



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Eidgenössisches Departement für Verteidigung,
Bevölkerungsschutz und Sport VBS

Bundesamt für Rüstung - armasuisse ar



How the CYD Campus leverages collaboration with the EPFL ecosystem to strengthen the cyber security of Switzerland

Dr. Vincent Lenders, Director Cyber-Defence Campus



Cyber-Defence Campus



CYD | CYBER
DEFENCE
CAMPUS

ETH zürich



armasuisse

EPFL



Founded in **2019** by armasuisse

3 sites in **Lausanne, Zurich** and **Thun**

Mission: strengthen the cyber-defence sector in Switzerland through collaboration between government, academia, and industry



CYD Campus Objectives

- **Anticipation Platform** (Technology monitoring and international scouting)
- **Cyber competences and technical skills** (Cyber-Defence community, research, innovation, labs, security testing)
- **Talents** (recruitment and specialization)
- **Interoperability** (collaboration industry/academia)



Our 7 Recipes to work with **EPFL** ecosystem

1. CYD Fellowship program
2. Research projects through C4DT
3. Startup challenges
4. Public-private partnerships
5. Internships / Master thesis
6. Conferences
7. Hackathons / Labs



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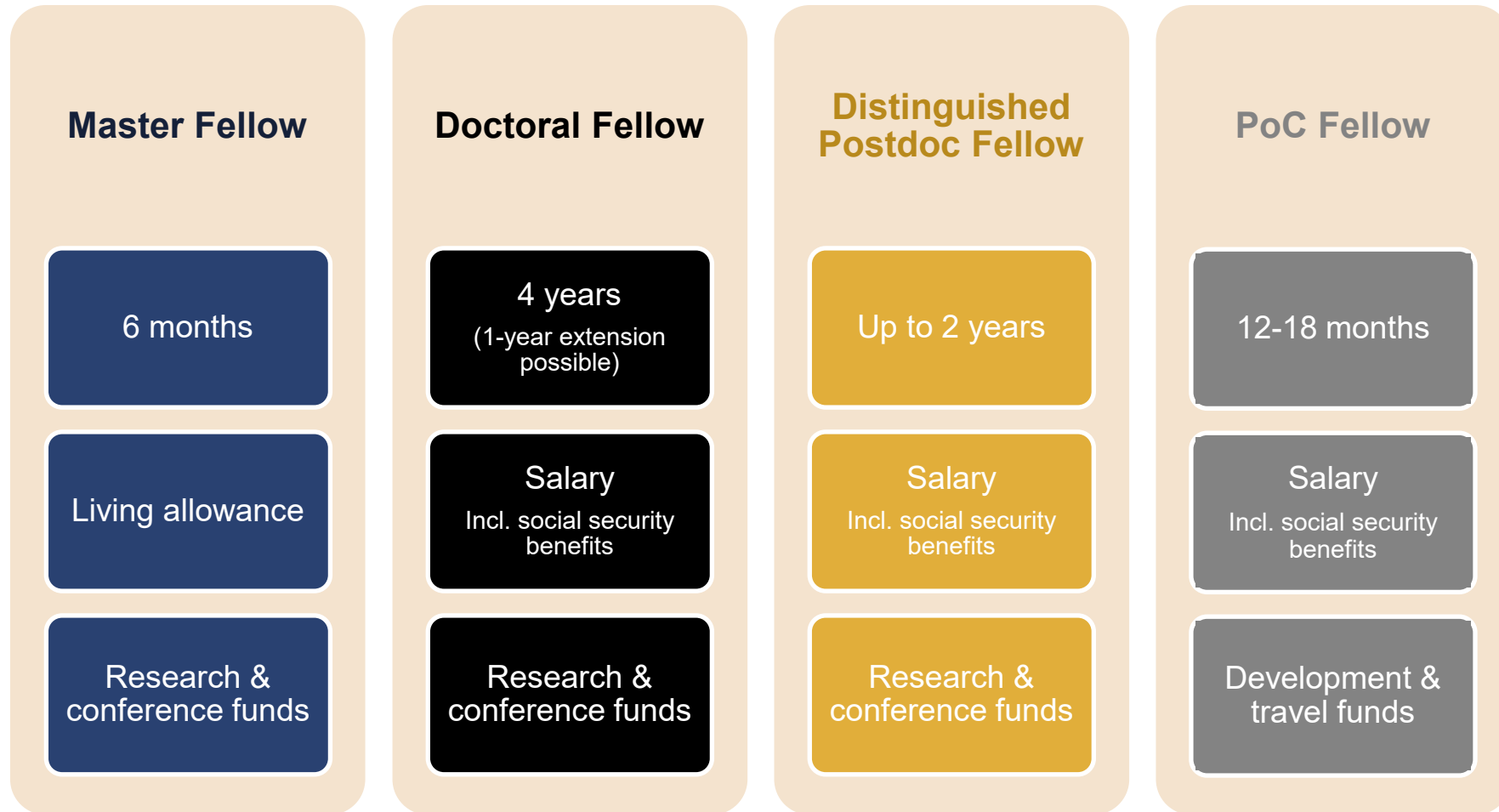
CYD fellowships

A talent program for cyber-defence research and innovation

<https://www.epfl.ch/research/funding/epfl-programmes/cyd/>



CYD Fellowships





Awarded CYD Fellows

- Fellowships type
 - Master: 20
 - PhD: 8
 - Postdoc: 5
 - PoC: 1
- University
 - ETH Zurich: 18
 - EPFL: 8
 - Uni Zurich: 2
 - Uni Geneva: 1
 - HES SO Valais: 1
 - ZHAW: 3
 - OST: 1





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Our Research Priorities



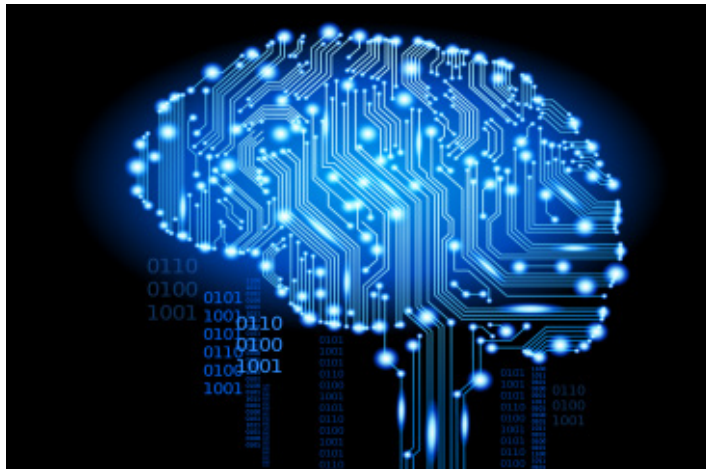
Cyber Security

- Networks
- Smartphones
- transportation systems (cars, trains, aircraft)
- industrial systems, IoT, and smart building
- 5G and wireless communication
- Quantum-safe crypto
- aerospace systems
- Vulnerability research tools
- E-id and E-voting



Technology Monitoring

- Information management
- Taxonomy generation
- Predictive analytics
- Scientometrics
- Cyber economics
- Quantum computing

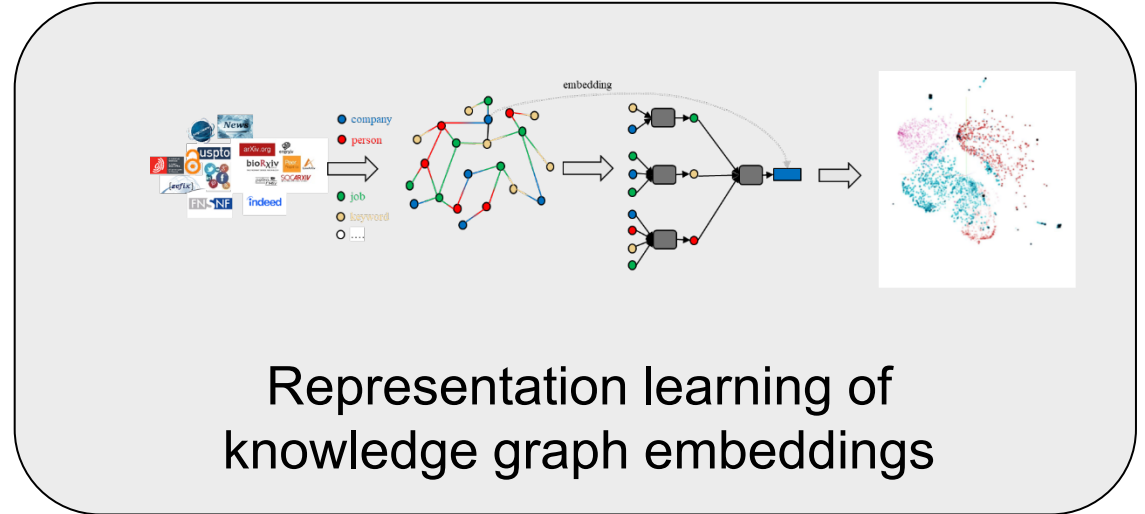
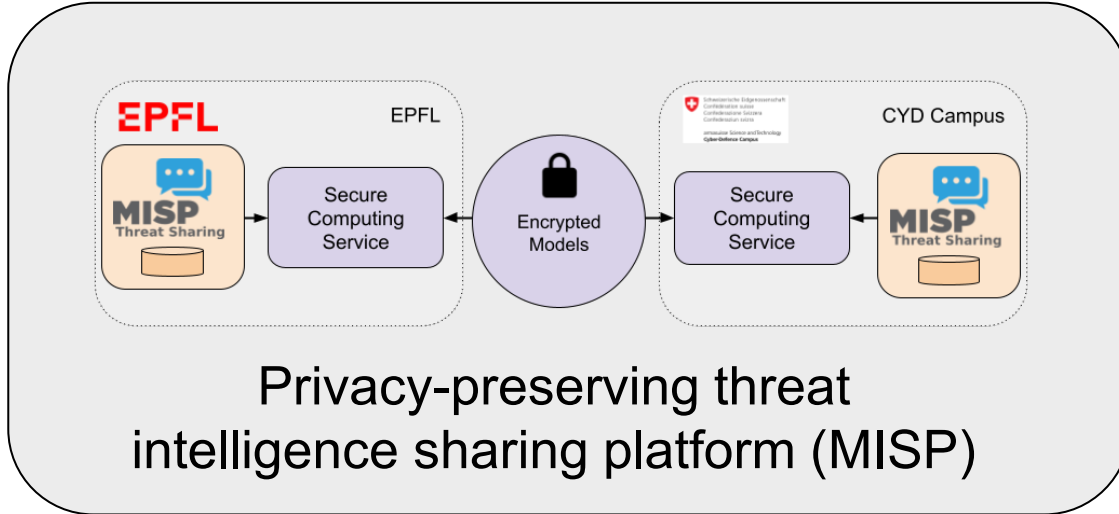


Data Technologies

- Cyber threat intelligence platforms
- Fake news detection
- Information fusion
- Social media intelligence
- Natural language processing
- Robustness and security of machine learning
- Distributed sensing and learning
- Machine translation and large language models
- Blockchain applications and analysis



Example Research Projects with C4DT





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Cyber Startup Challenge

- Annual market exploration on challenging topics
- Winner gets 100k CHF to implement a proof-of-concept

2020 Cyber Threat Intelligence: **Countercraft**

2021 Boost your ISAC: **Decentriq**

2022 IoT Security: **Onekey**

2023 Smartphone Security: **Ostorlab**

2024 Security of AI: **ongoing**





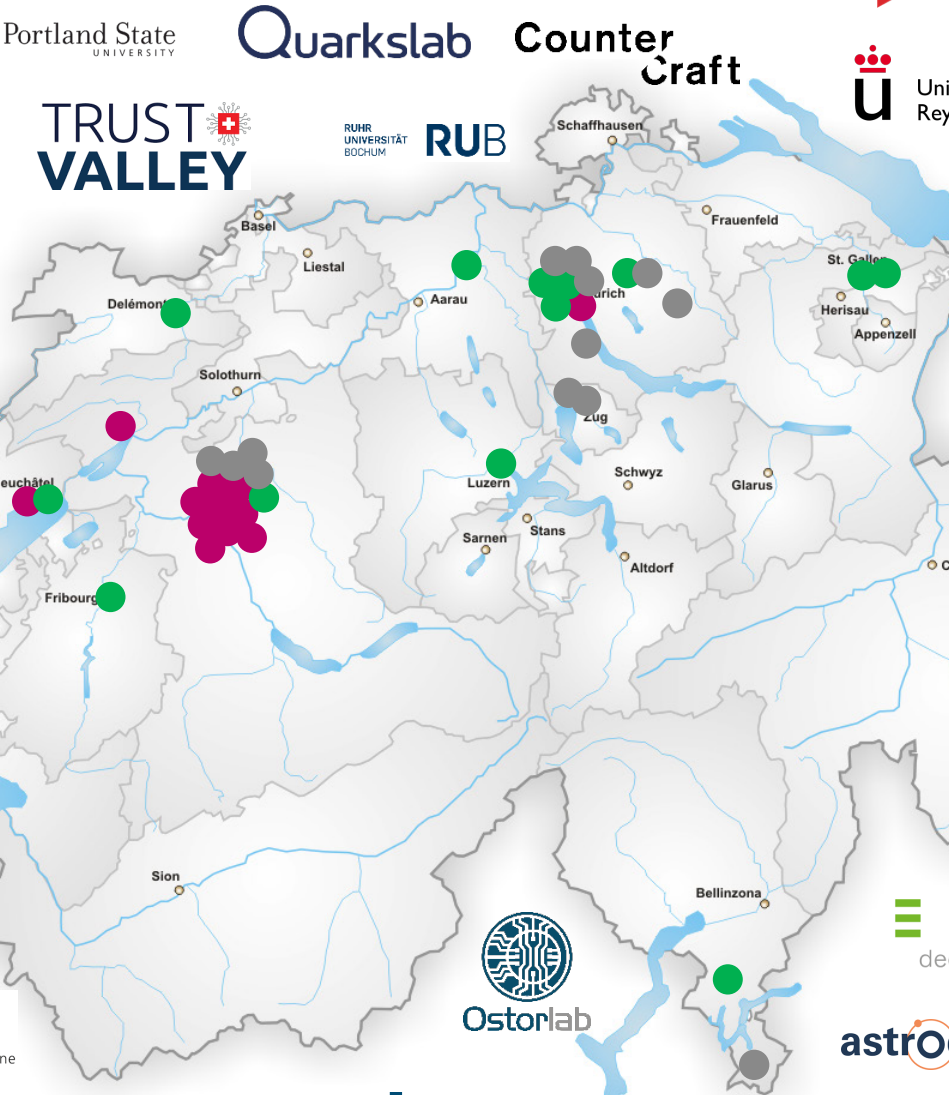
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CYD Partners

● Government
● Academia
● Industry

Bundesamt für Sicherheit in der Informationstechnik
 CCDCOE
 insitute idea networks
 SeRo Systems
 BUNDESPOLIZEI
 Schweizerische Eidgenossenschaft
 Confédération suisse
 Confederazione Svizzera
 Confederaziun svizra
 National Cyber Security Centre
 Kantonspolizei Zürich
 Berner Fachhochschule
 Haute école spécialisée bernoise
 Bern University of Applied Sciences
 SCHWEIZER ARMEE
 VERTEIDIGT
 swissnex
 EPFL
 ETH zürich
 n|w Fachhochschule Nordwestschweiz
 h e g
 Haute école de gestion Genève
 h e p i a
 Haute école du paysage, d'ingénierie et d'architecture de Genève
 Hes·SO
 Haute Ecole Spécialisée de Suisse occidentale
 Fachhochschule Westschweiz
 University of Applied Sciences and Arts Western Switzerland
 zhaw
 HSLU Hochschule Luzern
 OST
 Ostschweizer Fachhochschule
 HEIG-VD
 HIDE
 Institut Interdisciplinaire du Développement de l'entreprise
 Unil
 UNIL | Université de Lausanne
 Scuola universitaria professionale della Svizzera italiana
 SUPSI
 Universität St.Gallen
 UNIVERSITÉ DE GENÈVE
 Universität Zürich



CYBEXER TECHNOLOGIES
 Universidad Rey Juan Carlos
 UNIVERSITÀ DEGLI STUDI DI GENOVA
 UNIVERSITÄT LUXEMBURG
 UNIVERSITY OF South Carolina
 UNIVERSITÄT DE MURCIA
 KTH VETENSKAP OCH KONST
 KU LEUVEN
 Northeastern University
 SBB CFF FFS
 TUNE INSIGHT
 RUAG
 NOZOMI NETWORKS
 NOSER ENGINEERING
 swisscom
 modulos
 KUDELSKI SECURITY
 FLARM TECHNOLOGY
 dedication + innovation
 astrocast
 CYSEC
 adnovum
 ANAPAYA
 DECENTRIQ
 effixis
 Nationales Testinstitut für Cybersicherheit

unine UNIVERSITÉ DE NEUCHÂTEL
 PLUGANDPLAY









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Master Thesis and Internship Opportunities

- List of open topics on our website: <https://www.cydcampus.admin.ch/>

 Data analytics 4 topics available	 Data science 5 topics available	 Machine learning 3 topics available
 Mobile security 2 topics available	 Natural language processing 1 topic available	 Network security 8 topics available
 Penetration testing 3 topics available	 Technology monitoring 8 topics available	 Vulnerability research 5 topics available
 Wireless security 9 topics available		

- Hosted over 250 Master students over the last 5 years at the CYD Campus




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Cyber-Defence Campus Conference 2024

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Confédération suisse
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Confederaziun svizra

armasuisse
Science and technology

CYD | CYBER
DEFENCE
CAMPUS

CYBER-DEFENCE CAMPUS CONFERENCE

Emerging and Disruptive Cyber Technologies:
Quantum, Next-Gen Networks and AI

30. OCTOBER 2024
KURSAAL BERN



30 Oct 2024

Wednesday 09:00 - 17:30

Kursaal Bern
Kornhausstrasse 3
3013 Bern

Register now →

Register here: <https://www.cyd-campus.admin.ch/>



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Previous and Upcoming Hackathons

Cars 2022



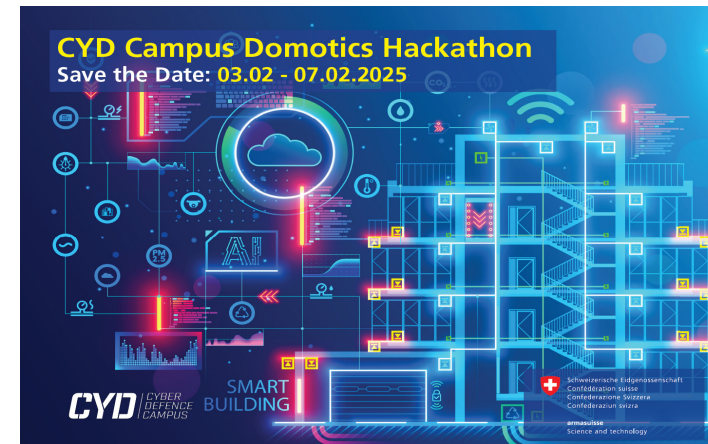
Satellite 2024



ICS 2023



Upcoming: Domotics 2025





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Thank you for your attention!

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 [@cydcampus](https://twitter.com/cydcampus)