

Gwendal Patat

PhD Candidate

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Research Interests

Cryptographic Implementations
Trusted Execution Environment
Digital Right Management
Smartphone Security & Privacy

Honors & Awards

- 2023 **Mozilla Foundation**, Bug Bounty Hall of Fame
- 2021 **Netflix, Inc.**, BugHunter Hall of Fame
- 2021 **Google LLC**, Vulnerability Research Program Hall of Fame & Honorable Mentions

Work Experience

- 2020–Now **Ph.D. Thesis in CyberSecurity**, *Bust the Trust: Exploring ARM TrustZone Implementations over Smartphones*, Univ Rennes, CNRS, IRISA, Rennes, France
Supervised by Pierre-Alain Fouque, and Mohamed Sabt.
- 2020 **Research Intern**, *EMSEC Team*, IRISA, Rennes, France
Research intern at the Institut de Recherche en Informatique et Systèmes Aléatoires (IRISA) in the Embedded Security team under the supervision of Mohamed Sabt. Analysis and exploitation of cryptographic implementations within the ARM TrustZone.
- 2019 **Research Intern**, *EMSEC Team*, IRISA, Rennes, France
Research intern at the Institut de Recherche en Informatique et Systèmes Aléatoires (IRISA) in the Embedded Security team under the supervision of Mohamed Sabt. Research on the U2F protocol and its security implementations in the wild.
- 2018 **Research Intern**, *STORM Team*, IRIT, Toulouse, France
Research intern at the Institut de Recherche en Informatique de Toulouse (IRIT) in the Structural Models and Tools in Computer Graphics (STORM) team, under the direction of Mathias Paulin. Implementation of a visual light path analysis tool.

Education

- 2020–Now **Ph.D. Thesis in CyberSecurity**, Université Rennes 1, Rennes, France
- 2018–2020 **Master’s Degree in CyberSecurity**, Université Rennes 1, Rennes, France
- 2015–2018 **Bachelor’s Degree of Computer Science**, Université Toulouse III Paul Sabatier, Toulouse, France

Publications

- **“WideLeak: How Over-The-Top Platform Fail in Android”**, Gwendal Patat, Mohamed Sabt, and Pierre-Alain Fouque, *52nd Annual IEEE/IFIP International Conference on Dependable Systems and Networks, DSN’22*, Baltimore, Maryland, United States, 2022.
- **“Exploring Widevine for Fun and Profit”**, Gwendal Patat, Mohamed Sabt, and Pierre-Alain Fouque, *16th IEEE Workshop on Offensive Technologies, WOOT’22*, San Francisco, California, United States, 2022.
- **“Please Remember Me: Security Analysis of U2F Remember Me Implementations in The Wild”**, Gwendal Patat and Mohamed Sabt, *Symposium sur la sécurité des technologies de l’information et des communications, SSTIC’20*, Rennes, France, 2020.

Talks

- **“Widevine in the Wild”**, Gwendal Patat, *Sony Entertainment*, Online, 2022.
- **“WideLeak: How Over-The-Top Platform Fail in Android”**, Gwendal Patat, *DSN’22*, Baltimore, Maryland, United States, 2022.
- **“Exploring Widevine for Fun and Profit”**, Gwendal Patat, *WOOT’22*, San Francisco, CA, USA, 2022.
- **“Breaking Widevine because we can”**, Gwendal Patat, *Quarkslab*, Rennes, France, 2022.
- **“Alice et la Reine Rouge: Pourquoi faut t-il courir pour se protéger numériquement ?”**, Gwendal Patat and Diane Leblanc-Albarel, *Festival Pint Of Science 2022*, Rennes, France, 2022.
- **“Si c’est caché, c’est sécurisé, non ? Ou comment contrarier les services de streaming”**, Gwendal Patat, *BreizhCTF 2022*, Rennes, France, 2022.
- **“Please Remember Me: Security Analysis of U2F Remember Me Implementations in The Wild”**, Gwendal Patat and Mohamed Sabt, *Symposium sur la sécurité des technologies de l’information et des communications, SSTIC’20*, Rennes, France, 2020.

Responsibilities

- 2021–2022 **Team Seminar Co-Organizer**, Organizer of the SPICY team seminar, IRISA, Rennes, France
- 2020–2023 **Committee Member**, Doctoral Students Representative in the IRISA’s Moral and Sexual Harassment Awareness Commission, IRISA, Rennes, France

Teaching Experiences

- 2022–2023 **Lab Assistant & Project Supervisor**, Université Rennes 1, Rennes, France
- **Software Security** Master level course.
 - **Research Project** Master level course.
 - **Low-Level Programming** Master level course.
 - **Introduction to Databases and Structured Data** Bachelor level course.
- 2021–2022 **Lab Assistant**, Université Rennes 1, Rennes, France
- **Software Security** Master level course.
 - **Low-Level Programming** Master level course.
- 2020–2021 **Lab Assistant**, Université Rennes 1, Rennes, France
- **Software Security** Master level course.
 - **System Security** Master level course.
 - **Network Security** Master level course.

Trainings & Competitions

- 2021 **Student**, Rencontre Entreprises DOCTORANTS (REDOCS): Study on the security and privacy impact of IoT devices for the Commission Nationale de l'Informatique et des Libertés (CNIL), CIRM, Marseille, France
- 2021 **Student**, CYBER IN Toulouse: Summer School on Security for IoT and embedded Critical Systems, GDR Sécurité Informatique, Toulouse, France
- 2020 **Winner**, Break The Code CTF, Rennes, France
- 2019 **Finalist**, European Cyber Week 2019 Student Challenge, ECW'19, Rennes, France
- 2017 **Student**, Artificial Intelligence Summer School, Centre International de Mathématiques et Informatique de Toulouse (CIMI), Toulouse, France