Antoine COMMARET

Third year of PhD - 2023-2024

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🖥 https://acommaret.github.io

📖 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**, *École 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.

💼 Stages

Feb 2023	**Startup Week 3IA**, *Sophia-Antipolis*. One week project on the segmentation femoral arteries on ultrasound scans for Caranx Medical.
June 2022	**Summer School EUTOPIA**, *Paris*. Topology in the study of soft matter and proteins.
2020 – 2021	**Research Internship**, *DataShape, Inria Saclay*, under the supervision of Frédéric Chazal & Bertrand Michel. TDA and study of the dimension reduction algorithm UMAP.
2019	**Research Internship**, *Göttingen University, Germany*, under the supervision of Harald Helfgott. Analytic Number Theory. Reviewing the proof of the weak Goldbach conjecture.

🏛 Teaching

2021 – 2024	**Lecturer**, *Université Côte d'Azur*. Introduction to Topological Data Analysis (M2), Graph Theory, Analysis I, Algebra II (Bachelor)
2017 – 2021	**Colleur in Preparatory Classes**, *Lycée Hoche, Versailles*. Weekly oral exams.

👥 Talks

2023	**Young Topologist Meeting**, *Lausanne, Suisse*. Talks for *Generalized Morse Theory for Tubular Neighborhoods*.
2023	**World AI Festival**, *Cannes, France*. Presenting the work done during the Startup Week 3IA.
2022	**Regards de Géomètres**, *Nice, France*. Science pop)ularization in primary school.

💬 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.