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 Riemanniann 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 Superieure. Undergraduate mathematics, physics, chemistry and computer science

Baccalauréat *2016*
Lycée Avesnieres 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 *(undergraduate level)*
Examiner for Agregation (French maths exam for future teachers) *(masters level)*

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

INVITED CONFERENCE AND SEMINAR TALKS

1. 60th Seminar Sophus Lie, Paderborn University (September 2024)
2. Shape seminar, Paris (September 2024)
3. Geometric Sciences in Action: from Geometric Statistics to Shape Analysis, CIRM, Marseille (May 2024)
4. Seminaire des doctorants d'analyse d'Orsay, (February 2024)
5. Congrès des Jeunes chercheurs en mathématiques et Applications, CentraleSupélec (September 2023)
6. Seminaire Pampers, Université Rennes I (October 2023)
7. Shape seminar, Paris (June 2023)

SOFTWARES

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

COMPUTER SKILLS

	Python, Matlab, C, C++
Software	Latex

LANGUAGES

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