

Oliver Irwin

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Education

Université de Lille - INRIA

PhD in Computer Science & Applications

Lille 🇫🇷

2022 – Now

Université de Lille

MSc. in Computer Science - Machine Learning

Lille 🇫🇷

2020 – 2022

BSc. in Computer Science

2018 – 2020

BSc. in Fundamental Physics

2014 – 2018

Publications

Conference Papers

- [1] Florent Capelli, Oliver Irwin and Sylvain Salvati. *A Simple Algorithm for Worst Case Optimal Join and Sampling*. In 28th International Conference on Database Theory (ICDT 2025), March 25 to March 28, 2025, Barcelona, Spain. Mar. 2025. DOI: 10.4230/LIPIcs.ICDT.2025.23.
- [3] Florent Capelli and Oliver Irwin. *Direct Access for Conjunctive Queries with Negations*. In 27th International Conference on Database Theory, ICDT 2024, March 24 to March 28, 2024, Paestum, Italy. Mar. 2024. DOI: 10.4230/LIPIcs.ICDT.2024.13.

Preprints

- [2] Florent Capelli, Nofar Carmeli, Oliver Irwin and Sylvain Salvati, *Direct Access for Conjunctive Queries with Negations*, Nov. 2024.

Teaching




Université de Lille

Lille 🇫🇷

- ▶ *Advanced Databases* 🔄 ⌚ 18 hrs. 👤 2nd year CS Masters 09/2025 – 12/2025
 - Introduction to NoSQL databases
 - Data distribution, transactions, CAP theorem
 - Distributed Computation, ML-model integration
- ▶ *Functional Programming* 🔄 ⌚ 42 hrs. 👤 3rd year CS 09/2024 – 12/2024
 - Introduction to functional programming with Haskell
 - Higher-order functions, type systems, pattern matching
 - Introduction to lambda-calculus and monads
- ▶ *Logic* 🔄 ⌚ 18 hrs. 👤 2nd year CS 09/2024 – 12/2024
 - Propositional Logic and SAT-solving, solving problems described by constraints
 - Terms: syntax, F-algebras, substitution and unification algorithms
 - First-order logic modelling
- ▶ *Web Technologies 1* 🔄 ⌚ 32 hrs. 👤 1st year CS 01/2024 – 05/2024
 - Introduction to HTML / CSS / JS
 - Conception of standard compliant documents
 - Introduction to event-driven programming

► **Graph Algorithms**   18 hrs.  3rd year CS 09/2023 – 12/2023

- Introduction to graph algorithms and main problems of graph theory
- Applying classic graph algorithms
- Modelising from a statement the underlying graph problem

► **Linear Programming**   18 hrs.  3rd year CS 09/2023 – 12/2023

- Modelisation of optimisation problems
- Applying the simplex algorithm and using the dual program
- Learning computer-assisted solvers with the AMPL language

Rubika

► **Introduction to Python**   30 hrs.  1st year 3D animation **Valenciennes** 

02/2023 – 06/2023

- Introduction to programming in Python
- Learning the key concepts through game programming
- Simple graphical interfaces conception

Experience

Glaz tech+fi

Developer & Data Analyst

Lille 

09/2020 – 09/2022

- Analysing the functional needs for the financial team
- Building digital tools to answer those needs
- Data engineering and analysing
- Building ML tools for credit acceptance prediction
- Communication with both internal teams and external clients

Centre Oscar Lambret

Developer (Intern)

Lille 

04/2020 – 08/2020

- Analysing the needs of the Medical Physics team
- Building simulation tools for IRM-IVIM denoising
- Multi-platform deployments

Awards

Direct Access for Conjunctive Queries with Negation: ICDT Best Newcomer Award [3]

Service

Reviews.....

Principles of Database Systems 

PODS

2025

Other academic activities.....

Member of the School Relations Committee 

CRIStAL

01/2025 – Now