

# Xavier Bacon

Postdoctoral researcher



## About me

Postdoctoral researcher

## Areas of specialization

- Optimal transport
- Statistics
- Computational aspects
- Modeling mathematics
- Optimization
- Optimal allocation

## PROFESSIONAL EXPERIENCE

2024-now	<b>Post-doc</b> ÉCOLE NORMALE SUPÉRIEURE DE PARIS-SACLAY In the Borelli Center, I use statistical models to study patient care pathways and look for societal determinants to enlight them.
2020-2023	<b>A.T.E.R.</b> PARIS DAUPHINE-PSL UNIVERSITY, C.E.R.E.M.A.D.E. team During this period, I developped an optimal resource allocation model that took into account transport costs and implemented it in Python.
2017-2020	<b>PhD in Applied Mathematics</b> PANTHÉON-SORBONNE UNIVERSITY, S.A.M.M. team The topic was to explore possible generalizations of optimal transport theory to multivalued densities.

## DEGREES

2022	<b>Thesis in Applied Mathematics</b> Panthéon-Sorbonne University
2017	<b>Master in <i>Mathématiques de la Modélisation</i></b> Pierre & Marie Curie University
2016	<b>Agrégation in Mathematics</b> Option <i>Calcul scientifique</i>
2013	<b>Bachelor's Degree in Mathematics</b> Pierre & Marie Curie University
2013	<b>Bachelor's Degree in Physics</b> Pierre & Marie Curie University

## PUBLICATIONS

2023	<b>A spatial Pareto exchange economy problem</b> (with G. Carlier and B. Nazaret) Applied Mathematics and Optimization Journal
2022	<b>A few models of vector-valued Optimal Transport</b> Thesis
2020	<b>Multi-species Optimal Transportation</b> 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<sup>A</sup>T<sub>E</sub>X** 

## INTERESTS

In my spare time, I practice martial arts ( Karate 3<sup>rd</sup> *dan*, Kudo 5<sup>th</sup> *kyu*) and study Japanese. 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](https://github.com/baconxavier)

 Xavier Bacon