

# Haoying Zhang

+33 06 10 33 50 43 | [avrilzhang99@gmail.com](mailto:avrilzhang99@gmail.com) | [website](#)

[in](#) [LinkedIn Profile](#) | [G](#) [Github \(Master projects\)](#) | [G](#) [GitLab \(PhD projects\)](#)

Palaiseau, Ile de France - 91300, France

PhD student specializing in privacy-enhancing technologies for time-series data. I am seeking a cybersecurity position, either in academia or industry, starting in September 2026, based in Montréal or the surrounding area in Canada.

## EDUCATION

- **Inria de Saclay and INSA** September 2023 - August 2026  
*PhD in Computer Science (Expected)* Palaiseau, France
  - Privacy-Enhancing Technologies with Time Series
  - **Supervisors:** Benjamin Nguyen, Nicolas Ancaux
- **Institut National des Sciences Appliquées (INSA)** September 2018 - Juin 2023  
*Engineering Master's Degree (Double Degree with Master of Research in Cybersecurity)* Rennes, France
  - Major: Computer Science
  - Grade: 15.17/20 (Rank: 3/74)

## EXPERIENCE

- **ENSTA Paris**  September 2023 - Present  
*Teaching Assistant* Palaiseau, France
  - Taught Oracle Database to second-year engineering students
  - Prepared materials (VMs, servers) and supported students with exercises and individual problem-solving
  - Co-supervised an master student's research internship at Inria
- **INSA CVL**  February 2023 - August 2023  
*Research Intern* Bourges, France
  - Research internship with topic "Privacy-Preserving Graph Processing"
  - Developed a framework called PUZZLE to compute PageRank on large distributed graph in a privacy-preserving way (with Differential Privacy guarantee)
- **NAGRA NexGuard**  May 2022 - August 2022  
*Intern* Rennes, France
  - Engineering internship with topic "High Performance Computing for Forensic Watermarking Algorithms"
  - Implemented Single Instruction Multiple Data (SIMD) architectures with vector processors on x86 and ARM
  - Integrated SIMD architectures into forensic watermarking algorithms to achieve high performance on multiple platforms
- **Huawei**  July 2021 - September 2021  
*Intern* Beijing, China
  - Engineering internship with topic "Routing Protocol Testing"
  - Learnt 8+ TCP/IP routing protocols
  - Designed the topologies and implemented automatic tests

## PUBLICATIONS

C=CONFERENCE, J=JOURNAL, S=SUBMISSION

- [S.1] Charlène Jojon, **Haoying Zhang**, et al. (2025). **ZKPMP: Zero-Knowledge Proofs for Anomaly and Similarity Detection in Time Series via Matrix Profile**. Submitted to *AsiaCCS*.
- [J.1] Haoying Zhang, et al. (2025). **TELESAFE: Detecting Private/Work Boundary Crossings in Energy Consumption Trails in Telework**. In *VLDB Endowment*, pp. 1565 - 1578. ACM. 29 August 2025. DOI: 10.14778/3725688.3725690
- [C.1] Haoying Zhang, et al. (2025). **Demo: Exploring Utility and Attackability Trade-offs in Local Differential Privacy**. Accepted for publication in *CCS 2025*.
- [C.2] Haoying Zhang, et al. (2026). **Privacy Attacks on Matrix Profiles via Reconstruction Techniques**. Accepted for publication in *PETS 2026*.
- [C.3] Haoying Zhang, et al. (2026). **Demo of TELESAFE: Monitoring Energy Consumption for Work-Life Boundaries in Telework**. Accepted for publication in *ICDM 2025*.

## SKILLS

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- **Programming Languages:** Assembly, C, C++, Python, Java, Rust, OCaml, Perl, Ruby, JavaScript, PHP
- **Database Systems:** MySQL, Oracle
- **Machine Learning:** Classification algorithms, RNNs, CNNs, GANs, etc
- **Cloud & Containerization:** Docker, Kubernetes
- **DevOps:** Git

## PROJECTS

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- **Mycelium** September 2021 - Juin 2022  
*Tools: Embedded system, C++, LoRaWAN, Raspberry Pi, Docker, Kubernetes* 
  - Implemented an alarm system in sensors to trigger actions based on weather scenarios
  - Developed a Kubernetes-based fog infrastructure on a Raspberry Pi cluster for storing and processing sensor data transmitted via LoRaWAN, enabling monitoring of natural environments in Rennes
  - Collaborated with scientists and engineers from Geosciences Rennes and Clermont-Ferrand University
- **Exchange Rate Reminder** August 2020  
*Tools: Python, InfluxDB* 
  - Developed a web-scraping application with data processing and storage in InfluxDB
  - Implemented an email notification system triggered by exchange rate drops
- **Chessboard game** August 2020  
*Tools: JavaFx* 

## VOLUNTEER EXPERIENCE

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- **Mathematics and Physics Tutor** September 2018 - February 2019  
*INSA*
  - Tutored fellow students in mathematics and physics through classes and Q&A sessions
- **Volunteer at the Planetarium** August 2014  
*Beijing Planetarium*
  - Guided visitors through exhibits and provided telescope demonstrations

## ADDITIONAL INFORMATION

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**Languages:** Chinese (Mother tongue), French (Fluent: DELF B2, 85/100), English (Fluent: TOEIC, 945/990)

**Interests:** Snowboarding, Badminton, Running, Astronomy