



# Milla Valnet



15 Août 2000



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## Langues

French

English

Greek

German

Russian

## Academic education

2023-2026	PhD in Computer Science "Static Value Analysis by Abstract Interpretation of Functional Languages", supervised by Antoine Miné and Raphaël Monat	<i>Sorbonne Université, Paris</i>
2022-2023	Minor "Géopolitics and Diplomaty"	<i>ENS, Paris</i>
2021-2022	Parisian Master in Computer Research (MPRI) (15.73/20)	<i>ENS, Paris</i>
2020-2021	Master 1 in Computer Science (16.98/20)	<i>ENS, Paris</i>
2019-2020	Bachelor in Computer Science (16.48/20)	<i>ENS, Paris</i>
2017-2019	Two-year intensive training in mathematics, physics and computer science (MPSI/MP)* Selected by the École Normale Supérieure de Paris via competitive exam, 4-year scholarship awarded	<i>Lycée Chateaubriand, Rennes</i>

## Internships

2023	Part-time research internship (5 months) "Delta-debugging for OCaml", supervised by Vincent Laviro	<i>OCamlPro, Paris</i>
2022	M2 internship (5 months) "Value Analysis by Abstract Interpretation of Functional Languages", supervised by Antoine Miné and Raphaël Monat	<i>LIP6, Sorbonne Université</i>
2021	M1 internship (5 mois) "Towards Dimension Types in Helium", supervised by Jurriaan Hage	<i>Utrecht University</i>
2020	Bachelor internship (8 weeks) "Study of explorable automata", supervised by Denis Kuperberg	<i>LIP, ENS Lyon</i>

## Publications

FM 2024	Chamelon : a delta-debugger for OCaml. Milla Valnet, Nathanaëlle Courant, Guillaume Bury, Pierre Chambart, Vincent Laviro
JFLA 2024	Chamelon : un minimiseur de programmes pour et en OCaml (in french) Milla Valnet, Nathanaëlle Courant, Guillaume Bury, Pierre Chambart, Vincent Laviro
JFLA 2023	Static Value Analysis by Abstract Interpretation of functional program manipulating Recursive Abstract Data Types Milla Valnet, Raphaël Monat, Antoine Miné

## Talks

07/06/2024	Static Value Analysis by Abstract Interpretation of higher order functional programs	<i>SemAntique</i>
30/05/2024	Static Value Analysis by Abstract Interpretation of higher order functional programs	<i>APRdays</i>
01/02/2024	Chamelon : a delta-debugger for and in OCaml	<i>JFLA2024</i>
05/10/2023	Chamelon : a delta-debugger for and in OCaml	<i>Meetup OUPS</i>
03/02/2023	Static Value Analysis by Abstract Interpretation of functional program manipulating Recursive Abstract Data Types	<i>JFLA2023</i>
19/01/2023	Static value analysis by Abstract Interpretation for OCaml	<i>Meetup OUPS</i>

## Community Life

- Program Comitee: OCaml 2024
- Artifact Reviewer: ECOOP 2024
- Seminar Organization: OUPS (OCaml Users in Paris) (2023-)
- Promoting computer science among youngs, especially girls: Numerical Meeting 2023, Journées Filles Maths et Informatique (JFMI) 2024

## Software

- OCaml analyzer in MOPSA (Modular Open Platform for Static Analysis)
- Chamelon, a delta-debugger for OCaml

## Personal projects

- 2021-2023 Three participations to the SWERC (South-Western European Regional Contest in Computer Science)  
Team ENS Ulm 2 : 44<sup>e</sup>/107, 49<sup>e</sup>/97, 20<sup>e</sup>/120
- 2020-2022 Master projects *ENS, Paris*
- A watchdog in Lustre for a student rocket
  - A type-checker  $F^\omega$
  - An initialization analyzer for a synchronus data-flow language
- 2019-2020 Bachelor projects *ENS, Paris*
- A compiler for a subset of Go in OCaml,
  - A netlist simulator in OCaml OCaml et a CPU in this netlist language
  - A static analyzer by abstract interpretation for a toy language

## Computer Science

- Interests Abstract Interpretation, Formal Methods, Functional Languages, Types theory, Compilation
- Languages OCaml, C/C++, Haskell, Python, L<sup>A</sup>T<sub>E</sub>X, beamer, expérience avec Coq, Lustre, assembleur x86-64, HTML & CSS, Go

## Extra-curricula activities

- Climbing Competition, 4 participation to french championship
- Movies directing Direction of short movie, selected in regional festival. "Friendship in sport" price in 2015, regional price "Young director" in 2016
- Others Dance (teaching), theater, writing, boardgames...