

Rémi Morvan

Database Researcher



“After four years advancing database theory, I want to apply it to real-world systems.”

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AWARDS

- 🏆 **DISTINGUISHED PAPER AWARD** at PODS '25 for *Minimization of Conjunctive Regular Path Queries*.
🏆 **SELECTED PAPER** at ICDT '23 for *Approximation and Semantic Treewidth of Conjunctive Regular Path Queries*.

TECH STACK

- 🐍 Python
🐫 OCaml
🅚 C
🐪 Perl
SQL SQL
🌐 JavaScript & TypeScript
HTML HTML & CSS
TeX TeX
typescript Typst

LANGUAGES

- FRENCH: mother tongue.
ENGLISH: mastery (level C2, Cambridge Advanced).

SOFT SKILLS

- PROBLEM SOLVING
INFORMATION SYNTHESIS
TEAMWORK



PROFESSIONAL EXPERIENCE

- Sept. 2021 – Aug. 2025 · LaBRI, Université de Bordeaux
PH.D. RESEARCHER
 - Research projects in **database theory** (graph database query optimization) and **automata theory** (model-checking of infinite structures). 6 publications and 24 seminars. **query optimization**
 - Main **organiser** and founder of a **three-day workshop ATLAS '24** 🌐. Member of the organising committee of several conferences. **event organization**
 - Supervisor of two interns. **student supervision**
- Sept. 2021 – Aug. 2025 · Université de Bordeaux & Enseirb-Matmeca
TEACHER
240 hours of teaching in Bachelor's and Master's programmes. Topics: **programming** (C & JavaScript), **machine learning**, **databases**, automata & logic.
- Sept. 2020 – June 2021 · Lycée Saint-Louis (Paris)
ORAL EXAMINER IN MATHEMATICS



EDUCATION

- Sept. 2021 – Aug. 2025 · Université de Bordeaux
PH.D. IN COMPUTER SCIENCE 📜
Title: “*Homomorphism Problems in Graph Databases and Automatic Structures*”. Supervised by Diego Figueira and Nathanaël Fijalkow (LaBRI, CNRS).
- Sept. 2017 – Aug. 2021 · École Normale Supérieure Paris-Saclay
MASTER'S IN MATHEMATICS AND COMPUTER SCIENCE
 - ENS Paris-Saclay diploma (civil-servant student) · 2021
 - Parisian Master of Computer Science · Université Paris-Cité, 2021
 - “Agrégation” of Mathematics & Master's of Higher Education in Mathematics · Université Paris-Saclay, 2020



SOFTWARE PROJECTS

- since May 2024 · **PYSEMIGROUP 2.0** 🌀
Collaborative database project dedicated to visualizing and comparing research results in *automata theory*. I mostly dealt with **knowledge representation**. Project leader: Charles Paperman. **Python** **Pydantic** **FastAPI**
- since Feb. 2022 · **KNOWLEDGE-CLUSTERING** 🌀
LaTeX command-line writing assistance tool. Creator and main developer. **Python** **Clustering** **Natural Language Processing** **LaTeX**



ASSOCIATIVE & ELECTORAL ENGAGEMENT

- Dec. 2023 – Aug. 2025 · LaBRI
MEMBER OF LABRI'S SCIENTIFIC COUNCIL
- Dec. 2021 – Nov. 2022 · **AFoDIB**
PRESIDENT **event organization** **communication** **funding application**
Association of Computer Science Ph.D. Students in Bordeaux. I was also **secretary** (Dec. 2020 – Nov. 2021) and **member of the board** (Dec. 2022 – Nov. 2023).

COMMUNICATION