

Kessler Nathan

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Éducation

PhD	ENS Paris-Saclay , mathematics supervised by Alain Trouvé, Jean Feydy	Gif-sur-Yvette 2023 – present
MSc	ENS Ulm , mathematics ENS graduate degree	Paris 2019 – 2023
MSc	ENS Paris-Saclay , mathematics MVA (mathématiques, vision, apprentissage)	Gif-sur-Yvette 2021 – 2022
MSc	Paris Centre , mathematics M2 de mathématiques fondamentales	Paris 2020 – 2021
CPGE	Lycée Louis-le-Grand , MP	Paris 2017 – 2019

Expérience

ENS Paris-Saclay , Pre-doctoral internship Supervised by Alain Trouvé	Gif-sur-Yvette Jan 2023 – Aug 2023
<ul style="list-style-type: none"> Investigation of deformation metrics inspired by LDDMM–Fisher–Rao Numerical implementation for transcriptomic datasets from mouse brain slices using PyKeOps 	
ENS Ulm / EPFL , Research internship Supervised by Gabriel Peyré, Nicolas Macris	Paris / Lausanne May 2022 – Sept 2022
<ul style="list-style-type: none"> A model generalizing the limit of single-hidden-layer neural networks to an arbitrary number of layers, using iterated Wasserstein spaces 	
University of Barcelona , Research internship Supervised by Joana Cirici	Barcelona Apr 2021 – July 2021
<ul style="list-style-type: none"> Literature review in homotopy theory, aimed at understanding the paper “E^∞ Algebras and p-adic Homotopy Theory” by Michael A. Mandell 	

Langues

French: native language
English: professional working proficiency
German: C1 (certified)

Publications

Normalizing Diffusion Kernels with Optimal Transport Kessler Nathan, Magnet Robin, Feydy Jean arxiv.org/abs/2507.06161	July 2025
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