

Federico Pavone

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Experience

- 2023 – present **MathInGreaterParis Postdoctoral Fellow**, Université Paris Dauphine-PSL, Paris
Postdoctoral fellow at CEREMADE under the supervision of Prof. Robin Ryder.
- 2023 **Research Visit**, King Abdullah University of Science and Technology, Thuwal (Saudi Arabia)
- 2019–2023 **Doctoral Researcher**, *Bocconi University*, Milan, Italy
Statistical modelling of complex data applied to social sciences under the supervision of Prof. [Daniele Durante](#)
○ Learning and forecasting age-specific mortality rates, with [Sirio Legramanti](#), [Daniele Durante](#)
○ Phylogenetic trees and network models for criminal networks, with [Daniele Durante](#), [Robin Ryder](#)
- 2020–2023 **Teaching Assistant**, *Bocconi University*, Milan, Italy
○ Preparing and giving exercise lectures, project supervision, office hours.
○ **Courses**: Data Analysis (3 years), Machine Learning (3 years), Statistics (2 years), Applied Stochastic Processes (2 years), Principles of Business Analytics (2 years), Metodi Quantitativi per la Finanza (2 years), Bayesian Statistical Methods (1 year).
- 2018–2019 **Research Assistant**, *Aalto University*, *Probabilistic Machine Learning Group*, Helsinki, Finland
Working on variable selection under the projection predictive approach under the supervision of Prof. [Aki Vehtari](#).

Education

- present **PhD candidate in Statistics**, *Bocconi University*, Milan, Italy
Supervisor: [Daniele Durante](#),
Title: Advances in Bayesian modelling of array structured data
- 2019 **MSc in Mathematical Engineering**, *Polytechnic University of Milan*, Milan, Italy, *with honors*
Major in Applied Statistics.
- 2016 **BSc in Mathematical Engineering**, *Polytechnic University of Milan*, Milan, Italy, *with honors*

Editorial Experience

- 2023 **Reviewer**, *Bayesian Analysis*

Awards

- 2023 **MathInGreaterParis: Marie Skłodowska-Curie COFUND Postdoctoral Fellowship**
- 2022 **Best poster award**, *The 2022 ISBA World Meeting*, Montreal, Canada
- 2016–2018 **Merit Scholarship**, *Polytechnic University of Milan*, Milan, Italy
For academic achievements for Master's degree at Polytechnic University of Milan

Papers

- 2023 **F. Pavone**, D. Durante, and R. Ryder, "Phylogenetic latent position models", *working paper*
- 2022 **F. Pavone**, S. Legramanti, and D. Durante, "Learning and forecasting of age-specific period mortality via B-spline processes with locally-adaptive dynamic coefficients", *submitted*, [\[arXiv'22\]](#), [\[code\]](#)
- 2022 **F. Pavone** and S. Legramanti, "Bayesian Analysis of Mortality in Iceland via Locally Adaptive Splines", **Book of Short Papers SIS 2022**, [\[pdf\]](#)
- 2022 **F. Pavone**, J. Piironen, P.-C. Bürkner, and A. Vehtari, "Using reference models in variable selection", **Computational Statistics**, pp. 1–23, [\[arXiv'20\]](#), [\[code\]](#)

Conferences and Seminars

- July 2024 **ISBA world meeting**, *Venice, Italy*, **invited** talk
- 18 Dec 2023 **CMStatistics**, *Berlin, Germany*, **invited** talk
- 14 Jul 2023 **SELECT Final Workshop**, *Venice, Italy*, **invited** talk
- 20 Oct 2022 **Bayesian Methods for the Social Sciences**, *Paris, France*, poster
- 2022–2023 **Bocconi PhD seminars**, *Milano, Italy*, talks
- 1 Sep 2022 **Workshop: Climbing Mortality Models**, *Misurina, Italy*, **invited** talk
- 29 Jul 2022 **ISBA world meeting**, *Montreal, Canada*, **best poster award**
- 23 Jun 2022 **Scientific Meeting of the Italian Statistical Society**, *Caserta, Italy*, **invited** talk
- 22 Sep 2020 **Università Cattolica seminars**, *Milan, Italy*, **invited** talk

Schools and short courses

- Oct 2023 **Short course: Data Analysis on the Sphere**, *KAUST, Saudi Arabia*
- 27–29 Mar 2023 **Probabilistic Numerics Spring School**, *Tübingen, Germany*
- 26 Jun 2022 **Introduction to Bayesian Nonparametric methods for causal inference**, *Montreal, Canada*, ISBA 2022 short course

Skills

Scientific: Bayesian statistics, Machine learning, Mathematics

Technical: R, C++, Stan, Python, Matlab, Git, Bash, Latex

Languages: Italian (native), English (fluent)

Projects

- 2017–2018 **C++/R package for density function estimation**
Optimized R package in C++ to perform density function estimation through smoothing splines based on Machalova, Hron and Monti (2016). Project carried out by a three-person team.
https://github.com/fpavone/pacs_spline_density
- 2017–2018 **Bayesian model for AVIS donations**
AVIS is the main Italian institute for blood donations. The goal was to build a Bayesian model for the gap times between different donations of different donors. Software used was R with its interface to Stan. Project carried out by a two-person team.
- 2017 **Spacescope**
Identified stars hosting exoplanets in NASA dataset using multivariate and functional data statistics tools in R. Project carried out by a five-person team.

Miscellaneous

Music: guitar, piano

Sports: Brazilian jiu jitsu purple belt, hiking