

Samuel Humeau

Curriculum Vitæ

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Studies

- 2022- **Preparation of a PhD under the supervisions of Amina Doumane and Damien Pous**, at the LIP in the team PLUME, ENS de Lyon, Lyon.
- 2017-2022 **School diploma**, ENS de Lyon, Lyon.
- 2018-2020 **MSc “Informatique Fondamentale” (Foundations of Computer Science)**, ENS de Lyon, Lyon.
- 2017-2018 **BSc “Informatique Fondamentale” (Foundations of Computer Science)**, ENS de Lyon, Lyon.
- 2017-2018 **BSc “Mathématiques pour les Formations d’Ingénieurs” (Mathematics for Engineering Studies)**, Université Claude-Bernard, Lyon.
- 2015-2017 **Classe Préparatoire aux Grandes Écoles, MPSI/MP option informatique (Intensive foundation degree in mathematics, physics, and computer science)**, Lycée Saint-Louis, Paris.
- 2015 **Baccalauréat Scientifique (High school diploma of science)**, Lycée Victor Hugo, Poitiers.

Experience

Teaching

- 2023-2024 **Practical work for the module “Compilation and program analysis” given by Gabriel Radanne**, MSc “Informatique Fondamentale” (Foundations of Computer Science), first year, ENS de Lyon.
28h
Project written in Python of a compiler for a C fragment, given in english
- 2022-2023 **Tutorials for the module “Théorie de la programmation” (Programming Languages Foundations) given by Daniel Hirschhoff**, BSc “Informatique Fondamentale” (Foundations of Computer Science), ENS de Lyon, Lyon.
32h
- 2023 **Jury member for the MSc’s first year’s defenses**, ENS de Lyon.
4h
- 2022-2023 **Tutorials for the module “Algorithmique I” given by Stephan Thomassé**, BSc “Informatique Fondamentale” (Foundations of Computer Science), ENS de Lyon, Lyon.
32h
- 2022-2023 **Tutorials for the module “Théorie de la programmation” (Programming Languages Foundations) given by Daniel Hirschhoff**, BSc “Informatique Fondamentale” (Foundations of Computer Science), ENS de Lyon, Lyon.
32h

2020-2021 **Oral exercise sessions in mathematics**, *Classe Préparatoire aux Grandes Écoles*, 60h *PCSI (Intensive foundation degree in physics, mathematics, and chemistry)*, Lycée du Parc, Lyon.

Research Internships

2022 **Kantorovich-Rubinstein Duality, again: a practical approach**, supervised by 12 weeks *Jurriaan Rot*, Institute for computing and information science, Radboud University, Nijmegen, Pays-Bas.

2021-2022 **Axiomatization of the isomorphism of graphs of treewidth k** , supervised by 20 weeks *Amina Doumane and Damien Pous*, LIP, ENS de Lyon, Lyon, France.

2020 **A categorical approach to the Kantorovich-Rubinstein duality**, supervised by 20 weeks *Daniela Petrisan*, IRIF, Paris Diderot, Paris, France.

2019 **Codensity bisimulations for weighted finite automata**, supervised by 11 weeks *Ichiro Hasuo*, ERATO Hasuo Project, National Institute of Informatics, Tokyo, Japon.

2018 **Optimal transport applied to the algorithmic reconstruction of the early universe**, supervised by 8 weeks *Bruno Lévy*, INRIA Nancy Grand Est, Nancy, France.

Publications

Articles

A finite presentation of graphs of treewidth at most three, *Amina Doumane, Samuel Humeau, and Damien Pous*, to appear in Proc. ICALP '24, 2024.

Codensity Games for Bisimilarity, *Yuichi Komorida, Shin-ya Katsumata, Nick Hu, Bartek Klin, Samuel Humeau, Clovis Eberhart, Ichiro Hasuo*, *New Generation Computing*, 2022, vol. 40, no 2, 403-465, Springer.

Languages

French **Mothertongue**

English **Fluent** *CAE (Cambridge Assessment English), "C1 Advanced" level*

Espagnol **Sparse notions**

Japanese **Sparse notions**

Computer skills

Languages \LaTeX , Coq, experiences in various languages (C, C++, Python, OCaml, Bash), Git, Makefile, HTML basis.

O.S. Linux (Ubuntu, Void Linux) and Windows.

Misc

Music: Guitar, drums, piano.

Other: Go game, cooking.