Boris Muzellec

Paris
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Education

2017–present **ENSAE**, *PhD in Mathematics*, Paris, Supervisor: Prof. Marco Cuturi.
Working on applications of optimal transport to machine learning.

2016–2017 **Université Paris-Saclay**, *MSc Data Science*, Paris.

2013–2016 **École polytechnique**, *Engineering Degree, Data Science Track*, Paris.
Applied mathematics and computer science.

Research Internships

Sept.–Nov. 2019 **Riken AIP/U. of Tokyo**, *Tokyo, Japan*, Supervisor: T. Suzuki.
Gradient Langevin dynamics for non-convex optimization in RKHS. Work with K. Sato, M. Massias and Pr. T Suzuki. Publication: currently writing.

Mar.–Jul. 2016 **Data61, CSIRO**, *Sydney, Australia*, Supervisor: R. Nock.
Regularized optimal transport for joint distribution inference. Publication in AAAI 2017.

Publications

BM, Julie Josse, Claire Boyer and Marco Cuturi. "'Missing Data Imputation using Optimal Transport." In: *arXiv:2002.03860*. 2020.

BM and Marco Cuturi. "Subspace Detours: Building Transport Plans that are Optimal on Subspace Projections." In: *Advances in Neural Information Processing Systems 32*. 2019.

BM and Marco Cuturi. "Generalizing Point Embeddings Using the Wasserstein Space of Elliptical Distributions." In: *Advances in Neural Information Processing Systems 31*. 2018.

BM, R. Nock, G. Patrini and F. Nielsen. "Tsallis Regularized Optimal Transport and Ecological Inference." In: *Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence*. 2017.

Teaching Experience

Oct. 2017–Present **ENSAE**, *Teaching Assistant*, Paris.
- Functional and Convex Analysis.
- Numerical Analysis.
- Introduction to Machine Learning.

Sept. 2016 – Aug. 2017 **École polytechnique**, *Student Tutor*, Paris.
- INF311: Introduction to Computer Science.
- INF557: Introduction to Concurrent and Communicating Systems.

Awards

2018 *Best Talk Award*, Junior Conference on Data Science and Engineering 2018.

2016 *Computer Science Research Internship Award*, École polytechnique.

Service to the community

Conference reviewer: AISTATS 2019, ICML 2019.

Ad-hoc journal reviewer: JMLR, Physica A.

Programming skills

Advanced: Python (numpy, scikit-learn, Pytorch, cupy).

Notions: C++ (OpenCV, Open MPI), Java, R.

Languages

Native French, fluent English, Spanish basics.

Interests

Sports: Rock climbing, savate (French-style kickboxing), fencing.

Music: Trumpet: Played for concerts and ceremonies as part of a local brass band. Played in the university's jazz band.