

# Maria Méndez Real

*Junior Professor Chair  
Université Bretagne Sud, Lab-STICC UMR CNRS 6285*

## Personal Info

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## Education & Qualifications

**Qualification to CNU 61 Section (Electronics and Electrical Engineering) (2018-2022)**

**Qualification to CNU 27 Section (Computer Science) (2018-2022)**

**PhD - European Label, Electronic and Electrical Engineering, in the frame of TSUNAMY project, funded by the French Agency of Research (ANR) (2014-2017)**

Université de Bretagne-Sud - Laboratoire Lab-STICC UMR CNRS 6285, France

Title: Physical Isolation against SW-based Cache Side-Channel Attacks on Many-core Architectures

PhD director: Prof. Guy Gogniat, guy.gogniat@univ-ubs.fr, co-sup. Ass. Prof. Vianney Lapotre

**Research oriented Master in Microtechnologies Architecture Networks and Communication Systems (I-MARS) (2014)**

Université Bretagne Sud, France

**Bachelor Degree on Electronic and Industrial Computer Science (EII) (2012)**

Université Bretagne Sud, France

## Teaching Activity - Key words

### Institutions:

- Université Bretagne Sud (UBS) (since 2024), as Chaire Professeur Junior
- Polytech Université de Nantes (2017-2023), as Associate Professeur
- Université Bretagne Sud (UBS) (2014-2017), as PhD student and Assistant Professeur

### Courses domain:

Cybersecurity - Computer Science - Electronics - Supervision of students projects and internships

### Courses Referee:

- Security of Connected devices - 5th year engineer, Electronics department, Polytech Nantes Université
- Cybersecurity - 5th year engineer, Computer Science dpt, Polytech Nantes Université
- C Language and Algorithm - 3rd year engineer, Polytech Nantes Université
- Resp. of Transversal Projects - 4th year engineer, Polytech Nantes Université

## Research Experience

**Chaire Professeur Junior (since 2024) - Trusted and Autonomous Maritime Swarm of Drones**

Université Bretagne Sud - Lab-STICC UMR CNRS 6285, SHAKER research team, France

### Associate Professor (since 2018)

Polytech - Nantes Université - IETR UMR CNRS 6164, ASIC research team, France

### Assistant Professor (ATER) (2017 - 2018)

Polytech - Université de Nantes - IETR UMR CNRS 6164, ASIC research team, France

### Invited researcher (2015, 4 months)

Ruhr-University Bochum (RUB), MCA (Multi-Core Architectures) research group, Germany

## Summary of PhD Students Supervision

**Juliette Pottier** Securing RISC-V Processors against Microarchitectural Side-Channel Attacks (2022-2025)

**May Myat Thu** Side-Channel Attacks Vulnerabilities of Neural Networks FPGA Accelerators (2021-2025)

**Dr Safouane Noubir** Vulnerabilities of dynamic Energy Management on Multi-core Architectures (2018-2021)

## Ongoing PhD

Tsion Fekadu	Embedded Detection of Deviant Drone Behavior (2025 - )
Mohcine Kaddi	Trusted Embedded AI for collaboration within a Swarm of Drones (2025 - )
Baptiste Chambon	EM security evaluation on FPGA accelerators (2024 - )
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Elliott Quere	Internal System-on-Chip Security Vulnerabilities (2024 - )
Owen Le Gonnidec	Securing RISC-V Trusted Execution Environments against Energy-based Attack (2023 - )
Alla-Eddine Bahi	Covert Attacks on Air-gap Computers (2023 - )

## Summary of Publications and communications since 2014

- Invited speaker during international and national workshops, seminars and scientific schools (including TRUDEVICE, DGA-IRISA SemSecuElec, DGA-IRISA SILM, Doctoral Schools SERICS, FETCH, rsd forum and ARCHI)
- 7 Publications within international Journals JCR indexed (including ACM TECSx3, IEEE Trans. on Computers, Elsevier JSA, MDPI Applied Sciences)
- 18 publications within international conferences (including HOST, DATE, SAMOS, FPT, VLSI-SoC, ARES)
- Participant to different international and national communications and research gatherings

## Ongoing research projects

- **SecDrone**, Trusted and Autonomous Maritime Swarm of Drones. Funding: DGA (French Defence Procurement Agency) through (Excellence Cybersecurity Pole - Pôle d'Excellence Cyber PEC), **Scientific leader**(2025-2027)
- **M2DMAC**, Trusted and Autonomous Maritime Swarm of Drones. Funding: ANR Chair de Professeur Junior, **Leader**(2024-2028)
- **CoPhyTEE**, Securing open source RISC-V Trusted Execution Environments against remote, Energy-based Side-Channel Attacks. Funding: **French Agency of Research ANR JCJC (Program of Excellence for Young Researcher), Coordinator** (2023-2027)
- **XAirGap** Creation and Detection of Covert Communications on Air-gapped Computers. Funding: DGA (French Defence Procurement Agency) through (Excellence Cybersecurity Pole - Pôle d'Excellence Cyber PEC) (2023-2026)
- Evaluation of Security in Multi-processors systems from the Design Phase. Funding: IETR PEPS (Exploratory Action Program), **Coordinator** (2023)
- **ATTILA**, Side-Channel Attacks and Approximation Techniques on Neural NEtwork Accelerators. Funding: ANR JCJC (Program of Excellence for Young Researcher) (2022-2025)
- **SeCV**, Securing a RISC-V Processor. Funding: ANR PRCE (Academia-company collaborative research) (2022-2025)
- **VAVIECA**, Vulnerabilities of Neural Networks accelarators againts Electromagnetic Side-Channel Attacks. Funding: DGA (French Defence Procurement Agency) through the PEC, **Scientific referee** (2021-2024)
- **NOP**, Intermittent Computing for Internet of Things based on Non volatile Memories. Funding: Cominlabs, **Scientific referee** (2021-2024)

## Responsabilities and Research Animation

### Technical Program Commitee (PC) of national and international Conferences and Journals

including TCHES'23-'24, DATE'24-'26, ISVLSI-Sécurité'22-25, ARC-Sécurité, SAC, ARES'22-24...

**Reviewer for national and international Conferences and Journals** including DATE, NEWCAS, FPL, TCAD, LASCAS, MCSOC, ICCS, Health & Technology Journal, Journal of Criptographic Engineering, ...

### Expert Evaluator

- Doctoral Thesis Award of CNRS GdR Sécurité Informatique (Computer security)(2026) – EDAA Outstanding Dissertation Award (2024-2026)
- CREACH'Lab projects (French Defence Procurement Agency DGA) (2023)
- PEC (Cybersecurity Excellence Pole, PEC throug DGA) (2021)
- French Agency of Research ANR (2020, 2026)
- French regional programs funded par the DESRI (French Direction de l'Enseignement Supérieur de la Recherche et de l'Innovation) (2019)

### Member of scientific expert boards and research groups

- Member of scientific board of SemSecuElec research seminars though CREACH'Lab - DGA (French Defence Procurement Agency DGA) and INRIA (since 2023)

- Member of research groupe *GT Groupe Miroir Sécurité* CNRS-Horizon Europe and Referee of INSIS institute (2021-2023)
- Referee of cybersecurity research of IETR research lab. Creation and referee of the transversal research axis CYM (Hardware cybersecurity) of IETR lab (2019-2023)

## Scientific Awards and Distinctions

- **Research Bonus Award *Prime RIPEC C3***

Category: Individual (2023-2026)

- **French Agency of Research ANR JCJC Grant - Program of Excellence for Young Researchers**

*CoPhyTEE Project* (2023-2027)

- **Doctoral Funding Award - Attractivité**

Grant funding from RFI région Pays de Loire for Excellent Young Researchers (2018-2021)

- **FADEx (French-American Doctoral Exchange)**

Scolarship for Participation to the Excellence Programme Exchange in Cybersecurity, FADEx (2017)