU/EEA students: January 31st, 2025
  NL/EU/EEA students: June 30th, 2025

- ▶ Register in Studielink at www.studielink.nl

- ▶ Receive your UvA-net ID and further instructions by email (check your spam folder)

- ▶ Go to www.datanose.nl, log in with your UvA-net ID and upload all necessary documents

- ▶ For admissions contact Niels Sijm – niels.sijm@os3.nl

Admissions Procedure

What is the admission procedure?

- ▶ Consists of 5 exams and an interview
- ▶ The admission depends on exam scores and interview
- ▶ Exams are organized either in our Amsterdam lab or online
- ▶ Interview is scheduled after passing all exams
- ▶ Three opportunities in total (i.e. 2 retakes)

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What are the exam topics?

- ▶ TCP/IP (multiple choice, 45 mins)
- ▶ Unix (multiple choice, 45 mins)
- ▶ Mathematics (multiple choice/fill the blanks, 1 hour)
- ▶ Python (programming exercises, 1 hour)
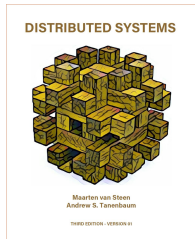- ▶ Text Analysis (summary & questions, 1.5 hours)

SNE Courses
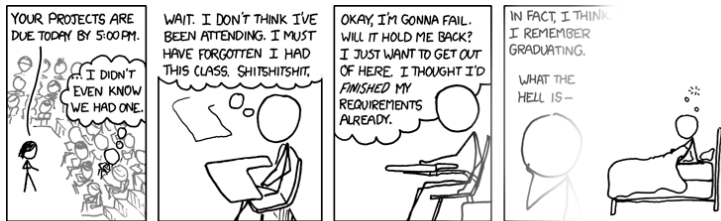
SNE Courses

- **SSN:** Security of Systems and Networks
- Jaap van Ginkel – jaap.vanginkel@os3.nl
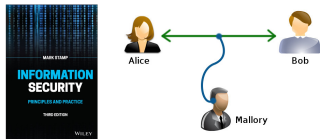
- **INR:** InterNetworking and Routing
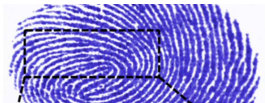- Paola Grosso – p.grosso@uva.nl, Marios Avgeris – m.avgeris@uva.nl
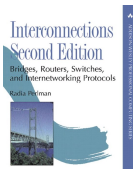
SNE Courses

- **LS:** Large Systems
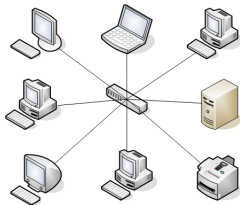- Zhiming Zhao – z.zhao@uva.nl, Shashikant Ilager – s.s.ilager@uva.nl

SNE Courses

- **CCF:** CyberCrime and Forensics
- Jaap van Ginkel – jaap.vanginkel@os3.nl

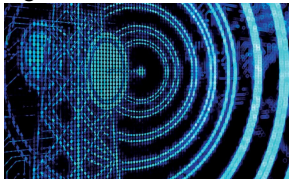- **AN:** Advanced Networking
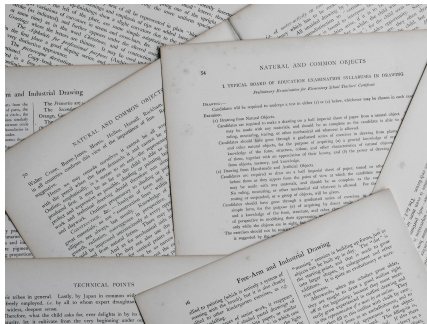- Chrysa Papagianni – c.papagianni@uva.nl

SNE Courses

- **OT:** Offensive Technologies
- Kostas Papagiannopoulos – k.papagiannopoulos@uva.nl

- **AS:** Advanced Security
- Jaap van Ginkel – jaap.vanginkel@os3.nl

SNE Courses

- 3-month Research Thesis Project
- Internal or External Supervisor – noclue@whoishere.xyz
- Francesco Regazzoni – f.regazzoni@uva.nl

SNE Staff

Feel free to contact us with questions: info@os3.nl
Feel free to drop by UvA!

- ▶ Program Director: Ana Oprescu
- ▶ Program Developer: Kostas Pagiannopoulos
- ▶ Systems Engineer & Intake Exams: Niels Sijm
- ▶ Student Representative Deniz Erim – deniz.erim@os3.nl

- ▶ Marios Avgeris
- ▶ Yuri Demchenko
- ▶ Jaap van Ginkel
- ▶ Paola Grosso
- ▶ Shashikant Ilager
- ▶ Chrysa Papagianni
- ▶ Kostas Papagiannopoulos
- ▶ Francesco Regazzoni
- ▶ Zhiming Zhao

- ▶ Finally, let's meet each other! Tell us about yourself, your interests, studies and background.