

Antoine COMMARET

First year of PhD - 2021-2022

Nice, France

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Education

- 2021 – 2024 **PhD Candidate**, *DataShape Team, INRIA Sophia-Antipolis & J. A. Dieudonné Lab*, France.
"Persistent Geometry", under the supervision of David Cohen-Steiner & Indira Chatterji
- 2019 – 2020 **Master 2 "Mathématiques, Vision, Apprentissage" with highest honors**, *ENS Paris-Saclay*.
Courses over the mathematics of Vision and Learning.
- 2017 – 2019 **Master 1 & Last Year of Bachelor**, *Ecole Normale Supérieure de Paris*, France.
General advanced maths in the highly selective mathematics path of the ENS
- 2015 – 2017 **Classes préparatoires aux Grandes Ecoles**, *Lycée Hoche*, Versailles, France.
Admitted to both École Polytechnique and ENS Paris after 2 years of intense preparation
- 2012 – 2015 **Baccalauréat scientifique with highest honors**, *Lycée Jean-Pierre Vernant*, Sèvres, France.

Experience

- June 2022 **EUTOPIA Summer School**, Paris.
Summer School on topology in the context of soft matter and biological molecules.
- 2020 – 2021 **Research Internship**, *DataShape Team, INRIA Saclay*.
Mathematical analysis of the UMAP method of dimensionality reduction.
Under the supervision of Frédéric Chazal and Bertrand Michel.
- 2019 **Research Internship**, *Georg-August University, Germany*, Göttingen, Germany.
Analytic Number Theory. Weak Goldbach conjecture proof review. Under the supervision of [Harald Helfgott](#)

Teaching

- 2021 – 2022 **Lecturer**, *Université Côte d'Azur*, Nice and Sophia-Antipolis.
Classes of Real analysis & Graph theory.
- 2021 – 2022 **Vulgariser**, Nice, France.
Talks in Primary schools through the association "Regards de Géomètres".
- 2017 – 2021 **Oral Examiner**, *Lycée Hoche*, Versailles.
Weekly oral examination in first and second year of Classes Préparatoires.

Languages

Native	French
Fluent	English, German
Beginner	Esperanto, Italian

Programming

- Advanced \LaTeX
- Advanced Python : Machine Learning with Numpy, Scipy, Pytorch and Topological Data Analysis with GUDHI.