

LOUIS TRIOULEYRE-ROBERJOT

Second-year Master's student in Operations Research, Combinatorics and Optimization in Grenoble

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SECTION 1. ABOUT ME

Research Profile

- I am driven by open-ended research questions and by turning a constant flow of original ideas into concrete research directions.
- My academic path, from CPGE to the Magistère and MoSIG/ORCO, has consistently been oriented toward research.
- I have enjoyed every research experience I have had, particularly the opportunity to explore diverse domains such as mathematics, computer science, and quantum theory. Beyond research itself, I naturally enjoy drawing connections with broader fields and ideas, including philosophy, physics, and politics.
- I believe that strong research stems from the ability to draw connections across disciplines, and I actively cultivate this interdisciplinary mindset.

SECTION 2. EDUCATION

2.1. M2 in Operations Research, Combinatorics and Optimization (ORCO) 2025–2026

UFR IM²AG and Grenoble INP - Ensimag

Grenoble

Master of Science in Operations Research, Combinatorics and Optimization, jointly offered by UFR IM²AG and Grenoble INP - Ensimag.

- Validated with highest honours.

2.2. Magistère of Computer Science

2023–2026

UFR IM²AG

Grenoble

Selective honours program completed alongside the Bachelor's and Master's degrees, with additional coursework in research methods and research projects.

- Includes a six-week research internship during both the Bachelor's and Master's programs, plus an additional diploma awarded at the end of the Master's degree.

2.3. M1 in Computer Science (MoSIG)

2024–2025

UFR IM²AG and Grenoble INP - Ensimag

Grenoble

Master of Science in Informatics in Grenoble, jointly offered by UFR IM²AG and Grenoble INP - Ensimag.

- Validated with honours (average: 15.8/20).

2.4. Bachelor's Degree in Computer Science and Mathematics

2023–2024

UFR IM²AG

Grenoble

Third undergraduate year combining computer science and mathematics.

- Awarded with highest honours (average: 16.6/20).

2.5. Scientific CPGE, Mathematics, Physics and Computer Science Option

2021–2023

Lycée Champollion

Grenoble

Intensive scientific preparatory classes (MPSI then MP), focused on mathematics, physics, computer science, and algorithmic problem solving.

- Took the CCINP competitive entrance examination before choosing an academic path oriented toward research.

SECTION 3. SCHOLARSHIPS

3.1. M2 PERSYVAL Scholarship

2026

Selective merit scholarship supporting my second Master's year (ORCO) and M2 research internship. Only eight candidates were selected across eleven eligible Master's programs.

SECTION 4. ACADEMIC PROJECTS

4.1. Second-Year Master's Research Internship

2026

LIG - CAPP team

Grenoble

Six-month research internship developing a process-based approach to quantum contextuality using integer generators, semigroups, and sheaf-theory.

- Supervised by Mehdi MHALLA.

– Funded by the French National Research Agency under the France 2030 program through *LabEx PERSYVAL*.

4.2. *First-Year Master's Research Internship*

2025

LJK, CAS3C3 team

Grenoble

Research internship on integrating verification into QFactory for secure and verifiable remote quantum computation protocols. ([see my report](#))

- Supervised by *Léo COLISSON PALAIS*.
- Funded by the *CyberSkills* project (ANR and France 2030).

4.3. *Third-Year Bachelor's Research Internship*

2024

G-SCOP

Grenoble

Three-month internship on locating small postal depots to improve bicycle parcel delivery in cities, including a MIP model for depot-location and organization decisions. ([see my report](#))

- Supervised by *Siao-Leu PHOURATSAMAY*.

4.4. *CPGE Research Project (TIPE)*

2021–2023

Dial-A-Ride Problem

Lycée Champollion, Grenoble

Computer science research work on DARP, the Dial-A-Ride Problem, using a simulated annealing metaheuristic.

SECTION 5. *PERSONAL PROJECTS AND TEACHING*

5.1. *Bi-objective Routing Engine: Time and Toll Cost Optimization*

2025–2026

Built an open dataset of French motorway toll prices by converting official PDFs into structured JSON/CSV data enriched with OpenStreetMap metadata, then designed a bi-objective routing engine optimizing both travel time and toll cost. ([GitHub](#))

5.2. *Tutoring*

2024–2025

UGA

Grenoble

Tutored first-year undergraduate students in mathematics and computer science alongside the first year of my Master's degree (MoSIG), including students enrolled in the « propédeutique » program.

5.3. *Mnemonic Cryptographic Secret Recovery*

Designed a tree-based mnemonic protocol for recovering cryptographic secrets with controlled information leakage at each node.

SECTION 6. *GENERAL SKILLS*

ACADEMIC

Mathematics **Quantum**
Computer Science
Graph theory English (C1)
Physics Cryptography
Convex/MI programming
Heuristics

SCIENTIFIC

Quantum computing **Contextuality**
Python **C** **Typst** Rust Java C++ PHP TUI MCP
OpenStreetMap IoT Multithreading Monte Carlo Git

AUXILIARY

Philosophy Politics COP23 Music
Interdisciplinary thinking