Clément Bonet

Curriculum Vitae

clement.bonet@univ-ubs.fr
https://clbonet.github.io
clement-bonet-2840a9153
clbonet

Education

2020 – 2023 **Laboratoire de Mathématiques de Bretagne Atlantique (LMBA), PHD**, *Université Bretagne Sud*, Vannes, Bretagne, France
Bridging the Gap between Stochastic Methods and Deep Learning.
Supervisors: François Septier, Nicolas Courty and Lucas Drumetz.

2019 – 2020 **Ecole Normale Supérieure Paris-Saclay, Master 2 MVA (Mathematics, Machine Learning and Computer Vision)**, Cachan, France.
Convex Optimization, Computational Statistic, Probabilistic Graphical Model, Deep Learning, Kernel Methods, Bayesian Machine Learning. High Honors.

2017 – 2020 **Télécom Paris**, Paris, France
Majors: Data Science, Random Modelization and Scientific Computing.

Professional Experiences

Teaching Assistant

2023 **Regression Model (L3)**, *Université Bretagne Sud*, Vannes, France

2022 **Linear Regression and Simulation Methods (L3)**, *Université Bretagne Sud*, Vannes, France

2021 **Mathematic Statistics (L3)**, *Université Bretagne Sud*, Vannes, France

Internships

2020 **Research Internship**, *MAP5*, Paris, France
Supervisors: Raphaël Lachièze-Rey, Pierre Latouche and Antoine Marchina.

Study of a subsampling algorithm using Gaussian Random Fields (`https://github.com/clbonet/Internship-MVA`).

2019 **Data Analyst Internship**, *Sodexo Benefits & Rewards Services*, Ixelles, Bruxelles

Establishment analysis of VISA and MasterCard reimbursement data as part of the replacement affiliate scholarship.

2018 **Web Development Internship**, *ZenyWay*, Paris, France

I developed the frontend interface of ZenyPass, a password manager.

Publications

[1] Clément Bonet, Paul Berg, Nicolas Courty, François Septier, Lucas Drumetz, and Minh-Tan Pham. "Spherical Sliced-Wasserstein". In: *International Conference on Learning Representations*. **2023**.

[2] Clément Bonet, Laetitia Chapel, Lucas Drumetz, and Nicolas Courty. "Hyperbolic Sliced-Wasserstein via Geodesic and Horospherical Projections". In: *2nd Annual Workshop on Topology, Algebra and Geometry in Machine Learning (TAG-ML) at the 40 th International Conference on Machine Learning*. PMLR. **2023**.

[3] Clément Bonet, Benoît Malézieux, Alain Rakotomamonjy, Lucas Drumetz, Thomas Moreau, Matthieu Kowalski, and Nicolas Courty. "Sliced-Wasserstein on Symmetric Positive Definite Matrices for M/EEG Signals". In: *International Conference on Machine Learning*. PMLR. **2023**, pp. 2777–2805.

[4] Clément Bonet, Nicolas Courty, François Septier, and Lucas Drumetz. "Efficient Gradient Flows in Sliced-Wasserstein Space". In: *Transactions on Machine Learning Research* (**2022**).

[5] Clément Bonet, Titouan Vayer, Nicolas Courty, François Septier, and Lucas Drumetz. "Subspace Detours Meet Gromov–Wasserstein". In: *Algorithms* 14.12 (**2021**), p. 366.

Preprints

[6] Guillaume Mahey, Laetitia Chapel, Gilles Gasso, Clément Bonet, and Nicolas Courty. *Fast Optimal Transport through Sliced Wasserstein Generalized Geodesics*. **2023**.

[7] Thibault Séjourné, Clément Bonet, Kilian Fatras, Kimia Nadjahi, and Nicolas Courty. *Unbalanced Optimal Transport meets Sliced-Wasserstein*. **2023**.

Other Research Experiences

Reviews I have reviewed at different conferences: AISTATS2022,2023, ICML2022 (Outstanding Reviewer), ICML2023, Neurips2022.

Open source Contributor to the Python Optimal Transport library: `https://pythonot.github.io`: I implemented the algorithm to solve the Wasserstein distance on the circle along with the Spherical Sliced-Wasserstein distance.

Talks

03/07/2023 Spjerical Sliced-Wasserstein. CAp 2023.

13/12/2021 Subspace Detours Meet Gromov-Wasserstein. Spotlight poster at the Neurips Workshop OTML2021.

18/11/2021 Sliced-Wasserstein Gradient Flows. GDR ISIS OTML.

Languages

French Native Speaker ★★★★★

English 623/677 TOEFL ITP (Januarly 2019) ★★★★☆

German Abitur in 2015 ★★☆☆☆

Skills

Programming Python ★★★★☆, LateX ★★★☆☆

Basic R, Java, C, C++, SQL, HTML, CSS, Javascript.

Data Science Scikit-learn, Pytorch

Tools Git *Program Version Control and Program Repositories.*

OS Linux *Daily use.*