

THOMAS PIERRON

Phd student at ENS Paris-Saclay
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FORMATION

Phd Student

2022 -

ENS Paris-Saclay

Under the supervision of Alain Trouvé

Visiting scholar

2021 - 2022

Florida State University (Tallahassee), John Hopkins University (Baltimore)

Under the supervision of Martin Bauer and Nicolas Charon,

Study of a family of riemannian elastic metrics on the space of unparametrized curves

Msc, Analyse, Arithmétique, Géométrie

2020 - 2021

Université Paris-Saclay

Obtained with highest honors

Differential and Riemannian Geometry, Lie groups, harmonical analysis, and some topics on geometric measure theory

Master's thesis : Diffeomorphic transport of varifolds, Centre Borelli, ENS Paris-Saclay, advisor : Dr. Alain Trouvé

First year graduate study

2019 - 2020

ENS Paris-Saclay, Cachan

Obtained with highest honors

functional and spectral analysis, probabilities, dynamical system, probabilistic graphs, geometry, optimization, statistics

Telecommuting internship : On length measures of planar closed curves and the comparison of convex shapes, AMS, John Hopkins University, advisor : Dr. Nicolas Charon

Bsc, Mathématiques Fondamentales

2018 - 2019

ENS Paris-Saclay, Cachan

Obtained with highest honors

topology, differential calculus, probability and measure theory, complex analysis, functional analysis, advanced probabilities and statistics, numerical analysis of PDE and ODE, algebra

Bachelor's thesis : optimization and optimal transport, CMLA, advisor : Dr. Vianney Perchet

Higher School Preparatory Classes

2016 - 2018

Lycée Chateaubriand Rennes

Intensive two-years university foundation course preparing for the competitive entrance examinations to the Ecole Normale Supérieure. Undergraduate mathematics, physics, chemistry and computer science

Baccalauréat

2016

Lycée Avesnières Laval

French equivalent of the A levels. Speciality in mathematics.

TEACHING EXPERIENCE

Teaching assistant*Ens Paris-Saclay*

2022 - 2024

Ordinary differential equations and numerical analysis

Examiner for Agregation (French maths exam for future teachers)

Higher School Preparatory Classes examiner

2018 - 2019

Lycée Lavoisier

Mathematics examiner for first year students in higher school preparatory classes

PUBLICATIONS AND PREPRINTS

1. Pierron, Trouvé, The graded group action framework for sub-riemannian orbit models in shape spaces, 2024 (**preprint**)
2. Bauer, Charon, Klassen, Kurtek, Needham, Pierron. (**alphabetical order**), Elastic Metrics on Spaces of Euclidean Curves: Theory and Algorithms, Journal of Nonlinear Science, 34, 56, 2024. <https://doi.org/10.1007/s00332-024-10035-5>
3. Charon, Pierron. On length measures of planar closed curves and the comparison of convex shapes, Annals of Global Analysis and Geometry, 60(4), 863-901, 2021

SOFTWARES

- Riemannian analysis of curves with a family of order 1 elastic metrics
https://github.com/charoncode/Gab_metrics

COMPUTER SKILLS

Software	Python, Matlab, C, C++ Latex
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LANGUAGES

French	(mothertongue)
English	C1, (grade B at C1 Cambridge Advanced)
Spanish	B1