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# CENTRE FOR CYBER DEFENCE AND INFORMATION SECURITY

David Olgart, Vice Director, CDIS

Coordinator R&D Cyber Defence, Swedish Armed Forces, HQ



SWEDISH ARMED FORCES



Swedish  
Defence  
University



Swedish  
Defence  
Research  
Agency

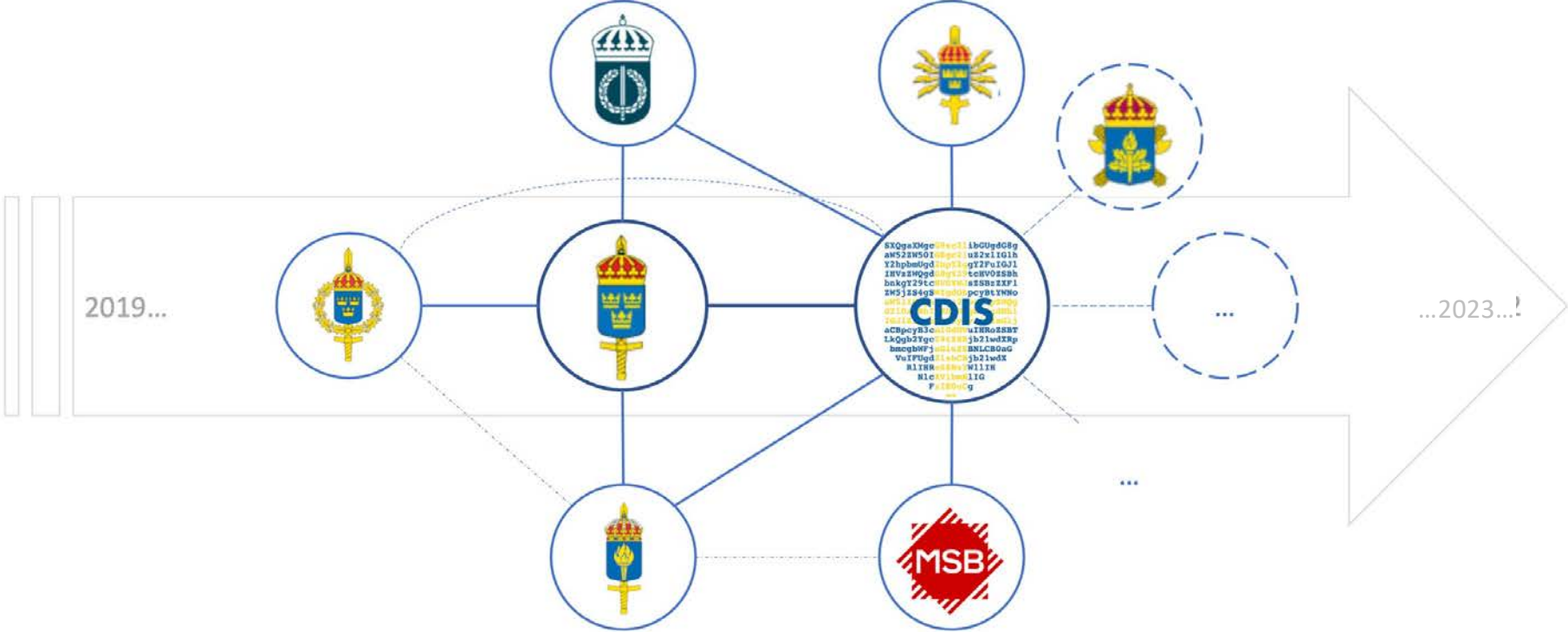


*National  
Defence Radio  
Establishment*



Swedish Civil  
Contingencies  
Agency

# CDIS Story-line



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# CENTER FOR CYBER DEFENCE AND INFORMATION SECURITY

## Researchers

PhD Stud. Annika Andreasson  
Assoc. Prof. Cyrille Artho  
Prof. Henrik Artman  
Assist. Prof. Musard Balliu  
Prof Benoit Baugry  
PhD Stud. Marcus Birgersson  
PhD Stud. Martin Brisfors Prof. Sonja Buchegger  
Docent Joel Bynielsson  
Prof. Mads Dam  
Prof. Elena Dubrova  
Prof. Mathias Ekstedt  
PhD Stud. Viktor Engström  
PhD Stud. Leon Fernandez  
Docent Ulrik Franke  
Assist. Prof. Roberto Guanciale  
PhD Stud. Joel Gärtner  
PhD Stud. Kim Hammar  
Prof. Johan Håstad  
Prof. Pontus Johnson  
Prof. Gunnar Karlsson  
PhD Stud. Henrik Karlsson  
Prof. Robert Lagerström  
Prof Martin Monperrus  
PhD Stud. Jakob Nyberg  
Prof Henrik Sandström  
Dr. Teodor Sommestad  
Prof. Rolf Stadler  
Prof Ragnar Thobaben  
Assoc. Prof. Douglas Wikström

## General assembly

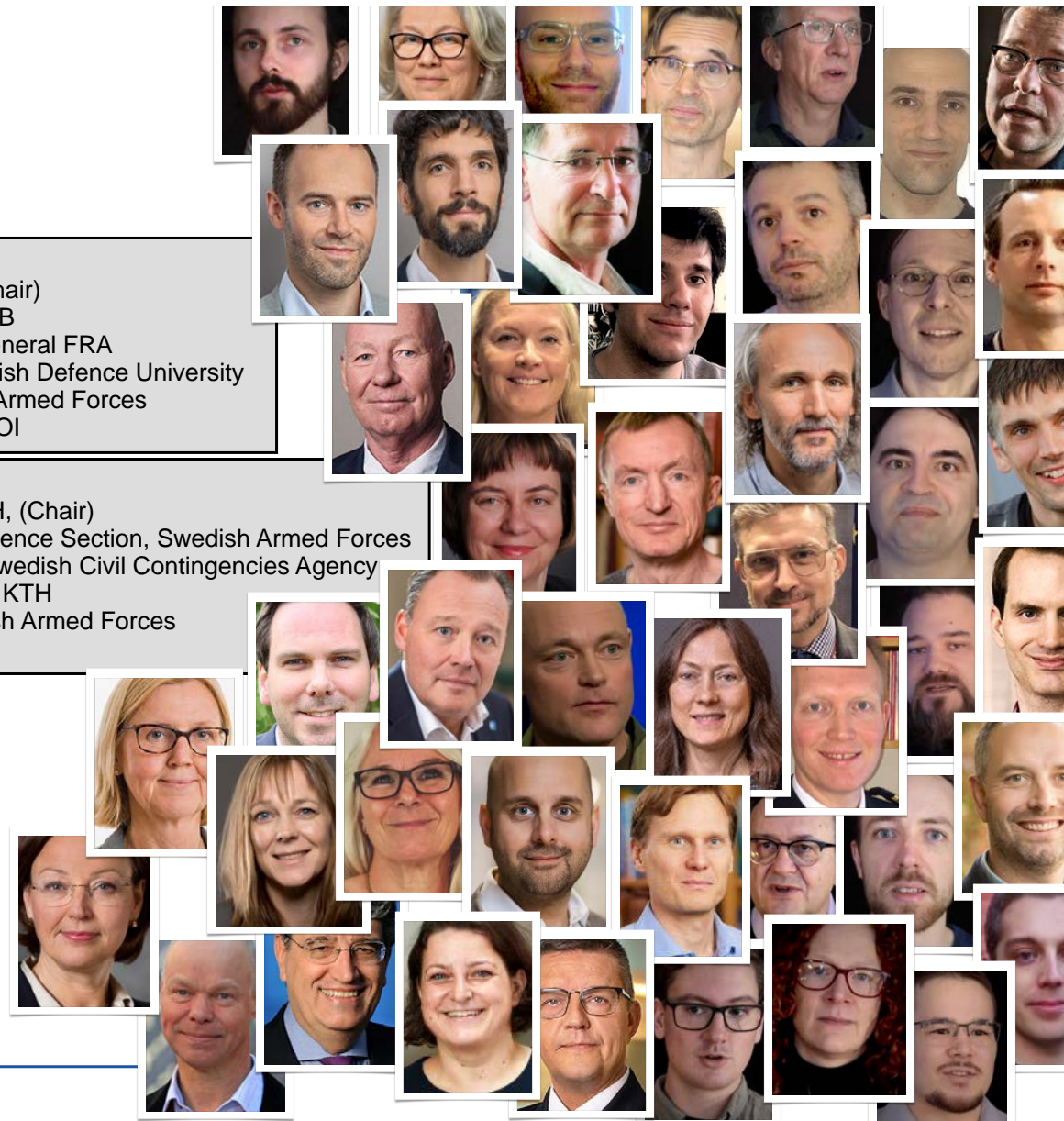
Anders Söderholm, President of KTH (Chair)  
Camilla Asp, Deputy director-general MSB  
Charlotta Gustafsson, Deputy director-general FRA  
Malena Britz, Pro-Vice-Chancellor, Swedish Defence University  
Johan Pekkari, Major General, Swedish Armed Forces  
Katarina Wilhelmsen, Director of R&D, FOI

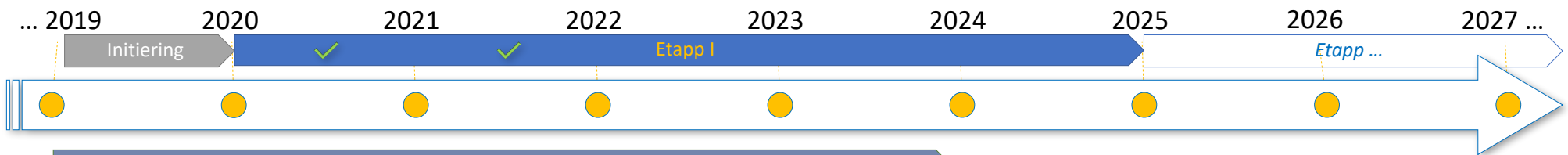
## Steering group

Mikael Lindström, Deputy President, KTH, (Chair)  
Thomas Höglund, Head of the Cyber Defence Section, Swedish Armed Forces  
Åke Holmgren, Head of Cybersecurity, Swedish Civil Contingencies Agency  
Ann Lantz, Head of the School of EECS, KTH  
Rikard Stridh, Head of Research, Swedish Armed Forces  
Gunnar Karlsson, Prof, KTH/EECS

## Management group

Prof. Pontus Johnson (Director)  
Utv.led. David Olgart (Co-director)  
Prof. Mads Dam  
Proj. led. Charlotta Ridderstråle  
Prof. Rolf Stadler  
Assoc. Prof. Cyrille Artho  
Dr Björn Marcusson  
Docent Joel Brynielsson





**CERCES**  
 Prof Henrik Sandberg, Prof Mads Dam, Prof György Dán, Prof Ragnar Thobaben

**Attack Simulations for Cyber Defense**  
 Prof Mathias Ekstedt, A/Prof Robert Lagerström - MSc Viktor Engström

**Cyber Situational Awareness**  
 Prof Henrik Artman, Dr Joel Brynielsson, Dr Ulrik Franke - MSc Annika Andreasson

**Self-Learning Systems for Cyber Defense**  
 Prof Rolf Stadler, Prof Pontus Johnson - MSc Kim Hammar

**Securing the Internet of Things**  
 A/Prof Musard Balliu, A/Prof Cyrille Artho - MSc Marcus Birgersson

**Provably Secure Systems**  
 A/Prof Roberto Guanciale, Prof Mads Dam - MSc Henrik Karlsson

**Post-Quantum Cryptography**  
 Prof Johan Håstad, A/Prof Douglas Wikström - MSc Joel Gärtner

**Denial of Service Prevention**  
 Prof Gunnar Karlsson - MSc Leon Fernandez

**Machine Learning for Side-Channel Attacks**  
 Prof Elena Dubrova - MSc Martin Brisfors

**Simulation-based Reinforcement learning for security operations**  
 Prof Pontus Johnson, Prof Rolf Stadler, Dr Teodor Sommestad - MSc Jakob Nyberg

**Tyr - (Semi-) Autonomous Cyber Defence Command and Control System / SAC<sup>3</sup>S FMV, FOI, CDIS**

**Intrusion Detection | Prof György Dán, Prof Pontus Johnson**  
**Security Operations Center**



**CHAINS**  
 Prof Benoit Baudry, Prof Martin Monperrus, Prof Mathis Ekstedt, A/Prof Musard Balliu

# Research projects



# Education

## Ongoing & Looking ahead

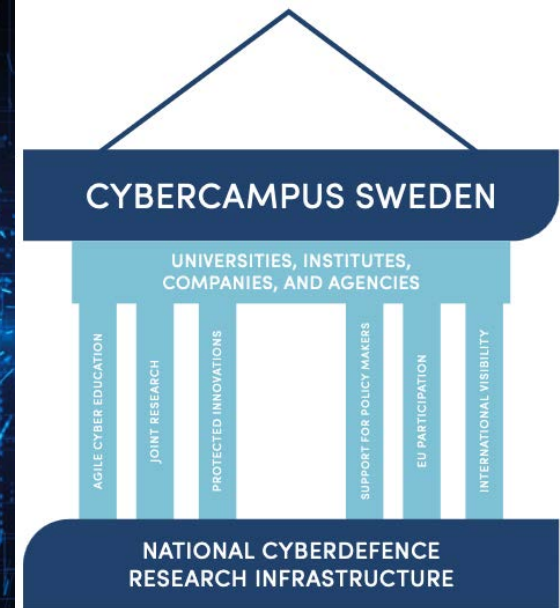
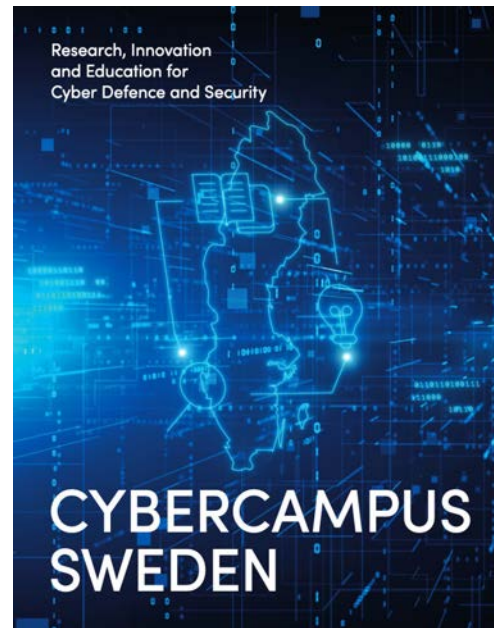
- Education of Swedish Cyber Soldiers (3<sup>rd</sup> iteration)
- Continued development, and delivery of
  - basic awareness training non-cyber personnel
  - cutting-edge agile education for
    - > cyber soldiers,
    - > officers,
    - > subject matter experts,
    - > decision makers,
    - > stakeholders
- For now, focusing on military personnel, but possible also for others, on-demand, as deemed appropriate..



# Looking Ahead

## The Next Phase of CDIS

- Conclude ongoing PhD projects in 2024-2025
- Define and setup new and exciting cutting-edge projects for 2025 and beyond
- Collaborate with and contribute to Cybercampus Sweden



**Cybercampus Sweden** carries out **agile** and **cutting-edge research, education** and **innovation** vital for a resilient Sweden that go **beyond** what is **possible** for an **individual** university, institute, agency, or company



# Collaboration with CDIS

- Participate in conferences
- Sign up for the CDIS mailing list
- Join contract teaching courses
- Hold guest lectures for students
- Initiate master thesis projects
- Host researcher presentations
- Participate in joint research applications
- Participate in research projects
- Fund research projects
- Apply for partnership in CDIS

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**CDIS**