

Xavier Bacon

Doctorate in Applied Mathematics



About me

Research associate

Areas of specialization

Optimization
Modeling mathematics
Optimal transport
Computational aspects
Optimal allocation

PROFESSIONAL EXPERIENCE

- 2020–2023 | **A.T.E.R.** PARIS DAUPHINE-PSL UNIVERSITY, C.E.R.E.M.A.D.E. team
During this period, I developed an optimal resource allocation model that took into account transport costs and implemented it in Python.
- 2017–2020 | **PhD in Applied Mathematics** PANTHÉON-SORBONNE UNIVERSITY, S.A.M.M. team
The topic was to explore possible generalizations of optimal transport theory to multivalued densities.

DEGREES

- dec. 2022 | **Thesis in Applied Mathematics**
Panthéon-Sorbonne University
- 2017 | **Master in *Mathématiques de la Modélisation***
Pierre & Marie Curie University
- 2016 | **Agrégation in Mathematics**
Option *Calcul scientifique*
- 2013 | **Bachelor's Degree in Mathematics**
Pierre & Marie Curie University
- 2013 | **Bachelor's Degree in Physics**
Pierre & Marie Curie University

PUBLICATIONS

- 2023 | **A spatial Pareto exchange economy problem** (with G. Carlier and B. Nazaret)
Applied Mathematics and Optimization Journal
- 2022 | **A few models of vector-valued Optimal Transport**
Thesis
- 2020 | **Multi-species Optimal Transportation**
Journal of Optimization Theory and Applications

TEACHING EXPERIENCE (> 600 HOURS)

Lectures in Linear Algebra, Analysis and Probability (L1)
Tutoring in Continuous Optimization (M1), Calculus (L1), Linear Algebra (L2) and Analysis (L2)

LANGUAGES

Français | ● ● ● ● ● ●
English | ● ● ● ● ● ●
Japanese | ● ● ● ●
German | ● ●

PROGRAMMING

Python | ██████████
↔ Numpy, P. Optimal Transport
↔ Pandas, Scikit-learn, Open-CV

L^AT_EX | ██████████

INTERESTS

In my spare time, I practice martial arts (Karate 3rd dan, Kudo 6th kyu) and study Japanese. I see video games through the light of game design, and movies through the *Mise-en-scène*. On vacation, I usually do backpack hiking, trying each year to go one step further in crossing the French Pyrénées (from Hendaye to Banyuls...this summer : Arens Marsous).

@ xnl.bacon@gmail.com

baconxavier.github.io

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