

Guillaume Wang

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Research interests Optimization, theory of machine learning, optimal transport

Education

EPFL	Lausanne, Switzerland
PhD in Mathematics	2021 – present
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

(* = equal contribution)

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