



Johann ROSAIN

- 🏠 24 years old (born in France)
- 🏠 Lyon, France
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Bonjour, I'm Johann Rosain. I am a student at **École Normale Supérieure de Lyon**. My current academic interests lies in **type theories and their practical applications** (as proof assistants for instance). In my free time, I enjoy **reading some books** or competing in various **programming contests**.

EDUCATION

ENS Diploma

Companion diploma that acknowledges a student's extra credits and allows for a fourth year of research stays.

École Normale Supérieure de Lyon (Lyon, France) 📍
2022 — 2026 (ongoing) 📅

Master Degree in Computer Science

Courses in advanced theoretical computer science with a specialization in formal methods.
GPA 18.02/20.

École Normale Supérieure de Lyon (Lyon, France) 📍
2022 — 2025 📅

Bachelor in Computer Science

Introduction courses on a wide range of Computer Science subjects.
GPA 17.46/20 (ranked 2nd out of 148).

Université de Montpellier (Montpellier, France) 📍
2019 — 2022 📅

SELECTED PUBLICATIONS

Bounded Sort Polymorphism with Elimination Constraints

T. Diaz, K. Maillard, J. Rosain, M. Sozeau,
N. Tabareau, E. Tanter and T. Winterhalter 🧑
Submitted to POPL26 📄
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A Generic Deskolemization Strategy

J. Rosain, R. Bonichon, J. Cailler and O. Hermant 🧑
LPAR-25 📄
DOI: 10.29007/g1tm 🔗

Goéland: A Concurrent Tableau-Based Theorem Prover (System Description)

J. Cailler, J. Rosain, D. Delahaye, S. Robillard and
H.-L. Bouziane 🧑
Automated Reasoning (2022) 📄
DOI: 10.1007/978-3-031-10769-6_22 🔗

TALKS

Extending Sort Polymorphism with Elimination Constraints

Presented at TYPES 2025

📍 University of Strathclyde (Glasgow, Scotland)
📅 June 2025

A Ghost Sort for Proof-Relevant yet Erased Data in Rocq and MetaRocq

Presented at TYPES 2025

📍 University of Strathclyde (Glasgow, Scotland)
📅 June 2025

SKILLS

Programming Languages

🟢 Rocq 🟢 Agda 🟢 C 🟢 C++ 🟢 Python 🟢 Go
🟢 OCaml 🟢 Haskell 🟢 Scheme 🟢 Java
🟢 JavaScript 🟢 PHP 🟢 SQL

Softwares

🟢 Git (GitHub, GitLab) 🟢 \LaTeX 🟢 Nix

Spoken Languages

🟢 French (Native)
🟢 English (CEFR C1 — Cambridge Advanced English grade B)

SELECTED WORK EXPERIENCE

Theory and Metatheory of Elimination in Rocq

Implementation of elimination constraints between sorts and study of the metatheory of this system.

📍 Galinette Project Team, INRIA, LS2N (Nantes, France)
📅 Feb. — Jul. 2024 (5.5 months)

Analyzing Proof-Terms in HoTT

Investigation on the lack of computational capacity of the proof that there are finite groups of (finite) order k up to isomorphism in Cubical Agda.

📍 Chalmers University of Technology (Göteborg, Sweden)
📅 May — Jul. 2024 (3 months)

(de)Skolemization in First-Order Logic

Proposition and implementation of a framework for deskolemizing tableaux proofs.

📍 LIRMM (Montpellier, France)
📅 Jun. — Jul. 2023 (2 months)