

Guillaume Wang

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Research interests Optimization, theory of machine learning, optimal transport

Education **EPFL** Lausanne, Switzerland
PhD in Mathematics 2021 – present

GPA: 5.71 (max: 6, min: 1).

Advisor: Lénaïc Chizat

ETH Zurich Zurich, Switzerland
MSc in Computer Science 2019 – 2021

GPA: 5.80 (max: 6, min: 1).

École polytechnique Paris-Saclay, France
Cycle Ingénieur polytechnicien 2016 – 2019

(Applied Mathematics, Computer Science)

GPA: 3.87 out of 4.

Publications **A higher-order Otto calculus approach to the Gaussian completely mono-**
(* = equal contribution) **tone conjecture**

Guillaume Wang

arXiv preprint, 2024

Mean-field Langevin dynamics for signed measures via a bilevel approach

Guillaume Wang*, Alireza Mousavi-Hosseini*, Lénaïc Chizat

arXiv preprint, 2024. To appear as NeurIPS 2024 spotlight

Local convergence of gradient methods for min-max games under partial curvature

Guillaume Wang, Lénaïc Chizat

Advances in Neural Information Processing Systems (NeurIPS), 2023

An exponentially converging particle method for the mixed Nash equilibrium of continuous games

Guillaume Wang, Lénaïc Chizat

arXiv preprint, 2022. To appear in Open Journal of Mathematical Optimization

Tight bounds for minimum ℓ_1 -norm interpolation of noisy data

Guillaume Wang*, Konstantin Donhauser*, Fanny Yang

International Conference on Artificial Intelligence and Statistics (AISTATS), 2022

Research experience	<p>Internship at Statistical Machine Learning group Summer 2021</p> <p>Mentor: Fanny Yang (ETH Zurich)</p>
Teaching experience	<p>Teaching assistant, Section de Mathématiques (EPFL) (* = head TA)</p> <p>*Analysis 2 (sections GC SIE) Spring 2022</p> <p>*MATH-101(g): Analysis 1 Fall 2022</p> <p>*MATH-450: Numerical Integration of SDEs Spring 2023</p> <p>MATH-101(g): Analysis 1 Fall 2023</p> <p>*MATH-105(a): Analysis 2 Spring 2024</p> <p>*MATH-100(a): Analysis 1 Fall 2024</p> <p>Bachelor & Master semester projects supervision (EPFL) 2022 – present</p>
Talks and tutorials	<p><i>An Exponentially Converging Particle Method for the Mixed Nash Equilibrium of Continuous Games</i> March 2023</p> <p>SIGOPT 2023 International Conference on Optimization (Cottbus, Germany)</p> <p><i>From optimal transport to Wasserstein gradient descent for optimization and sampling</i> November 2023</p> <p>Internal FLAIR tutorial (EPFL)</p>
Skills	<p>Programming</p> <p>Proficient in: Python, Julia.</p> <p>Familiar with: Matlab, Java, C, C++, Caml, javascript, GraphQL, PHP.</p> <p>Languages</p> <p>French, Chinese (native); English (fluent); German (conversational)</p>
Service	<p>Reviewing</p> <p>Journal of Machine Learning Research, Mathematics of Operations Research, Optimal Transport and Machine Learning workshop (NeurIPS 2023), NeurIPS 2024</p> <p>Student life at EPFL</p> <p>Webmaster for the EPFL SIAM student chapter (Society for Industrial and Applied Mathematics)</p>