Thomas Gravier

Applied Mathematics, Machine Learning, Generative Modeling & Information Geometry

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Education

Master 2 MVA
École Normale Supérieure Paris-Saclay, 2024–2025 (*Highest honours*)
Applied Mathematics, Vision, Learning, Optimal Transport
14 validated courses, average grade: 17.37/20

Master in Engineering
Arts et Métiers, 2020–2023 (*Highest honours, top 10%*)
Applied Mathematics, Scientific Computing, Modeling & Simulation, Optimization, Project Management

CPGE PCSI-PC
Lycee Thiers, Marseille, 2017–2020
Highly intensive preparatory classes in mathematics and physics for engineering schools.

Research & Work Experience

Research Intern
Ecole Normale Supérieure, 2025, Paris, France
Dynamical Multi-Marginal Schrödinger Bridge and application to Video generation from static and unpaired data. Probability theory, stochastic processes & Optimal transport

Research Engineer
French space agency, 2023–2024, Toulouse, France
Inverse problem algorithm, Physics-Informed Machine Learning, Signal processing

Research Intern
French space agency, 2022, Toulouse/Bordeaux, France
Development and validation of mathematical models for capillary-driven fluid dynamics, leading to the design of a filling system tested in microgravity during the October 2022 parabolic flight campaign (5-person team).

Paper Submission & Thesis

- Gravier & al. (2025). *Multi-Marginal temporal Schrödinger Bridge Matching for Video generation from unpaired data.* Under review at ICLR 2026.
- Master Thesis: *Multi-Marginal Schrödinger Bridge Theory and Applications for Video Generation*
  Supervised by Prof. Auguste Genovesio, Prof. Gabriel Peyré, and PhD candidate Thomas Boyer
  Final grade: 18/20

Awards

- 2024 EDF Excellence Scholarship — awarded by EDF's Department of Mathematics & Physics for Master's studies in Mathematics
- Best Research Project — French Space Agency (award included a microgravity test session during a parabolic flight campaign)

Interests

Outside of academics, I am passionate about outdoor sports and adventure.
I am actively preparing for a transatlantic sailing project, which combines navigation skills, endurance, and teamwork.
I also practice paragliding, trekking, mountaineering, and climbing, always looking for new challenges in nature.
In 2022, I took part in an expedition in French Guiana, which strengthened my adaptability and resilience in extreme environments.

Languages

- English (fluent), French (native)