

Denis Mazzucato

Ph.D. Student

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🌐 denismazzucato.github.io

Education

- 2020–2024 **Ph.D.**, *ANTIQUE, Inria & DI/ENS*, Paris (FR), École Normale Supérieure — Université PSL
Static Analysis by Abstract Interpretation of Quantitative Extensional Program Properties
- 2015–2020 **Master and Bachelor**, *University of Padua*, Padua (IT), magna cum laude 110/110
Computer Science, Dipartimento di Matematica, Università degli Studi di Padova

Experiences

- 2023 **Summer School**, *Summer School Marktoberdorf*, Marktoberdorf (DE)
Scientific foundations and technologies for improving the quality and security of software.
- 2022 **Research intern**, *Amazon*, Prime Video, London (UK)
Six months internship project in Amazon Prime Video as a research intern.
- 2019–2020 **Exchange Program**, *Vrije Universiteit*, Amsterdam (NL)
Six months exchange program at the VU in Amsterdam.
- 2018 **Developer**, *THRON*, Piazzola sul Brenta, Padua (IT)
Quality Assurance, three months stage.

Programming languages

Fluent Python, Scala
Known Agda, C, C++, Haskell, Java, Lean, OCaml

Spoken languages

Fluent English, Italian
Known French, Dutch

Interest

Static Analysis, Abstract Interpretation, Verification, Security, Formal Methods,

Conference Service

- Sub-Reviewer CAV 2021, TACAS 2023
- AEC PLDI 2024, CAV 2023, TACAS 2023/24, SAS 2022/23, ECOOP 2024
- SV CAV 2021, SPLASH 2022/23, ETAPS 2023

Publications

- 2024 **Quantitative Input Usage Static Analysis**,
<https://hal.science/hal-04339001>
Denis Mazzucato, Marco Campion, and Caterina Urban
- SAS 2021 **Reduced Products of Abstract Domains for Fairness Certification of Neural Networks**,
doi.org/10.1007/978-3-030-88806-0_15
Denis Mazzucato and Caterina Urban

Projects

- full overview in <https://github.com/denismazzucato>

- Haskell **wstat**, *Static Analyzer by Abstract Interpretation*, github.com/parof/wstat
For the final evaluation of the *Software Verification* course taught by Prof. Francesco Ranzato.
- Lean **Noninterference Flow**, github.com/denismazzucato/noninterference-lean
This was a project related to the *Logical Verification* course taught by Prof. Jasmin Blanchette at the VU.
- MCS Thesis **Solving systems of fixpoint equations: an algorithmic perspective**, 2020
Thesis produced under the supervision of Prof. Paolo Baldan and Tommaso Padoan.