

Victor PRISER

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EDUCATION

Telecom Paris

2023 – Jul. 2026

PhD: Convergence of stochastic particle systems and applications

Palaiseau

- **Advisors:** Pascal Bianchi and François Portier

ENSTA Paris

Sep. 2019 – Nov. 2022

Engineering Degree in Quantitative Finance

Palaiseau

Preparatory Classes – CPGE (Jean Baptiste Say)

Sep. 2017 – Jul. 2019

Equivalent to L2 Level

Paris

PUBLICATIONS

Gradient-free optimization with Laplace Importance Sampling

2025

Preprint: <https://arxiv.org/pdf/2604.02882>

Dragomir R.-A., Portier F., Priser V.

The paper proposes improving grid/random search by replacing the best-point selection with a weighted average of configurations using importance sampling, either as a post-processing step or in an adaptive iterative scheme. It achieves better theoretical error rates in non-convex settings than standard methods and shows strong empirical performance.

Consensus-Based Optimization Beyond Finite-Time Analysis

2025

Preprint: <https://arxiv.org/pdf/2509.12907>

Bianchi P., Dragomir R.-A., Priser V.

The work proves long-time convergence of a small-noise CBO-type zeroth-order optimization algorithm to the minimizer, using a quantitative Laplace principle in the mean-field limit and a block-wise analysis that yields explicit finite-particle error bounds.

Stochastic mirror descent for nonparametric adaptive importance sampling

2024

Preprint: <https://www.arxiv.org/pdf/2409.13272>

Bianchi P., Delyon B., Priser V., Portier F.

This paper proposes a sequential mirror descent algorithm for approximating an unknown density, providing theoretical convergence guarantees with a fixed learning rate, improving the discovery of multiple modes and computational efficiency through particle subsampling.

Long-time asymptotics of noisy SVGD outside the population limit

2024

ICLR: <https://openreview.net/pdf?id=X7eAhXcps1>

Bianchi P., Priser V., Salim A.

The paper studies the long-time behavior of a noisy variant of SVGD, a particle-based algorithm for approximating a target distribution. It shows that, for large iteration numbers, the limit set is well defined and converges to the target distribution as the number of particles increases.

Long run convergence interacting particle systems of the McKean–Vlasov type

2024

Stochastic Process and Applications : <https://arxiv.org/abs/2403.17472>

Bianchi P., Hachem W., Priser V.

We study a discrete-time system of n interacting particles with vanishing step size and random perturbations, and show that as both the number of particles and iterations tend to infinity, the empirical measure of their trajectories converges in probability to the set of recurrent McKean–Vlasov distributions.

TEACHINGS

Télécom Paris

2022-2025

Statistics, Advanced Statistics, Optimization for Machine Learning, Markov Chains and Time Series, Foundations of Topology and Probability, Advanced Machine Learning, Point Process Theory