

We start at 9h30 CET

3

Chair Cybersecurity for Critical Networked Infrastructures @ECW 2022

Marc-Oliver Pahl

Titulaire de la chaire cybersécurité des
infrastructures critiques (cyberCNI.fr)



Sécurité des infrastructures critiques



Session 1

The chaire Cybersecurity of Critical Networked Infrastructures (cyberCNI.fr) as important pillar in the French and European cybersecurity ecosystem

CYBERCNI
Sécurité des infrastructures critiques

- 09:30 am Chaire cyberCNI.fr - Excellence in cybersecurity since 2016
Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes
- 09:45 am Cybersecurity as central element in the DNA of IMT Atlantique - the chair CyberCNI in its heart
Christophe Lerouge, Director of IMT Atlantique
Veronique Stephan, Development and Corporate relations, IMT Atlantique
- 09:55 am The chaire CyberCNI as key actor of the ecosystem of the Pôle d'Excellence Cyber (PEC)
Colonel Pierre-Arnaud Borrelly, Délégué général du PEC,
Commandant du Groupement de cyberdéfense des Armées (COMCYBER/GCA)
- 10:00 am The role of academic partnerships within Airbus Defence and Space Cybersecurity at the example of the chair
CyberCNI, Nicolas Razy, Head of Defence and Strategic Programmes France, Airbus
- 10:05 am The added value of the collaboration with the chair CyberCNI for our bank
Marc-Michel Stack, Head of Group IT Technology Intelligence, BNP PARIBAS
- 10:10 am Energy and CyberCNI - the role of the collaboration for EDF
Etienne Decossin, Responsable du programme Tech de l'information - Simulation avancée, EDF R&D
Youssef Laarouchi, Cybersecurity Project Manager, EDF
- 10:15 am Let's roll - cybersecurity for mobile infrastructures: a successful collaboration between SNCF and the chair
CyberCNI, Cyril Cappi, Team Leader Rail Safety System at SNCF /
VP R&D at Fédération Française de la Cybersécurité
- 10:20 am How to join the club? 7 Reasons for becoming a partner of the chair CyberCNI
Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes
- 10:25 am Outlook to the research session at 11h00
Networking





Session II

Excellent cybersecurity research around current challenges in cybersecurity for critical infrastructures

CYBERCNI

Sécurité des infrastructures critiques

11:00 am Cybersecurity as key factor in the ecosystem of Brittany and the role of the chair CyberCNI within *Jérôme Tré-Hardy, Conseiller régional délégué à la transition numérique et la cyber- Région Bretagne*



11:05 am Research Activities of the Chaire *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes*



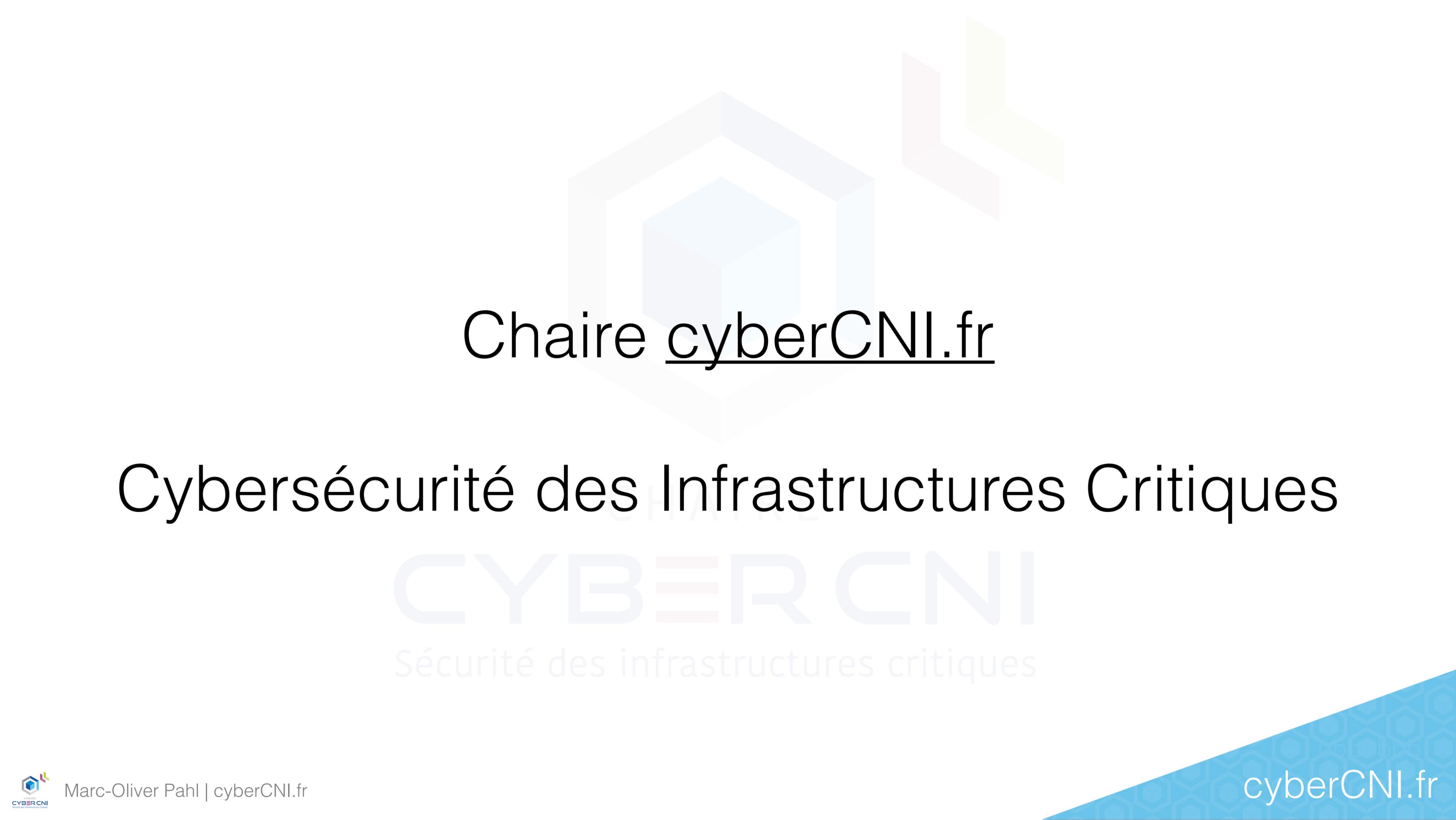
11:10 am **90sec per PhD thesis**

11:30 am **Panel:** How safe are our critical infrastructures under the current geopolitical circumstances?

The recent geopolitical developments show us once more how fragile our critical infrastructures are. With the outbreak of the war in Ukraine, diverse disruptions in systems such as energy production or communication occurred. In this panel we discuss the new threat potential we are facing today.

- *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes (Moderation)*
- *Cyril Cappi, Team Leader Rail Safety System at SNCF / VP R&D at Fédération Française de la Cybersécurité*
- *Gianluca Vannuccini, Director Dir Système Information, Infrastructures Technologiques et Innovation, Toscany*
- *Éric Labouré, Nokia Head of Business Operations, Managed Security Services, Nokia*
- *Alban Odrejeck, Co-founder/CTO & speaker chez ANOZR WAY*
- *Reda Yaich, Senior Researcher SystemX*





Chaire cyberCNI.fr

Cybersécurité des Infrastructures Critiques

CYBERCNI
Sécurité des infrastructures critiques

cyberCNI.fr



CHAIRE
CYBERCNI
Sécurité des infrastructures critiques



IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

IMT Mines Albi-Carmaux
École Mines-Télécom

TELECOM Paris
IP PARIS

IMT Lille Douai
École Mines-Télécom
IMT-Université de Lille

Institut Mines-Télécom Business School

TELECOM SudParis
IP PARIS

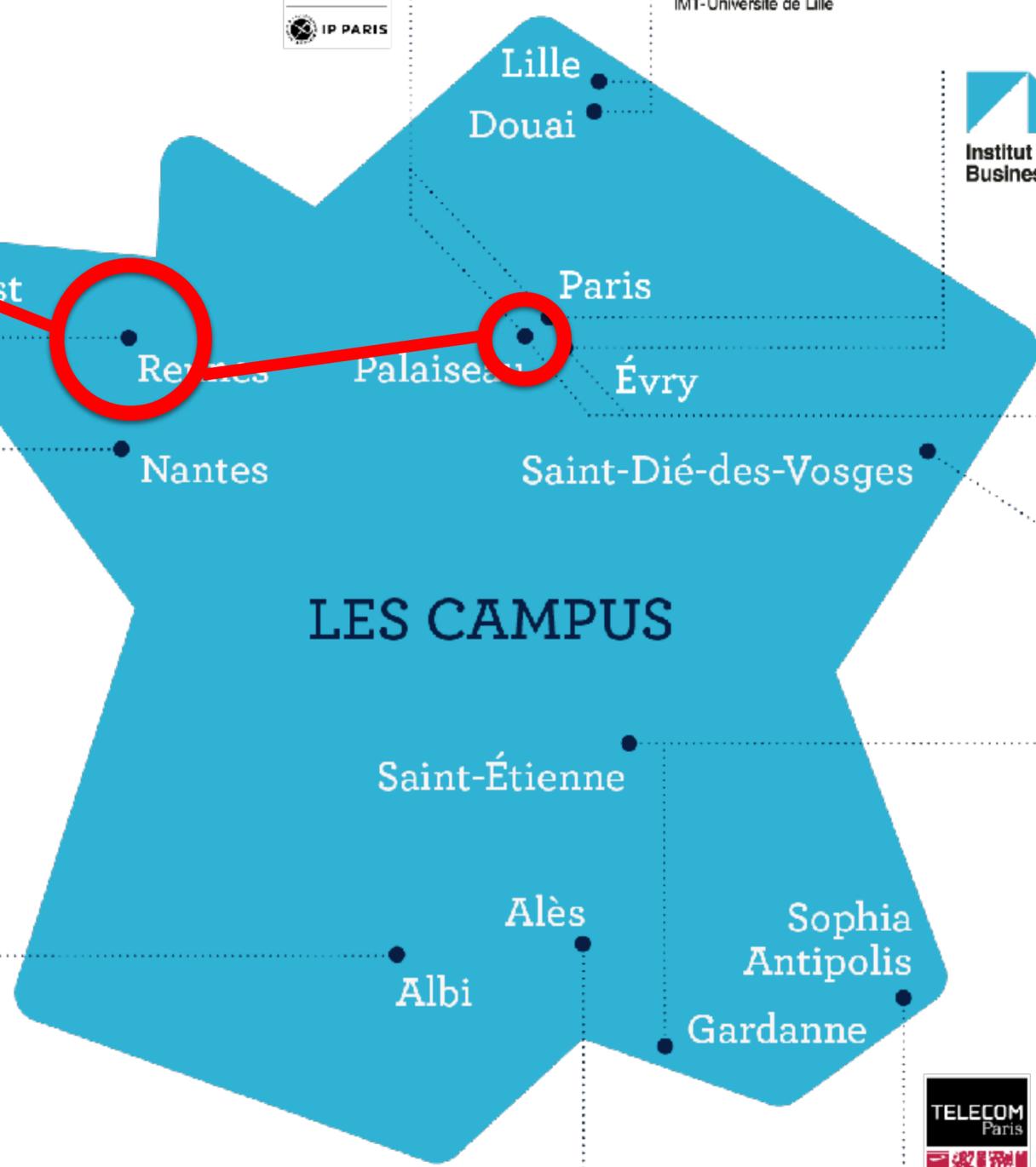
InSIC
Institut Supérieur de Génie de la Conception

MINES Saint-Étienne
Une école de l'IMT

TELECOM Paris
IP PARIS

IMT Mines Alès
École Mines-Télécom

EURECOM
SOPHIA ANTIPOLIS



LES CAMPUS

It's all about people...



10+ Professors

4+ PostDocs

8+ PhD Students

7 Partners



Phase I (1/2016-1/2019)

Phase II (1/2019-1/2022)

Phase III (1/2022-1/2025)





Chaire cyberCNI.fr

Research Update

CYBERCNI

Sécurité des infrastructures critiques

The cyberCNI.fr Research Update

The cyberCNI.fr (<https://cyberCNI.fr/>) Research Update (spring/ Fall) happens once per semester. It is the *big status event* of the chair Cyber CNI.

All works around the chair (PhD students, PostDocs, Engineers, . . .) are presenting their progress, current works, and next challenges. There are vital discussions with the audience on the topics.

It is the perfect opportunity for getting an overview on and discussing what is going on at the chair.



Research Update Events

- 08.06.2020 Online
- 11.12.2020 Online/ Rennes
- 24.06.2021 Online/ Rennes
- 17.12.2021 DG EDF, Palaiseau
- 20.05.2022 IMT Atlantique, Rennes
- 17.10.2022 DG SNCF, Paris
- 4/2023 BNP Paribas, Paris
- 10/ 2023 Airbus, Paris

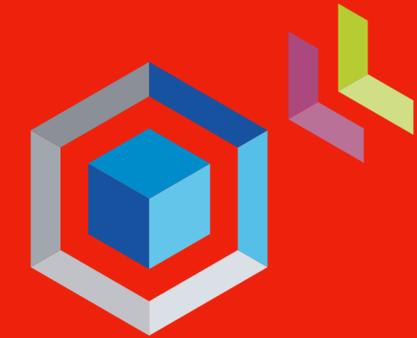




Research at the chaire cyberCNI.fr

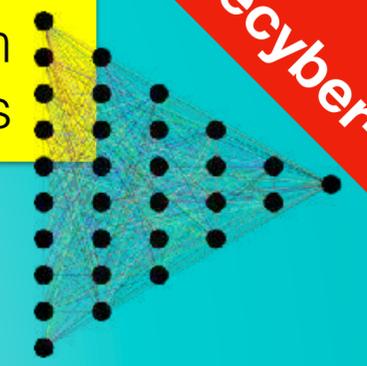
CHAIRE
CYBERCNI
Sécurité des infrastructures critiques

<https://www.chairecyber-cni.org/>



Prevent
Security-by-Design

Mitigate
Self-Defend Security Incidents
Self-Recover from Security Incidents



Human-in-the-loop
Innovative interfaces, Mixed Reality
Data Analytics
Configuration
Live interaction, collaborative actions

Detect
Anomaly Detection



Ethical Algorithms Machine Learning
Distributed Ledgers Digital Twins



Prevent **Detect** **Mitigate** **Human-in-the-loop**

T5 : Software Defined Security for Internet of Things

T4: Optimisation of security risks through learning on heterogeneous data

AI

T9 : Federated threat detection and defense

T1 : Automated learning and handling of Cyber-Physical Attacks

T6' : Jumeaux numériques pour la cyber-sécurité

T2: 3D interfaces for Cybersecurity

Cybersecurity for connected mobile systems

Collaborative Cybersecurity

TP

[TP] P3-3-Codeledger: CodeLedger: tracking the provenance of critical open source components

[IMTA] P3-1-Digital-Twin: Modular Digital Twin-based cyber resilience

[IMTA] P3-2-Piloting: Real-world detection and mitigation of AI-based cyberattacks and defence mechanisms

[TSP] P3-4: How can crypto-watermarking-DLTs improve trust in the use of AI for cybersecurity?

[IMTA] P3-6-Software: Improving resilience through securing connected software in IT and OT (PostDoc)

[IMTA] P3-5-Interface: Multi-Modal Collaborative Cybersecurity Operation Center

Engineer

PostDoc

PhD student



Activities throughout the year

CHAIRE

CYBERCNI

Sécurité des infrastructures critiques

Publications

- [1] Hassan Chaitou, Thomas Robert, Jean Leneutre, and Laurent Pautet. Threats to adversarial training for idss and mitigation. In Proceedings of the 19th International Conference on Security and Cryptography (Secrypt 2022), Lisbon, Portugal, 2022.
- [2] Valentin Dimov, Erkin Kirdan, and Marc-Oliver Pahl. Resource tradeoffs for tls-secured mqtt-based iot management. In NOMS 2022 Workshops - Manage-IoT 2022 (), 2022.
- [3] Awaleh Houssein-Meraneh, Christophe Clavier, H el ene Le-Bouder, Julien Maillard, and Ga elle Thomas. Blind side channel on the elephant lfsr. In Proceedings of the 19th International Conference on Security and Cryptography (Secrypt 2022), Lisbon, Portugal, 2022.
- [4] Leo Lavaur, Marc-Oliver Pahl, Yann Busnel, and Fabien Autrel. The evolution of federated learning-based intrusion detection and mitigation: a survey. IEEE Transactions on Network and Service Management, 2022.
- [5] Christian L ubben and Marc-Oliver Pahl. Autonomous convergence mechanisms for collaborative crowd-sourced data-modeling. In NOMS 2022 - Full and short papers (), 2022.
- [6] Christian L ubben, Simon Sch affner, and Marc-Oliver Pahl. Continuous microservice re- placement in the iot. In NOMS 2022 Workshops - Manage-IoT 2022 (), 2022.
- [7] Mariana Segovia, Jose Rubio-Hernan, Ana Cavalli, and Joaquin Garcia-Alfaro. Switched- based control testbed to assure cyber-physical resilience by design. In Proceedings of the 19th International Conference on Security and Cryptography (Secrypt 2022), Lisbon, Portugal, 2022.
- [8] Manel Smine, David Espes, and Marc-Oliver Pahl. Optimal access control deployment in network function virtualization. In NOMS 2022 - Full and short papers (), 2022.

obsolete functions. In that case, it is important to decommission the device, and recycle it. One solution for recycling is to re-use the object in a different application or deployment, if it embeds the necessary functions. It can also be disassembled and its parts can be sent to different recycling industry. In order to make this possible, we need to address the issues of localization, keep-alive, classification and security.

security point of view, this process represents a risk since it offers the attacker various ways of degrading classifier performance (either by forcing classifications mischievous, either by randomly degrading its performance). These two types of attacks require more or less effort from the attacker.

This risk is exacerbated when data comes from sources (network equipment, organizations) corresponding to heterogeneous trust levels. Hassan's thesis aims at controlling the risk associated with this update via game theory in the case where the confidence in the learning data is not homogeneous.



BONNE ANNÉE 2022 ! HAPPY 2022!

- January 1, 2022 By Marc-Oliver Pahl ☐
Uncategorized

Dear members and friends of the chair CyberCNI.fr, we wish you all the best for the year 2022! May many of your wishes become reality! Click on the video to watch our wishes....



**CHAIRE CYBERCNI
@EDF PARIS
(21.9.2021) – AWALEH
HOUSSEIN
MERANEH,
AUTOMATED**

TALK.CYBERcni.fr

- 26.01.2022 Carol Fung (Professor, Virginia Commonwealth University, USA) – Security and Privacy Protection for IoT Networks
- 23.02.2022 Soumya Banerjee (Senior Vice President Innovation Trasn-Solutions Ltd, Ireland) – Securing the Internet of Things: Lattice-based crypto and side-channel attacks
- 30.03.2022 Ayoub SABBAR (CEO & Founder ORNISEC, Président CLUSIR BRETAGNE, France) – Comment mettre en place un programme efficace de sensibilisation à la cybersécurité au sein des organisations
- 27.04.2022 Cora Perner (Airbus, Germany) – Security for ground and air vehicles
- 25.05.2022 Julien Nocetti (Académie militaire de Saint-Cyr, Titulaire de la Chaire Gouvernance du risque cyber, Rennes S) – Geopolitics: Upgrading the level-playing expertise
- 27.07.2022 Philipp Drieger (Principal Machine Learning Architect, Splunk, Germany) – Thrive in the Data Age how Siemens cybersecurity, operations and business use cases using Splunk
- 05.10.2022 Nicolas RAZY and Nicolas LORIOT (Airbus) – Airbus CyberSecurity – 10 years of challenges and opportunities
- 21.10.2022 Gabi Dreo (University of armed Forces, Germany) – Paradigm shift from cybersecurity to cyber resilience
- 26.10.2022 Aaron Ding (Director of CPI Lab, Tenured Faculty at TU Delft, Associate Professor at Uni Helsinki) – Trustworthiness in Cybersecurity
- ???.11.2022 Moritz Flößler (EuropaNova Germany e.V., Germany) – Institutionalizing Cybersecurity: National Strategies and their Implications for Europe
- 23.11.2022 Roland van Rijswijk-Deij (Professor of Network Security at University of Twente, Principal Scientist at NLnet Labs) – Quantum Proving the Internet
- 30.11.2022 Clemens Arzt (Professur für Staats- und Verwaltungsrecht und Recht der Fahrzeugautomatisierung, HWR Berlin, Germany) – T.B.A.
- 07.12.2022 Cristian Hesselman (Director of SIDN Labs, Netherlands)- T.B.A.



TALK.CYBERCNI.FR

Prevent Security-by-Design

Detect Anomaly Detection

Mitigate Self-Defend Security Incidents, Self-Recover from Security Incidents

ML

Ethical Algorithms Machine Learning Distributed Ledgers Digital Twins

chairecyber-cni.org/

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

TALK.CYBERCNI.FR

THE MONTHLY CYBERSECURITY SPEAKER SERIES

27.1.2021 17h00 - Frédéric Julhes Head of Airbus CYBERSECURITY SAS

chairecyber-cni.org/

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

TALK.CYBERCNI.FR

24/02/2021 17h >>>>>>

free livestream on YouTube

Securing Smart Homes: Cross-Layer Second Line of Defence

Muhammad Usman, Senior Lecturer University of South Wales

chairecyber-cni.org

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

TALK.CYBERCNI.FR

31/03/2021 17h >>>>>>

free livestream on YouTube

Addressing security breaches through trusted data management

Sylvain Guilley, co-founder and CTO at Secure-IC, France

chairecyber-cni.org

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

TALK.CYBERCNI.FR

16/06/2021 17h CET >>>

free live stream on YouTube LinkedIn

Mutter aller Sicherheitslücken: Arbitrary Code Execution in the Universal Turing Machine

Pontus Johnson, Prof. KTH Royal Institute of Technology, Sweden

chairecyber-cni.org

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

TALK.CYBERCNI.FR

28/05/2021 17h CET >>>

free live stream on YouTube LinkedIn

Identifying relevant cyber risks quickly with the EBIOS RM method

Tony Hedoux, Product Owner Cyber at All4Tec, France

chairecyber-cni.org

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

TALK.CYBERCNI.FR

26/05/2021 17h CET >>>

free live stream on YouTube LinkedIn

Dare the breakthrough of cybersecurity: an opportunity to build sovereignty

Cyril Cappi, Senior Research Engineer at SNCF, France

chairecyber-cni.org

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

TALK.CYBERCNI.FR

30/06/2021 17h CET >>>

free live stream on YouTube LinkedIn

Quantum Safe and Safe Quantum Data communications

Michel Barbeau, Professor and Director School CS, Carleton Univ., Canada

chairecyber-cni.org

AIRBUS AMOSSYS BNP PARIBAS EDF NOKIA Bell Labs

Tell your friends...

TALK.CYBERCNI.FR

28/07/2021
17h CET >>>

free live Stream on
 YouTube
 LinkedIn
chairyber-cni.org

*Automotive Cybersecurity -
How to make Millions in a
\$5.1 Billion Dollar Industry*



Hasan Ibne Akram, CEO Matrickz GmbH, Germany

TALK.CYBERCNI.FR

25/08/2021
17h CET >>>

free live Stream on
 YouTube
 LinkedIn
chairyber-cni.org

*Resilience for Critical
Infrastructures:
a Volunteer Cyber Brigade*



Carl Denis, AG KRITIS, Germany

TALK.CYBERCNI.FR

29/09/2021
17h CET >>>

free live Stream on
 YouTube
 LinkedIn
chairyber-cni.org

*CyberSchool: Mounting the
first graduate cybersecurity
school in France*



Frédéric Renouard, Pierre-Alain Fouque, Cyberschool, France



your monthly cybersecurity talk
TALK.CYBERCNI.FR

27/10/2021
@5PM CET >>>

free live Stream
 YouTube
 LinkedIn
chairyber-cni.org

*Cybersecurity Risk Analysis:
Reaching the Full Potential*



Dr. Sebastian Labitzke, ITK Engineering GmbH, Germany

your monthly cybersecurity talk
TALK.CYBERCNI.FR

24/11/2021
@5PM CET >>>

free live Stream
 YouTube
 LinkedIn
chairyber-cni.org

*A Multilayer Cybersecurity Framework
for the Internet of Vehicles*



Mohammad Hamad, TU München, Germany

your monthly cybersecurity talk
TALK.CYBERCNI.FR

15/12/2021
@5PM CET >>>

free live Stream
 YouTube
 LinkedIn
chairyber-cni.org

DDoS Attacks and Botnet Services



Oliver Hohfeld, BTU Cottbus, Germany



your monthly cybersecurity talk
TALK.CYBERCNI.FR

25/01/2022
@5PM CET >>>

free live Stream
 YouTube
 LinkedIn
chairyber-cni.org

*Security and Privacy
Protection for IoT Networks*



Carol Fung, Virginia Commonwealth University, USA

your monthly cybersecurity talk
TALK.CYBERCNI.FR

23/02/2022
@5PM CET >>>

free live Stream
 YouTube
 LinkedIn
chairyber-cni.org

*Securing the Internet of Things: Lattice-
based crypto and side-channel attacks*



Soumya Banerjee, Trasn-Solutions Ltd.

Tell your friends...



your monthly cybersecurity talk
TALK.CYBERCNI.FR

30/03/2022
@5PM CET >>>

free LIVE Stream
YouTube
LinkedIn
cyberCNI.fr

Comment mettre en place un programme efficace de sensibilisation à la cybersécurité au sein des organisations

Ayoub Sabbar, CEO & Founder ORNISEC, France

your monthly cybersecurity talk
TALK.CYBERCNI.FR

27/04/2022
@5PM CET >>>

Live from NOMS 2022 in Budapest. Join us in room TOBOZ !!

free LIVE Stream
YouTube
LinkedIn
cyberCNI.fr

Security for ground and air vehicles

Cora Perner, Airbus, Germany

your monthly cybersecurity talk
TALK.CYBERCNI.FR

13/05/2022
@2PM CET >>>

free LIVE Stream
YouTube
LinkedIn
cyberCNI.fr

Cybersecurity on nation state level

Moritz Flössler, EuropaNova Germany e.V., Germany



your monthly cybersecurity talk
TALK.CYBERCNI.FR

25/05/2022
@5PM CET >>>

free LIVE Stream
YouTube
LinkedIn
cyberCNI.fr

Cyber-related threats & Geopolitics: Upgrading the level-playing expertise

Julien Nocetti, Head Chair in Cyber Risk Governance, Rennes SB, France

your monthly cybersecurity talk
TALK.CYBERCNI.FR

27/07/2022
@2PM CET >>> 21

free LIVE Stream
YouTube
LinkedIn
cyberCNI.fr

Big Data Cybersecurity and Machine Learning with SPLUNK

Philipp Drieger (Principal Machine Learning Architect, Splunk, Germany)

your monthly cybersecurity talk
TALK.CYBERCNI.FR

07/09/2022
@3PM CET >>> 20

free LIVE Stream
YouTube
LinkedIn
cyberCNI.fr

Airbus CyberSecurity - 10 years of challenges and opportunities

Nicolas Razy and Nicolas Lorient, Airbus, France



your monthly cybersecurity talk
TALK.CYBERCNI.FR

??/??/2022
@5PM CET >>>

free LIVE Stream
YouTube
LinkedIn
chairyber-cni.org

Another exciting talk yet to be announced...

I am the speaker, Institution, Country

your monthly cybersecurity talk
TALK.CYBERCNI.FR

??/??/2022
@5PM CET >>>

free LIVE Stream
YouTube
LinkedIn
chairyber-cni.org

Another exciting talk yet to be announced...

I am the speaker, Institution, Country

Tell your friends...





5th Future-IoT PhD School

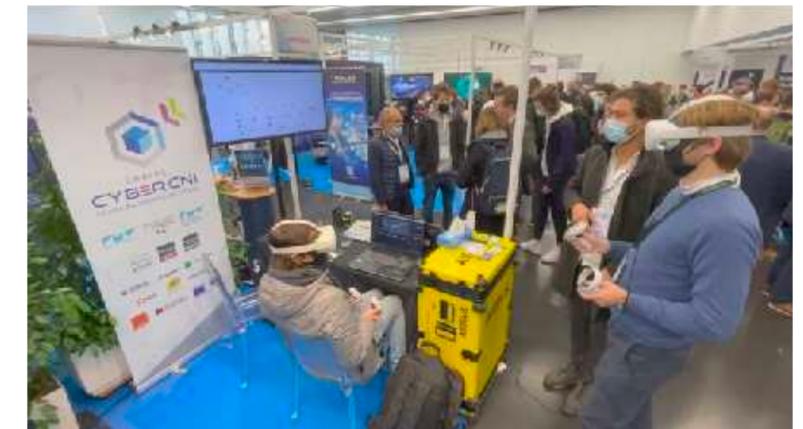
IoT meets Autonomy

Aug 29-Sep 2, 2022, Berlin



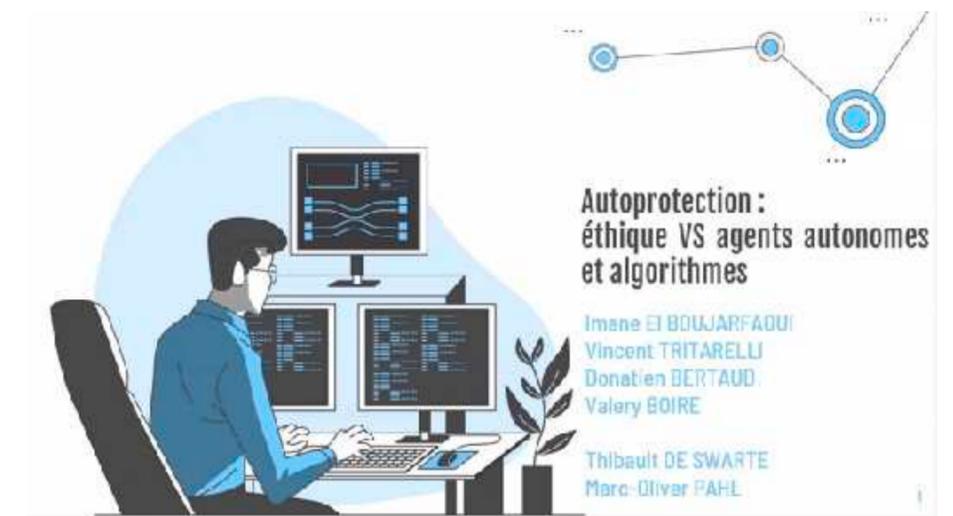
Big faires

- The chaire participated at the **Forum International de la Cybersécurité (FIC)** in Lille in **June 2022**. The FIC is the biggest cybersecurity event in France, mainly targeting deciders in companies. The focus of the event was mainly on exchanging with potential future partners for the chaire. We had a lot of very interesting exchanges.
- In November 2022, **15.11.-17.11.2022 the chaire is participating at the European Cyber Week (ECW)**. The ECW is oriented more towards research than the FIC and the second biggest cybersecurity event in France. The chair will organize a dedicated session with the following program planned:
 - In addition, we are very happy and grateful to our partner Airbus that we can show our works at their stand throughout the three days.
 - We are looking forward to welcoming you at the ECW.



January

- The chaire co-supervised a **student project** “Final year student project – Autoprotection : **éthique VS agents autonomes et algorithmes**” that had its presentation in January. The project looked at the ethical aspects of autonomous computing.
- Léo presented his thesis work on Federated Learning for defending Cyber-Attacks in a science popularization program on **French radio France Culture**.



February

- In February, a delegation of the chaire visited the big crisis management exercise at the ENSIBS.



March

- The chaire had a big presence at the **colloque “Gestion de crise et numérique : nouvelles menaces et nouvelles solutions”** of the Institut Mines Telecom. Marc-Oliver Pahl gave a presentation on “Cybersécurité collaborative renforcée par la réalité virtuelle pour les infrastructures critiques”. Manel, Zeinab, Leo, Awaleh, Nicolas
- The last PhD student of the phase 1 **Raphael Larsen defended** his thesis on “Traçabilité et intégrité de l’information au sein de systèmes critiques : analyse et proposition de méthodes statistiques“ successfully. Congratulations!



April

- Marc-Oliver Pahl (IMT Atlantique) and Frédérick Benaben (IMT Mines Albi) were received by **Frédéric Simottel of BFM 01 Business**. Their topic was “comment utiliser la réalité virtuelle au service de la cybersécurité ?”



May

- The chair participated at the Rendez-vous de la **Recherche et de l'Enseignement de la Sécurité des Systèmes d'Information (RESSI)** at Chambon-sur-Lac, France from 10-12 mai 2022. Marc-Oliver Pahl presented the chaire. Léo Lavaur presented his PhD work.
- The chair was part of the organizing committee of the **Network Operations and Management Symposium (NOMS)**.
- At the NOMS, the chair co-organized a **panel on cybersecurity**.
- Also at the NOMS, the chair co-organized a **workshop on IoT Management**.
- **Research Update Spring** in Rennes with keynote of Youssef Laarouchi (EDF)



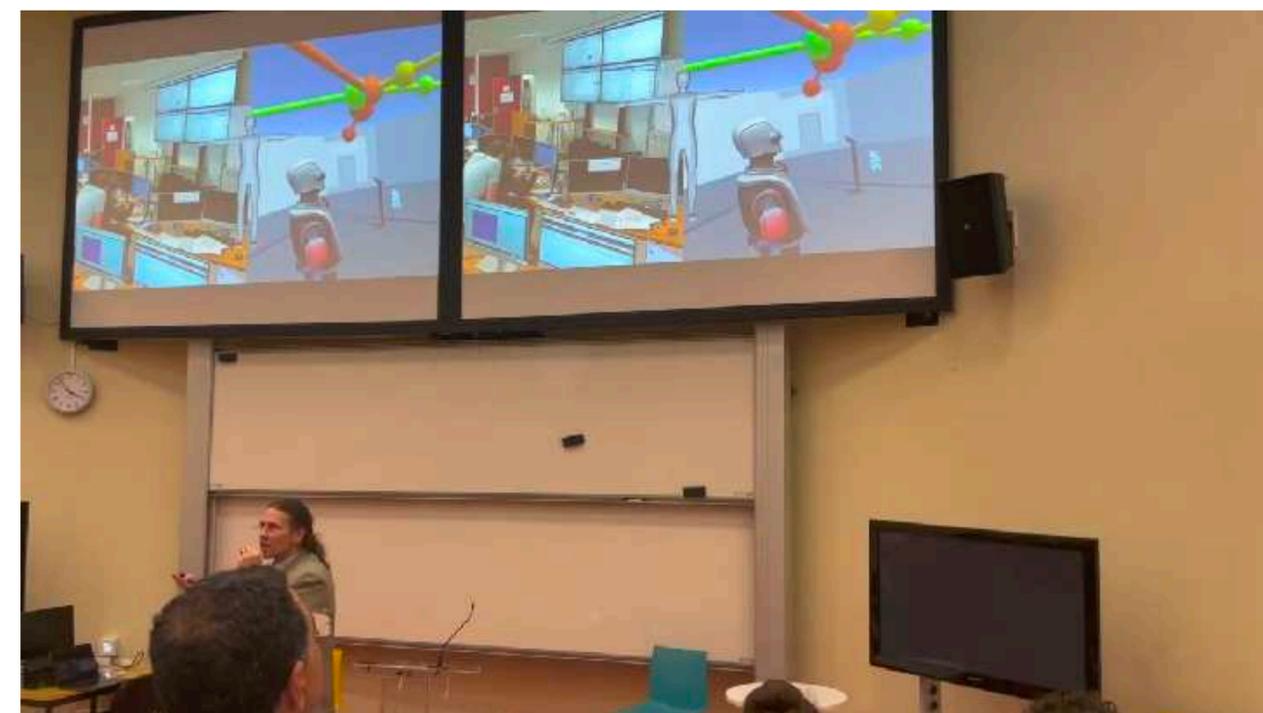
June

- The chair (Marc-Oliver Pahl) participated at the **Young Security Conference (YSC)** ahead of the Munich Security Conference in a roundtable on **“Cybersecurity – Readjusting Institutional Strategy and the Role of AI”**.



July

- The chair presented at the **research seminar of IMT Atlantique** with a presentation on “The chair presented at the research seminar of IMT Atlantique with a presentation on “A Security-Operation Center in the Metaverse”.



August

- Holidays :-)



September

- The chair organized the **IMT Webinaire Risques&Cybersécuritéés**: Marc-Oliver Pahl “Migrer le SOC vers le Metaverse – virtualiser le Security Operation Center”
- The chaire (Marc-Oliver Pahl) participated at an **interview with Deutschlandfunk on the European Data Act**.
- The chaire (Marc-Oliver Pahl) participated at the **Heidelberg Laureate Forum** with several Turing Award winners.
- The chaire participated at the **Bits and Pretzels** festival in Munich and co-organized a **round-table with the German-French Academy for the Industry of the Future on “ Metaverse – threat or opportunity for the French-German industry?”**



October

- Research Update Fall SNCF



November

- Organization of a **half-day event at the European Cyber Week**
- **Presence at the stand of Airbus** with Demos
- 2 presentations at C&ESAR



December

- T.B.A.



Testimonials of our partners

CHAIRE

CYBERCNI

Sécurité des infrastructures critiques

“Let’s roll - cybersecurity for mobile infrastructures:
a successful collaboration between SNCF and the chair CyberCNI”



Cyril Cappi

Team Leader Rail Safety System at SNCF
VP R&D at Fédération Française de la
Cybersécurité



Sécurité des infrastructures critiques

“Cybersecurity as central element in the DNA of IMT Atlantique
The chair CyberCNI in its heart”



IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

4:00
Stop

Christophe LEROUGE
Director

Sécurité des infrastructures critiques

cyberCNI.fr

“Cybersecurity as central element in the DNA of IMT Atlantique
The chair CyberCNI in its heart”



IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

Véronique STEPHAN
Development & Corporate
Relations

Sécurité des infrastructures critiques

4:00
Stop

“The Chair CyberCNI as key actor of the ecosystem of the Pôle d’Excellence Cyber (PEC)”

PÔLE D’EXCELLENCE
CYBER

Colonel

Pierre-Arnaud BORRELLY

Délégué Général

4:00
Stop

Sécurité des infrastructures critiques

cyberCNI.fr



“The role of academic partnerships within Airbus Defence and Space Cybersecurity at the example of the chair CyberCNI”



AIRBUS

Nicolas Razy

Head of Defence and Strategic Programmes France, Airbus

4:00
Stop

Sécurité des infrastructures critiques

cyberCNI.fr

“The added value of the collaboration with the Chair CyberCNI for our bank”



BNP PARIBAS

La banque d'un monde qui change

Marc-Michel STACK

Head of Group IT Technology of
Intelligence

4:00
Stop

Sécurité des infrastructures critiques

cyberCNI.fr

“Energy & CyberCNI : The role of the collaboration for EDF”



Etienne DECOSSIN

Responsable du programme Tech
de l'information, simulation avancée

4:00
Stop



Youssef LAAROUCHI

Cybersecurity Project Manager

“How to join the club ? 7 reasons for becoming a partner of the chair CyberCNI”



IMT Atlantique

Bretagne-Pays de la Loire
École Mines-Télécom

Marc-Oliver PAHL

Chairholder chair CyberCNI

Professor IMT Atlantique

Sécurité des infrastructures critiques

Why should you engage as a partner at the chaire?

Well, there are at least 8 reasons...

1. Extending competencies in Cybersecurity / participating in excellent research from the very top Grandes Ecoles in France on this subject (IMT Atlantique, Telecom Paris, Telecom SudParis): At the chaire we do excellent research on diverse aspects of cybersecurity for distributed networked systems.
2. Access to many more research activities than you pay for: Besides that a big advantage for you could be that you will be able to follow all thesis obviously, which means though only paying for two PhD theses you have access to the many we will have, typically 10 in parallel.
3. More opportunities for joint research, e.g. with final year students, in teaching, priority in hiring interns, working on project proposals in the context of the EU, ANR, etc.
4. Recruitment option: At the end of each thesis, the partners receive the CV of the PhD and can try to recruit her/him. If the collaboration works well, it should be simple to recruit the person afterwards.

Why should you engage as a partner at the chaire?

Well, there are at least 8 reasons...

5. „Neutral ground” exchange possibility with the other partners: In addition, an important aspect is the regular exchange on neutral terrain with the other partners.
6. Access to our Cyber CNI experimentation platform for making joint experimentation with us and possibly in-between multiple partners, and priority access to our facilities, including several cyber-physical research labs, etc.
7. Tax benefit: via mécénat. The Mines Telecom Foundation will be happy to answer any questions regarding this.
8. Additional Visibility: Joint publications, participation possibility in the diverse activities of the chaire, including:
 - <https://talk.cybercni.fr>, the cybersecurity speaker series
 - <https://school.future-iot.org>, the PhD school series on IoT
 - <https://being-human-with-algorithms.org>, the series on the digital transformation
 - regular visibility in the press through the chaire
 - possibilities for press interviews organized by the chaire
 - participation possibility in round-tables etc.
 - ...





Session II

Excellent cybersecurity research around current challenges in cybersecurity for critical infrastructures

CYBERCNI

Sécurité des infrastructures critiques

11:00 am Cybersecurity as key factor in the ecosystem of Brittany and the role of the chair CyberCNI within *Jérôme Tré-Hardy, Conseiller régional délégué à la transition numérique et la cyber- Région Bretagne*



11:05 am Research Activities of the Chaire *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes*



11:10 am **90sec per PhD thesis**

11:30 am **Panel:** How safe are our critical infrastructures under the current geopolitical circumstances?

The recent geopolitical developments show us once more how fragile our critical infrastructures are. With the outbreak of the war in Ukraine, diverse disruptions in systems such as energy production or communication occurred. In this panel we discuss the new threat potential we are facing today.

- *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes (Moderation)*
- *Cyril Cappi, Team Leader Rail Safety System at SNCF / VP R&D at Fédération Française de la Cybersécurité*
- *Gianluca Vannuccini, Director Dir Système Information, Infrastructures Technologiques et Innovation, Toscany*
- *Éric Labouré, Nokia Head of Business Operations, Managed Security Services, Nokia*
- *Alban Odrejeck, Co-founder/CTO & speaker chez ANOZR WAY*
- *Reda Yaich, Senior Researcher SystemX*



Axe 1: Prevent

- 11:10 am Software-defined Security for Network Function Virtualization, Manel SMINE [PhD student] [IMT Atlantique]
- 11:12 am Security risk optimization for learning on data of heterogeneous quality, Hassan CHAITOU [PhD student] [Télécom Paris]
- 11:14 am Digital twins for cyber security, Zeinab Ibrahim Rahal [PhD student] [Télécom Sud Paris]
- 11:16 am CodeLedger: Tracking the provenance of critical open source components, Luís Fernando de Oliveira Soeiro [PhD student] [Télécom Sud Paris]

Axe 2: Detect

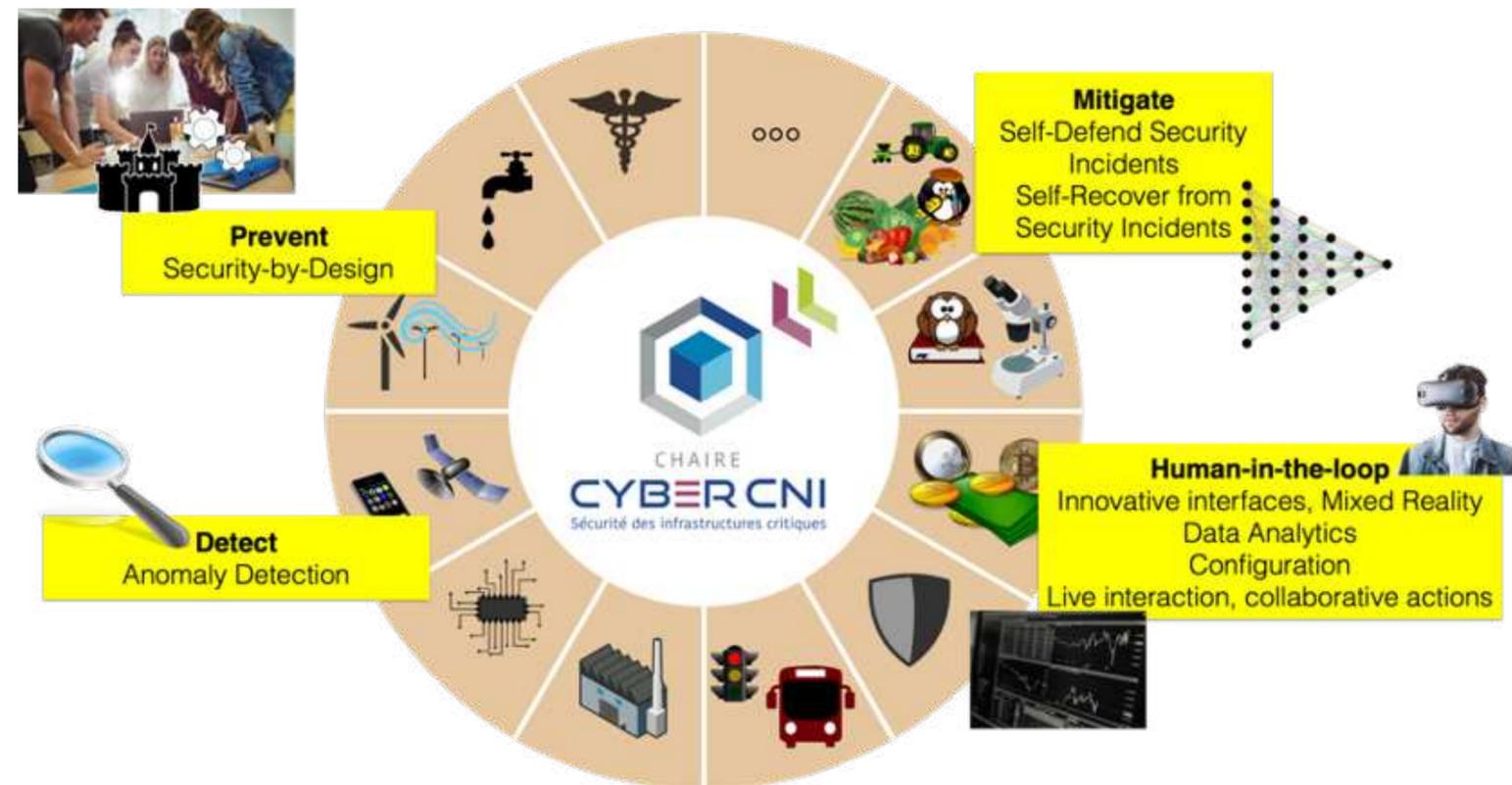
- 11:18 am Federated learning for defending Cyber-Attacks, Léo LAVAUUR, [PhD student] [IMT Atlantique]

Axe3: Mitigate

- 11:20 am Collaborative Cybersecurity,
Loic MILLER, [PostDoc] [IMT Atlantique]
- 11:22 am Securing Mobile Infrastructures,
Nisrine IBADAH, [PostDoc] [IMT Atlantique]

Axe 4: Human-in-the-loop

- 11:24 am Cyber Sécurité en Réalité Virtuelle,
Nicolas DELCOMBEL [PhD student] [IMT Atlantique]
- 11:26 am Immersive Cybersecurity
Anthony DAVID [PhD student] [IMT Atlantique]



We continue at 11h00 CET

3

Chair Cybersecurity for Critical Networked Infrastructures @ECW 2022

Marc-Oliver Pahl

Titulaire de la chaire cybersécurité des
infrastructures critiques (cyberCNI.fr)

Sécurité des infrastructures critiques





Session 1

The chaire Cybersecurity of Critical Networked Infrastructures (cyberCNI.fr) as important pillar in the French and European cybersecurity ecosystem

CYBERCNI
Sécurité des infrastructures critiques

- 09:30 am Chaire cyberCNI.fr - Excellence in cybersecurity since 2016
Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes
- 09:45 am Cybersecurity as central element in the DNA of IMT Atlantique - the chair CyberCNI in its heart
Christophe Lerouge, Director of IMT Atlantique
Veronique Stephan, Development and Corporate relations, IMT Atlantique
- 09:55 am The chaire CyberCNI as key actor of the ecosystem of the Pôle d'Excellence Cyber (PEC)
Colonel Pierre-Arnaud Borrelly, Délégué général du PEC,
Commandant du Groupement de cyberdéfense des Armées (COMCYBER/GCA)
- 10:00 am The role of academic partnerships within Airbus Defence and Space Cybersecurity at the example of the chair
CyberCNI, Nicolas Razy, Head of Defence and Strategic Programmes France, Airbus
- 10:05 am The added value of the collaboration with the chair CyberCNI for our bank
Marc-Michel Stack, Head of Group IT Technology Intelligence, BNP PARIBAS
- 10:10 am Energy and CyberCNI - the role of the collaboration for EDF
Etienne Decossin, Responsable du programme Tech de l'information - Simulation avancée, EDF R&D
Youssef Laarouchi, Cybersecurity Project Manager, EDF
- 10:15 am Let's roll - cybersecurity for mobile infrastructures: a successful collaboration between SNCF and the chair
CyberCNI, Cyril Cappi, Team Leader Rail Safety System at SNCF /
VP R&D at Fédération Française de la Cybersécurité
- 10:20 am How to join the club? 7 Reasons for becoming a partner of the chair CyberCNI
Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes
- 10:25 am Outlook to the research session at 11h00
Networking





Session II

Excellent cybersecurity research around current challenges in cybersecurity for critical infrastructures

CYBERCNI

Sécurité des infrastructures critiques

11:00 am Cybersecurity as key factor in the ecosystem of Brittany and the role of the chair CyberCNI within *Jérôme Tré-Hardy, Conseiller régional délégué à la transition numérique et la cyber- Région Bretagne*



11:05 am Research Activities of the Chaire *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes*



11:10 am **90sec per PhD thesis**

11:30 am **Panel:** How safe are our critical infrastructures under the current geopolitical circumstances?

The recent geopolitical developments show us once more how fragile our critical infrastructures are. With the outbreak of the war in Ukraine, diverse disruptions in systems such as energy production or communication occurred. In this panel we discuss the new threat potential we are facing today.

- *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes (Moderation)*
- *Cyril Cappi, Team Leader Rail Safety System at SNCF / VP R&D at Fédération Française de la Cybersécurité*
- *Gianluca Vannuccini, Director Dir Système Information, Infrastructures Technologiques et Innovation, Toscany*
- *Éric Labouré, Nokia Head of Business Operations, Managed Security Services, Nokia*
- *Alban Odrejeck, Co-founder/CTO & speaker chez ANOZR WAY*
- *Reda Yaich, Senior Researcher SystemX*



“Cybersecurity as key factor in the ecosystem of Brittany and the role of the chair CyberCNI within”



UNION EUROPÉENNE
UNANIEZH EUROPA



L'Europe s'engage
en Bretagne / Avec le Fonds européen
de développement régional



Jérôme TRE-HARDY
Conseiller régional
Région Bretagne

Sécurité des infrastructures critiques

4:00
Stop



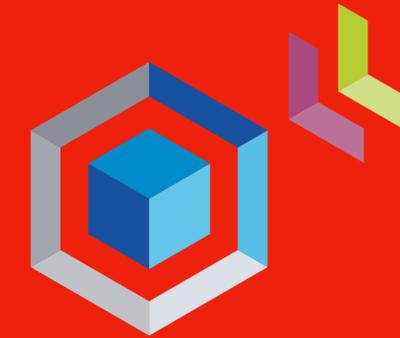
90 Sec Research Pitches

CHAIRE

CYBERCNI

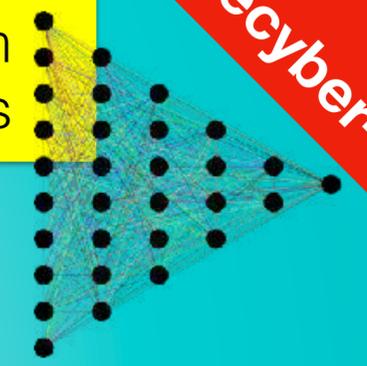
Sécurité des infrastructures critiques

<https://www.chairecyber-cni.org/>



Prevent
Security-by-Design

Mitigate
Self-Defend Security Incidents
Self-Recover from Security Incidents



Human-in-the-loop
Innovative interfaces, Mixed Reality
Data Analytics
Configuration
Live interaction, collaborative actions

Detect
Anomaly Detection

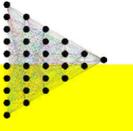


Ethical Algorithms Machine Learning
Distributed Ledgers Digital Twins



 **Prevent**

 **Detect**

 **Mitigate**

 **Human-in-the-loop**

 T5 : Software Defined Security for Internet of Things

 T9 : Federated threat detection and defense

AI

T2: 3D interfaces for Cybersecurity 

 T4: Optimisation of security risks through learning on heterogeneous data

T1 : Automated learning and handling of Cyber-Physical Attacks 

T6' : Jumeaux numériques pour la cyber-sécurité 

 Cybersecurity for connected mobile systems

 Collaborative Cybersecurity

 [IMTA] P3-1-Digital-Twin: Modular Digital Twin-based cyber resilience

TP
 [TP] P3-3-Codeledger: CodeLedger: tracking the provenance of critical open source components

 [IMTA] P3-2-Piloting: Real-world detection and mitigation of AI-based cyberattacks and defence mechanisms

 [TSP] P3-4: How can crypto-watermarking-DLTs improve trust in the use of AI for cybersecurity? 

 [IMTA] P3-6-Software: Improving resilience through securing connected software in IT and OT (PostDoc)

 [IMTA] P3-5-Interface: Multi-Modal Collaborative Cybersecurity Operation Center

Engineer

PostDoc

PhD student

Axe 1: Prevent

- 11:10 am Software-defined Security for Network Function Virtualization, Manel SMINE [PhD student] [IMT Atlantique]
- 11:12 am Security risk optimization for learning on data of heterogeneous quality, Hassan CHAITOU [PhD student] [Télécom Paris]
- 11:14 am Digital twins for cyber security, Zeinab Ibrahim Rahal [PhD student] [Télécom Sud Paris]
- 11:16 am CodeLedger: Tracking the provenance of critical open source components, Luís Fernando de Oliveira Soeiro [PhD student] [Télécom Sud Paris]

Axe 2: Detect

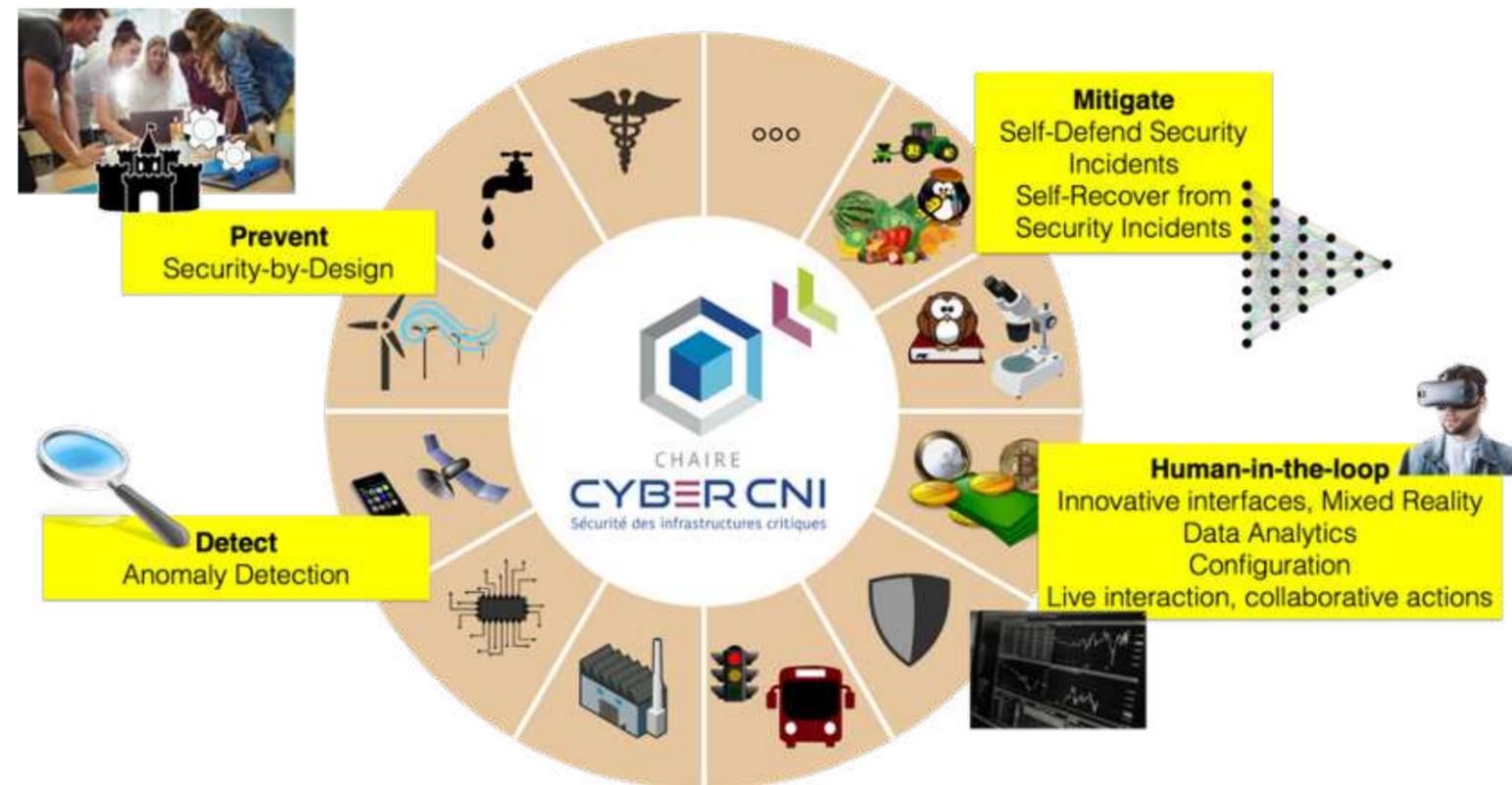
- 11:18 am Federated learning for defending Cyber-Attacks, Léo LAVAUUR, [PhD student] [IMT Atlantique]

Axe3: Mitigate

- 11:20 am Collaborative Cybersecurity,
Loic MILLER, [PostDoc] [IMT Atlantique]
- 11:22 am Securing Mobile Infrastructures,
Nisrine IBADAH, [PostDoc] [IMT Atlantique]

Axe 4: Human-in-the-loop

- 11:24 am Cyber Sécurité en Réalité Virtuelle,
Nicolas DELCOMBEL [PhD student] [IMT Atlantique]
- 11:26 am Immersive Cybersecurity
Anthony DAVID [PhD student] [IMT Atlantique]



Axe 1 : Prevent

“Software-defined security for network function virtualization”



IMT Atlantique

Bretagne-Pays de la Loire
École Mines-Télécom

Manel SMINE

PhD Student

1:30
Stop

Sécurité des infrastructures critiques

cyberCNI.fr



Marc-Oliver Pahl | cyberCNI.fr

Axe 1 : Prevent

“Optimization of security risk for learning on heterogeneous data”



TELECOM
Paris



Hassan CHAITOU

PhD Student

1:30
Stop

CHAIRE
CYBERCNI
Sécurité des infrastructures critiques

Axe 1 : Prevent

“Digital Twins for Cybersecurity”



Zeinab RAHAL

PhD Student

1:30
Stop

Sécurité des infrastructures critiques

cyberCNI.fr



Marc-Oliver Pahl | cyberCNI.fr

Axe 1 : Prevent

“CodeLedger : tracking the provenance of critical open source components”



TELECOM
Paris



Luis SOEIRO
PhD Student

1:30
Stop

Sécurité des infrastructures critiques

Axe 1: Prevent

- 11:10 am Software-defined Security for Network Function Virtualization, Manel SMINE [PhD student] [IMT Atlantique]
- 11:12 am Security risk optimization for learning on data of heterogeneous quality, Hassan CHAITOU [PhD student] [Télécom Paris]
- 11:14 am Digital twins for cyber security, Zeinab Ibrahim Rahal [PhD student] [Télécom Sud Paris]
- 11:16 am CodeLedger: Tracking the provenance of critical open source components, Luís Fernando de Oliveira Soeiro [PhD student] [Télécom Sud Paris]

Axe 2: Detect

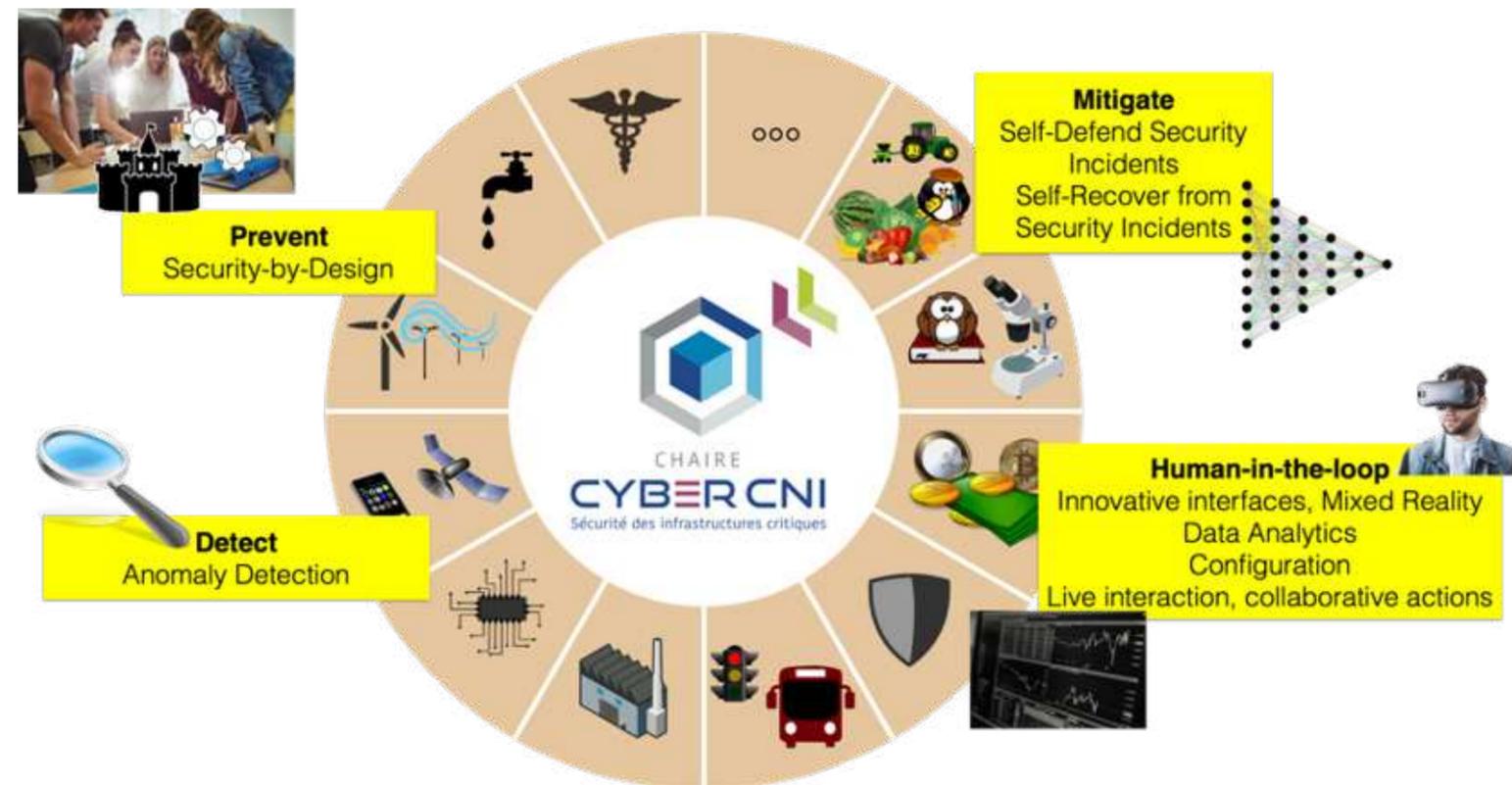
- 11:18 am Federated learning for defending Cyber-Attacks, Léo LAVAUUR, [PhD student] [IMT Atlantique]

Axe3: Mitigate

- 11:20 am Collaborative Cybersecurity,
Loic MILLER, [PostDoc] [IMT Atlantique]
- 11:22 am Securing Mobile Infrastructures,
Nisrine IBADAH, [PostDoc] [IMT Atlantique]

Axe 4: Human-in-the-loop

- 11:24 am Cyber Sécurité en Réalité Virtuelle,
Nicolas DELCOMBEL [PhD student] [IMT Atlantique]
- 11:26 am Immersive Cybersecurity
Anthony DAVID [PhD student] [IMT Atlantique]



“Federated learning for defending cyber-attacks”



IMT Atlantique

Bretagne-Pays de la Loire
École Mines-Télécom

Léo LAVAUUR

PhD Student

1:30
Stop

CHAIRE
CYBERCNI
Sécurité des infrastructures critiques

Axe 1: Prevent

- 11:10 am Software-defined Security for Network Function Virtualization, Manel SMINE [PhD student] [IMT Atlantique]
- 11:12 am Security risk optimization for learning on data of heterogeneous quality, Hassan CHAITOU [PhD student] [Télécom Paris]
- 11:14 am Digital twins for cyber security, Zeinab Ibrahim Rahal [PhD student] [Télécom Sud Paris]
- 11:16 am CodeLedger: Tracking the provenance of critical open source components, Luís Fernando de Oliveira Soeiro [PhD student] [Télécom Sud Paris]

Axe 2: Detect

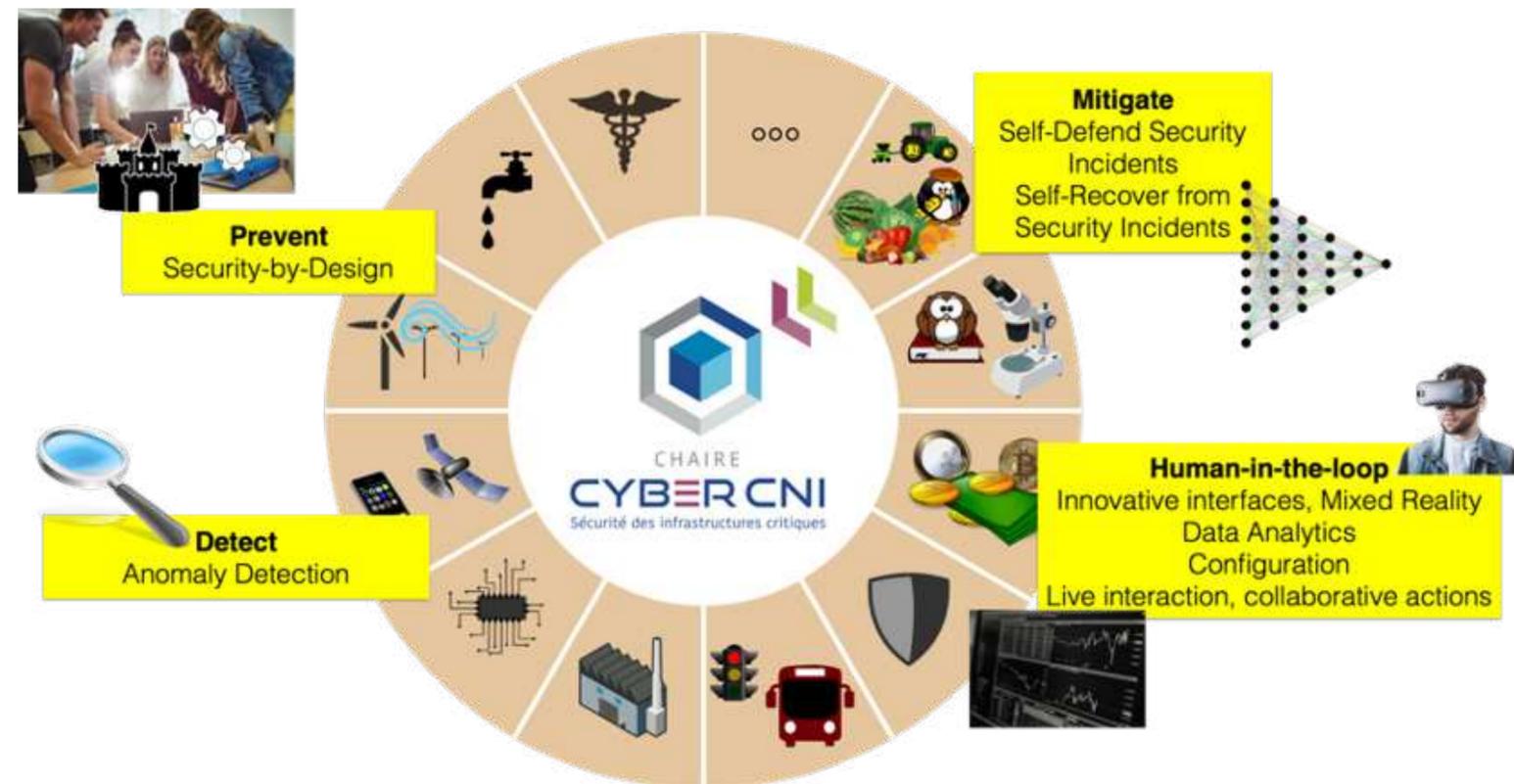
- 11:18 am Federated learning for defending Cyber-Attacks, Léo LAVAUUR, [PhD student] [IMT Atlantique]

Axe3: Mitigate

- 11:20 am Collaborative Cybersecurity,
Loic MILLER, [PostDoc] [IMT Atlantique]
- 11:22 am Securing Mobile Infrastructures,
Nisrine IBADAH, [PostDoc] [IMT Atlantique]

Axe 4: Human-in-the-loop

- 11:24 am Cyber Sécurité en Réalité Virtuelle,
Nicolas DELCOMBEL [PhD student] [IMT Atlantique]
- 11:26 am Immersive Cybersecurity
Anthony DAVID [PhD student] [IMT Atlantique]



“Collaborative cybersecurity”



IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

Loïc MILLER
Postdoc

1:30
Stop

Sécurité des infrastructures critiques

“Securing mobile infrastructures”



IMT Atlantique

Bretagne-Pays de la Loire
École Mines-Télécom

Nisrine IBADAH

Postdoc

1:30
Stop

Sécurité des infrastructures critiques

Axe 1: Prevent

- 11:10 am Software-defined Security for Network Function Virtualization, Manel SMINE [PhD student] [IMT Atlantique]
- 11:12 am Security risk optimization for learning on data of heterogeneous quality, Hassan CHAITOU [PhD student] [Télécom Paris]
- 11:14 am Digital twins for cyber security, Zeinab Ibrahim Rahal [PhD student] [Télécom Sud Paris]
- 11:16 am CodeLedger: Tracking the provenance of critical open source components, Luís Fernando de Oliveira Soeiro [PhD student] [Télécom Sud Paris]

Axe 2: Detect

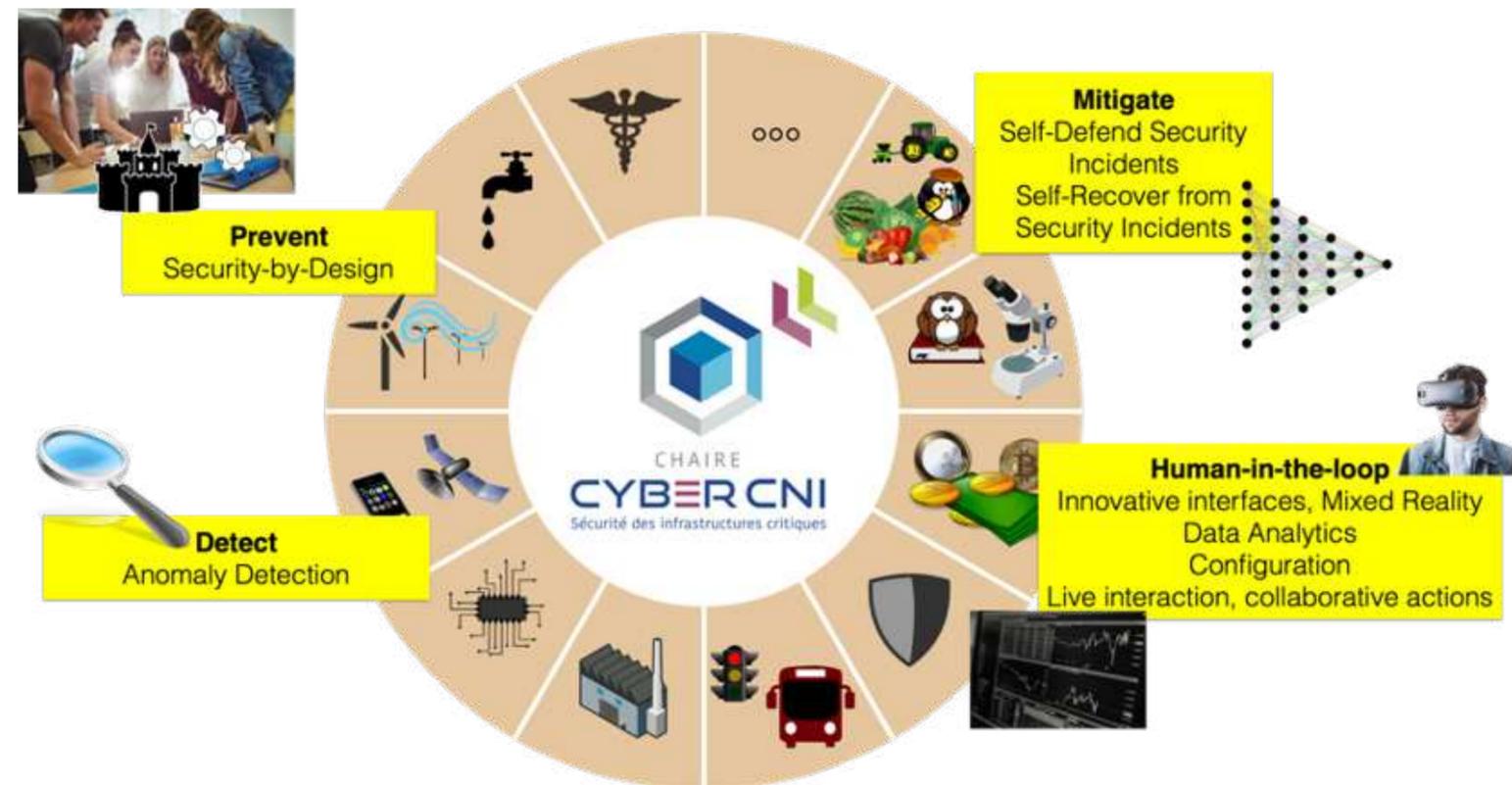
- 11:18 am Federated learning for defending Cyber-Attacks, Léo LAVAUUR, [PhD student] [IMT Atlantique]

Axe3: Mitigate

- 11:20 am Collaborative Cybersecurity,
Loic MILLER, [PostDoc] [IMT Atlantique]
- 11:22 am Securing Mobile Infrastructures,
Nisrine IBADAH, [PostDoc] [IMT Atlantique]

Axe 4: Human-in-the-loop

- 11:24 am Cyber Sécurité en Réalité Virtuelle,
Nicolas DELCOMBEL [PhD student] [IMT Atlantique]
- 11:26 am Immersive Cybersecurity
Anthony DAVID [PhD student] [IMT Atlantique]



Axe 4 : Human-in-the-loop

“Cyber sécurité en réalité virtuelle”



IMT Atlantique

Bretagne-Pays de la Loire
École Mines-Télécom

1:30
Stop

Nicolas DELCOMBEL
PhD Student

Sécurité des infrastructures critiques

cyberCNI.fr

“Immersive cybersecurity”



IMT Atlantique

Bretagne-Pays de la Loire
École Mines-Télécom

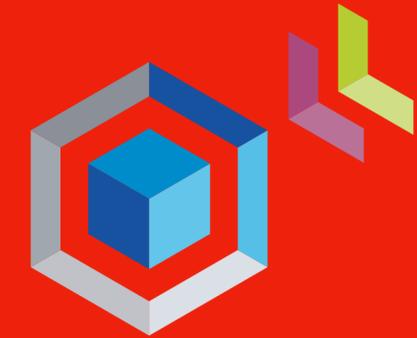
Anthony DAVID

PhD Student

1:30
Stop

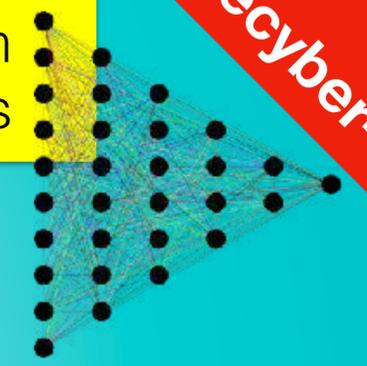
Sécurité des infrastructures critiques

<https://www.chairecyber-cni.org/>



Prevent
Security-by-Design

Mitigate
Self-Defend Security Incidents
Self-Recover from Security Incidents



Human-in-the-loop
Innovative interfaces, Mixed Reality
Data Analytics
Configuration
Live interaction, collaborative actions

Detect
Anomaly Detection

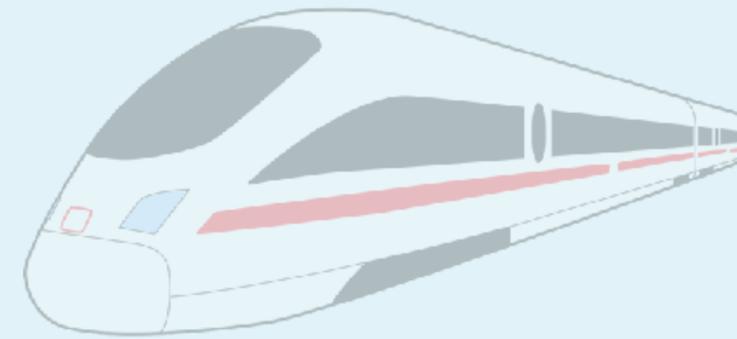


Ethical Algorithms Machine Learning
Distributed Ledgers Digital Twins



“How safe are our critical infrastructures under the current geopolitical circumstances ?”

Panel Discussion



The recent geopolitical developments show us once more how fragile our critical infrastructures are. With the outbreak of the war in Ukraine, diverse disruptions in systems such as energy production or communication occurred. In this panel we discuss the new threat potential we are facing today.

“How safe are our critical infrastructures under the current geopolitical circumstances ?”



- **Marc-Oliver Pahl**, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes (Moderation)
- **Cyril Cappi**, Team Leader Rail Safety System at SNCF / VP R&D at Fédération Française de la Cybersécurité
- **Gianluca Vannuccini**, Director Dir Système Information, Infrastructures Technologiques et Innovation, Tuscany region
- **Éric Labouré**, Nokia Head of Business Operations, Managed Security Services, Nokia
- **Alban Odrejeck**, Co-founder/CTO & speaker chez ANOZR WAY
- **Reda Yaich**, Senior Researcher SystemX

“How safe are our critical infrastructures under the current geopolitical circumstances ?”

How did the attack surface change over the past 7 years?

What changed on the types and techniques of the ATTACKERS?

What changed on the types and techniques of the DEFENDERS?



What is the role of AI for Cybersecurity?

“How safe are our critical infrastructures under the current geopolitical circumstances ?”

How did the attack surface change over the past 7 years?

What changed on the types and techniques of the ATTACKERS?

What changed on the types and techniques of the DEFENDERS?

What is the role of AI for Cybersecurity?



“How safe are our critical infrastructures under the current geopolitical circumstances ?”

How did the attack surface change over the past 7 years?

What changed on the types and techniques of the ATTACKERS?

What changed on the types and techniques of the DEFENDERS?

What is the role of AI for Cybersecurity?



“How safe are our critical infrastructures under the current geopolitical circumstances ?”

How did the attack surface change over the past 7 years?

What changed on the types and techniques of the ATTACKERS?

What changed on the types and techniques of the DEFENDERS?



What is the role of AI for Cybersecurity?

Chair Cybersecurity for Critical Networked Infrastructures @ECW 2022

Marc-Oliver Pahl

Titulaire de la chaire cybersécurité des
infrastructures critiques (cyberCNI.fr)



Sécurité des infrastructures critiques



Session 1

The chaire Cybersecurity of Critical Networked Infrastructures (cyberCNI.fr) as important pillar in the French and European cybersecurity ecosystem

CYBERCNI
Sécurité des infrastructures critiques

- 09:30 am Chaire cyberCNI.fr - Excellence in cybersecurity since 2016
Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes
- 09:45 am Cybersecurity as central element in the DNA of IMT Atlantique - the chair CyberCNI in its heart
Christophe Lerouge, Director of IMT Atlantique
Veronique Stephan, Development and Corporate relations, IMT Atlantique
- 09:55 am The chaire CyberCNI as key actor of the ecosystem of the Pôle d'Excellence Cyber (PEC)
Colonel Pierre-Arnaud Borrelly, Délégué général du PEC,
Commandant du Groupement de cyberdéfense des Armées (COMCYBER/GCA)
- 10:00 am The role of academic partnerships within Airbus Defence and Space Cybersecurity at the example of the chair
CyberCNI, Nicolas Razy, Head of Defence and Strategic Programmes France, Airbus
- 10:05 am The added value of the collaboration with the chair CyberCNI for our bank
Marc-Michel Stack, Head of Group IT Technology Intelligence, BNP PARIBAS
- 10:10 am Energy and CyberCNI - the role of the collaboration for EDF
Etienne Decossin, Responsable du programme Tech de l'information - Simulation avancée, EDF R&D
Youssef Laarouchi, Cybersecurity Project Manager, EDF
- 10:15 am Let's roll - cybersecurity for mobile infrastructures: a successful collaboration between SNCF and the chair
CyberCNI, Cyril Cappi, Team Leader Rail Safety System at SNCF /
VP R&D at Fédération Française de la Cybersécurité
- 10:20 am How to join the club? 7 Reasons for becoming a partner of the chair CyberCNI
Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes
- 10:25 am Outlook to the research session at 11h00
Networking





Session II

Excellent cybersecurity research around current challenges in cybersecurity for critical infrastructures

CYBERCNI

Sécurité des infrastructures critiques

11:00 am Cybersecurity as key factor in the ecosystem of Brittany and the role of the chair CyberCNI within *Jérôme Tré-Hardy, Conseiller régional délégué à la transition numérique et la cyber- Région Bretagne*



11:05 am Research Activities of the Chaire *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes*



11:10 am **90sec per PhD thesis**

11:30 am **Panel:** How safe are our critical infrastructures under the current geopolitical circumstances?

The recent geopolitical developments show us once more how fragile our critical infrastructures are. With the outbreak of the war in Ukraine, diverse disruptions in systems such as energy production or communication occurred. In this panel we discuss the new threat potential we are facing today.

- *Marc-Oliver Pahl, Titulaire de la chaire cyberCNI.fr, IMT Atlantique, Rennes (Moderation)*
- *Cyril Cappi, Team Leader Rail Safety System at SNCF / VP R&D at Fédération Française de la Cybersécurité*
- *Gianluca Vannuccini, Director Dir Système Information, Infrastructures Technologiques et Innovation, Toscany*
- *Éric Labouré, Nokia Head of Business Operations, Managed Security Services, Nokia*
- *Alban Odrejeck, Co-founder/CTO & speaker chez ANOZR WAY*
- *Reda Yaich, Senior Researcher SystemX*



For more
info
take a look
at
[https://
cyberCNI.fr/](https://cyberCNI.fr/)

