

Clément Hérouard

2nd-year PhD student

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Experience

- 2022 – ... **PhD student in Computer Science**,
(currently) *Team SPICY*, IRISA, [Rennes](#).
▶ **Subject** : Automation of protocols computationnal proofs - Squirrel
▶ **Research Interest** : Formal verification, cryptographic protocols, Typing
▶ **Directors/Supervisor** : Stéphanie Delaune and JosephALLEmand
▶ **Other** : Team's seminars co-organisator
- 2021 – 2022 **Research engineer: Development of a proof assistant for security**,
(1 year) *Team SPICY*, IRISA, [Rennes](#).
▶ Adaptation of the output to generate dynamic documentation
▶ Visualisation et clarification of the proof status
- 2018 – 2019 **Mathematics teacher**,
(1 year) High-school Blaise Pascal, [Rouen](#).
- 2018 **Research internship: Automatic correction of Bash scripts of undergraduate student**,
(5 months) *Supervised by Julien Broisin*, IRIT, [Toulouse](#).
▶ Conception of a Bash analyser in Javascript
▶ Creation of an automatic notation algorithm and its testing
- 2015 **Research internship: Gossip protocol in a dynamic network**,
(2 months) *Supervised by Jan van Eijck*, CWI, [Amsterdam](#).
▶ Adaptation of a gossip protocol to new constraints
▶ Testing of the algorithm in Haskell
- 2014 **Research internship: SMT solver and temporal logic**,
(2 months) *Supervised by Pascal Fontaine*, LORIA, [Nancy](#).
▶ Adaptation of an SMT module for temporal logics
▶ Learning of temporal and modal logics

Publications

- EDM 2019** Julien Broisin, Clément Hérouard, *Design and evaluation of a semantic indicator for automatically supporting programming learning*.
- EIAH 2019** Julien Broisin, Clément Hérouard: *Soutien à l'apprentissage de la programmation : conception et évaluation d'un indicateur sémantique*.

Teaching

2022 – ... **Missions d'enseignement, Rennes.**

(en cours)

- ▶ Databases (DSB) - 20h - Tutorials - 2nd-year students
ISTIC - Resp. : Annie Foret
- ▶ Object-oriented programming (PO) - 20h - Practical sessions - 2nd-year students
ISTIC - Resp. : Alexandre Termier
- ▶ Functional programming - 20h - Practical sessions - 2nd-year students
INSA - Resp. : Barbara Fila

2018 – 2019 **Mathematics teacher,**

(1an) High-school Blaise Pascal, [Rouen](#).

- ▶ Two tenth-grade classes

Education

2018 **Master degree: computer science, *Research and Innovation Specilisation*,**
École Normale Supérieure de Rennes, [Rennes](#).

- ▶ **SOS** – Software Security
- ▶ **ASM** – Advanced Semantics
- ▶ **GTA** – Game Theory and Applications
- ▶ **SML** – Supervised Machine Learning
- ▶ **HDL** – High Dimension Learning
- ▶ **ADM** – Data Analysis and Stochastic Modelling
- ▶ **AIR** – Analysis, Interpretation and Recognition of gestures

2017 **Master degree: Interdisciplinary approach of research and education,**
EdTech Specialisation, Centre de Recherches Interdisciplinaires, [Paris](#).

2016 **Master degree in mathematics and teaching,** ENS Rennes, [Rennes](#).

- ▶ "Agrégation": a competitive examination in the French public education

2015 **Bachelor degree: mathematics,** ENS Rennes, [Rennes](#).

2014 **Bachelor degree: computer science,** ENS Rennes, [Rennes](#).

Programmation

OCaml

- ▶ Squirrel
- ▶ Taught to 2nd-year student
- ▶ Several courses
- ▶ Personal use

Python

- ▶ Taught in high-school
- ▶ Personal use (2018-2019)

Javascript

- ▶ Squirrel (2021-2022)
- ▶ Research internship (2018)

Java

- ▶ Taught to 2nd-year student

Other: C++, Coq, R, Haskell

- ▶ Some courses

Vulgarisation

- 2022 **Vulgarisation formation**, Société Informatique de France, [Paris](#).
(3 days)
 - ▶ Presentation of several vulgarisation formats
 - ▶ Familiarisation with scientific journalism
- 2017 **Study of the project "D-clics numériques" from "la Ligue de l'enseignement"**, CRI, [Paris](#).
(6 months)
 - ▶ Project to form social worker to computer science vulgarisation
 - ▶ Join the Ligue's teams to create support and animate formations
 - ▶ Documentation of their work and organisation
- 2014 **Scientific vulgarisation**, LORIA, [Nancy](#).
 - ▶ Activities during a cultural event and the laboratory's open day

Languages

French: Mother language

English: TOIEC-920/990 (in 2015)

Interests

Creative activities:

- ▶ Jewelry
- ▶ Sewing

Recreational activities:

- ▶ Board games
- ▶ Role-playing games