Arthur DUMAS

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Degrees & Studies

Currently **École Normale Supérieure of Rennes's Degree**.
2020-2024

Currently **École Normale Supérieure of Rennes**, *Computer Science Department*.
2020-2023 Trainee civil servant (joined the school on a highly selective national examination)
- Master 2, Agrégation training, Université de Rennes, 2022-2023
- Master 1, Computer Science, Université Rennes 1, 2021-2022
- Licence 3, Mathematics, Université Rennes 1, 2020-2021 and 2021-2022
- Licence 3, Computer Science, Université Rennes 1, 2020-2021

2017–2020 **Classes Préparatoires aux Grandes Écoles**, *Lycée Champollion*, Grenoble.
3 years in MPSI/MP*/MP* (Mathematics and Physics classes)
With the Computer Science optional class
Passed the highly selective national examition of the Computer Science Department of the ÉNS Rennes

2017 **Baccalauréat in Sciences**, *Lycée Jules Fil*, Carcassonne.
Engineering and Computer Science specializations
Honors: summa cum laude

Experiences

Computer Science

Currently **Agrégation of Computer Science**, *Ministère de l'Éducation Nationale*.
2023 Option B : Foundations of Computer Science
Results on the 27th of June, 2023

Summer 2022 **Abroad research internship - 8 weeks**, *University of Liverpool*, Liverpool.
M1 Internship under the supervision of Sven Schewe
Graphs, Automaton and Game theories
What Makes Parity Games Simple ?:
- Study of games between *parity games* and *mean payoff games*.
  Are they harder than *parity games* ?

2021-2022 **Computer Science Lab Classes, MPSI**, *Lycée Chateaubriand*, Rennes.
2nd semester 8 classes of 2h, Ocaml programming
Main teacher : Amélie Stainer
Topics taught : recursivness, lists, data types (tree), imperative proramming, stacks and queues, hashtables, divide-and-conquer, logic

Summer 2021 **Research initiation internship - 8 weeks**, *LIRIS*, Lyon.
L3 Internship under the supervision of Aline Parreau and Éric Duchêne
Graphs and Game theories
Positional game in Maker-Maker version:
- Study of some variants of positional games : players try to be the first to fulfil a winning set (Maker-Maker), or one of the player has to fill one and the other has to prevent that (Maker-Breaker)
- Particular study of the Domination Game Maker-Maker version

2018–2019 **TIPE**, *Lycée Champollion*, Grenoble, Small research/bibliography project.
Agent interception in graphs
Urban-like graph generator (roads, crossroads, one-way streets, ...).
Python implementation of Dijkstra algorithm adapted to a moving agent.
Display of the avergage interception delay in function of the graph generator parameters.

2014–2017	**Computer science conmpetitions**, *Lycée Jules Fil*, Carcassonne.
	Maximum marks at Concours Castor
	Participation at 2nd turn or semi-final of Algoréa

Mathematics

2021	**TFJM² Member of Jury**, *ÉNS de Rennes*, Rennes.
	French Tournament of Young Mathematicians
	Part of the local tournament of Rennes
2014–2017	**TFJM² Competitor**, *Lycée Jules Fil*, Carcassonne.
	French Tournament of Young Mathematicians
	Team competition of mathematical reseach
	Only made research in 2015
	Also presented solutions to jury in 2016 and 2017

Computer skills

Proficient	Java, C++, git
Advanced	Ocaml, Python, LaTeX, C

Languages

Français	**Native tongue**
Anglais	**C1**
Espagnol	**B1**

Interests

- Boardgames, head of the *Boardgame* club of ÉNS Rennes for the year 2021-2022
- Role Play Games
- Strategy (Videogames, wargame, ...)
- Politics