

## Education

- Dec 2022 — present **PhD student**, *Université Paris-Saclay, CEA List & Polytechnic Institute of Paris*, Paris, France  
I work in the BINSEC team (<https://binsec.github.io>) under the supervision of Stefano Zacchiroli and Michaël Marcozzi, on the automatic detection of advanced vulnerabilities at the binary level using dynamic analysis.
- Sep 2023 **Summer school student**, *Summer School on Security Testing & Verification*, Brussels, Belgium  
I attended the 2023 Summer School on Security Testing and Verification, organized by KU Leuven and VUB. Relevant lecture topics: static and dynamic program analysis, program verification.
- Aug 2023 **Summer school student**, *Marktoberdorf Summer School*, Marktoberdorf, Germany  
I attended the Marktoberdorf 2023 Summer School on Safety and Security through Formal Verification. Relevant lecture topics: proof assistants, SMT solvers, symbolic execution, program verification.
- Sep 2017 — Aug 2020 **Master of Science in Embedded Systems**, *Polytech Sorbonne (Pierre & Marie Curie University)*, Paris, France  
Relevant courses: Algorithms & Data Structures, Information Theory, Numerical Methods, Operating Systems, Compilers, Machine Learning, Networking, Analog Electronics, Digital Electronics.
- Sep 2019 — Dec 2019 **Exchange student**, *University of Toronto*, Toronto, Ontario, Canada  
First student of Polytech Sorbonne to be accepted at the University of Toronto. Courses: Advanced Algorithms, Quality of Service, Digital Design, Computer Security.
- Sep 2015 — Aug 2017 **Preparatory course of the Polytech Engineering Schools (PeiP)**, *Polytech Tours*, Tours, France  
88th out of 1500 in the national ranking of Polytech students (PeiP A). Relevant courses: Algorithms, Object-Oriented Programming, Fourier Analysis, Electromagnetism, Power Electronics.

## Personal experience

- Programming I have been programming since I was 15 years old. I have participated in the **National Computer Science Contest** (2015, Greece), in **Google Hashcode** (2018 & 2019), in the **Facebook Hackathon in Paris** (2018 & 2019), in the **Google foobar challenge** (2022–2023). I create and host open source projects and blog posts on my personal site (<https://kokkonisd.github.io>).

## Teaching

- Feb 2024 — Apr 2024 **Teaching Assistant (9 hours)**, *Télécom Paris*, Paris, France  
I worked as a teaching assistant in charge of the lab sessions of the INF203 “Web Development” course for the second-year engineering students at Télécom Paris. This is an introductory course to Web technologies and frameworks, with some background on security. The course was fully taught in English.
- Oct 2023 — Jan 2024 **Teaching Assistant (13.5 hours)**, *ENSTA Paris*, Paris, France  
I worked as a teaching assistant in charge of the lab sessions of the INI01 “Algorithms and programming” course for the first-year engineering students at ENSTA Paris. This is an introductory course to algorithm design applied to real programs using C, with a light overview of basic proofs of complexity, termination and correctness.
- Sep 2023 **Co-presenter**, *Summer School on Security Testing & Verification*, Brussels, Belgium  
I co-presented an introductory course in fuzzing together with my PhD supervisor Dr. Michaël Marcozzi at the 2023 Summer School on Security Testing and Verification. Specifically, I was in charge of showing the students how to use AFL++—a well-known fuzzer—in a simple demonstration, followed by a CTF (Capture-The-Flag) challenge.

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## Presentations & talks

- Mar 2024 **Automatic backdoor detection at the binary level**, WISG'24 (*Workshop Interdisciplinaire sur la Sécurité Globale*), Rennes, France  
First-place best presentation award.
- Nov 2021 **Software Composition Analysis using open-source tools**, *Open Source Experience 2021*, Paris, France  
<https://www.youtube.com/watch?v=nWiAQ-jFdUO>

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## Professional experience

- Nov 2020 —  
Sep 2022 **QA Release & Support engineer**, *AdaCore*, Paris, France  
*AdaCore* (<https://www.adacore.com>) creates and maintains GNAT, the main Ada compiler, as well as other code validation and code generation tools. I integrated the QA Release & Support team, actively participating in the development and productization process and maintaining the production system. My work focused on supply chain security and software composition analysis, and specifically in the detection of known vulnerabilities (CVEs) in the dependencies of *AdaCore*'s software.
- Mar 2020 —  
Aug 2020 **Embedded Computer Vision intern**, *STMicroelectronics*, Paris, France  
*STMicroelectronics* (<https://www.st.com>) is one of the largest semiconductor manufacturers in the world. I integrated a multidisciplinary team dispersed across multiple countries and developed a machine learning model for an AI-on-the-edge low-power application on a resource-restricted embedded platform. I also designed and tested a fully functioning demo for possible clients.
- Jun 2019 —  
Aug 2019 **Embedded IoT intern**, *Zerynth*, Pisa, Italy  
*Zerynth* (<https://www.zerynth.com>) is a company that provides a Python VM with minimal memory footprint to simplify firmware development. I developed low-level C firmware libraries and performed analysis on data collected by a WiFi sniffer to infer relationships between companies in a startup incubator.

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## References

- Pr. Stefano Zacchiroli, full professor of Computer Science at Télécom Paris, PhD supervisor ([stefano.zacchiroli@telecom-paris.fr](mailto:stefano.zacchiroli@telecom-paris.fr))
- Dr. Michaël Marcozzi, permanent researcher at the CEA List institute from Université Paris-Saclay, PhD supervisor ([michael.marcozzi@cea.fr](mailto:michael.marcozzi@cea.fr))
- Dr. Sébastien Bardin, senior researcher & CEA Fellow at the CEA List institute, head of the BINSEC team ([sebastien.bardin@cea.fr](mailto:sebastien.bardin@cea.fr))

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## Skills

### Computer Science & Embedded Systems

- Concepts Fuzzing (dynamic analysis), reverse engineering, binary program analysis, symbolic execution
- Languages C/C++ (both *desktop* and *embedded*), Rust, Python, assembly (x86, MIPS, ARM), MCU linker scripts/startup programs, VHDL, Java, JavaScript
- Software AFL++, QEMU, Ghidra, git, LaTeX, typst, Bash/Zsh, Neovim, UNIX systems, Sphinx, mdBook
- Hardware Microcontrollers (STM32 Cortex-M, ESP32, ATmega), FPGAs, Raspberry Pi

### Languages

- English (fluent) 117/120 on the TOEFL test, 8+ years of academic & professional experience
- French (fluent) 8+ years of academic & professional experience
- Greek (fluent) Mother tongue

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## Interests & hobbies

- Music Have been studying music since the age of 6, very interested in performance as well as composition. Written, recorded and produced three musical albums (<https://jimikokko.bandcamp.com>).
- Theater Active member of the Theater in English group of Polytech Sorbonne in 2017–2018. Founder/organizer of the Polytech Sorbonne student's theater group (2018–2019).