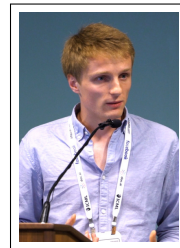


François-Pierre Paty

PhD Student at ENSAE

49B rue Sedaine, 75011 Paris, France

📞 +33 6 52 30 29 17 • ✉ francoispierre.paty@gmail.com
🌐 francoispierrepaty.github.io



Research interests

Recent progress in computational optimal transport have opened the door for a wide range of applications in statistics and machine learning. My research focuses on making those tools more robust—to high dimension, to noise, to outliers—in order to provide theoretically consistent and numerically efficient methods in machine learning applications.

Keywords: Optimal Transport, Statistics, Machine Learning.

Education

PhD Student at ENSAE

- PhD under the supervision of Prof. Marco Cuturi (ENSAE, Google Brain)
- Grant from CREST

Palaiseau, France

Since Sept 2018

Université Paris-Sud

Master in Statistics and Machine Learning

Advanced courses in statistics and machine learning

Orsay, France

2017–2018

ENSAE Paris

Engineering Track

Data Science specialization

Palaiseau, France

2017–2018

École polytechnique

Engineering Track

Studied applied mathematics with focus on statistics, probability and data analysis

Palaiseau, France

2014–2018

Publications

Regularized Optimal Transport is Ground Cost Adversarial

F-P. Paty, M. Cuturi

Preprint 2020

Regularity as Regularization: Smooth and Strongly Convex Brenier Potentials in Optimal Transport

F-P. Paty, A. d'Aspremont, M. Cuturi

AISTATS 2020

Subspace Robust Wasserstein Distances

F-P. Paty, M. Cuturi

(20 minutes oral, top ~ 20% of papers)

ICML 2019

Talks

- **January 2020:** I gave a talk at the seminar day *Learning meets Astrophysics* in CEA Saclay.
- **November 2019:** I gave a talk at the seminar *Stat·Eco·ML*.
- **November 2019:** I gave a talk at *Le Séminaire Palaisien*.
- **August 2019:** I gave a tutorial at *MLSS 2019* in Moscow.
- **July 2019:** I gave a talk at *Saint-Flour Probability Summer School*.
- **June 2019:** I gave a 20-minutes oral presentation at *ICML 2019* in Long Beach.

Research internships

Maximizing Wasserstein distances

ENSAE

Master thesis under the supervision of Prof. Marco Cuturi.

Palaiseau, France

April 2018–July 2018

Sparse recovery of time series

Finance For Energy Market Research Centre and EDF R&D

Adapted sparse deconvolution techniques to missing data imputation for time series. Received *congratulations* from the Applied Mathematics department of École polytechnique.

Palaiseau, France

April 2017–August 2017

Modelling of raw material markets

EDF R&D

Modelling of the long-term ore markets, in collaboration with EDF R&D.

Palaiseau, France

Sept 2016–March 2017

Teaching experience

Teacher Assistant

ENSAE Paris

Since Sept 2018

- Topology and Analysis (*last-year Bachelor students*)
- Differentiable Optimization (*last-year Bachelor students*)
- Geometric Methods in Machine Learning (*MSc. students*)
- Stochastic Optimization and Automatic Differentiation for Machine Learning (*MSc. students*)
- Optimal Transport : Theory, Computations, Statistics and ML Applications (*MSc. students*)
- Deep Learning: Models and Optimization (*MSc. students*)

Service to the community

Conference Reviewer

AISTATS 2020, ICML 2020

Seminar Organizer

I co-organize the seminar *Stat·Eco·ML* (StatEcoML.github.io)

Programming skills

Advanced

Python (*numpy, pandas, sklearn, cupy*)

Notions
PHP, SQL

Languages

French: Mother tongue
English: Fluent

Italian: Fluent
Chinese: High intermediate:
汉语水平考试四级