

Francesco GAFFI

CURRENT POSITION: Postdoctoral Associate in Statistics
Department of Mathematics
University of Maryland, College Park, MD, USA
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EDUCATION

2023	Ph.D. in STATISTICS, <i>cum laude</i> Bocconi University , Milano, Italy Supervisors: Antonio Lijoi and Igor Prünster Thesis: Modeling with discrete random probability measures Defence date: January 23rd, 2023
2018	M.Sc. in PURE AND APPLIED MATHEMATICS, <i>cum laude</i> Università di Roma Tor Vergata , Italy Supervisor: Domenico Marinucci Thesis: Functional data analysis on $\mathcal{L}^2(\mathbb{S}^2)$ Defence date: July 24th, 2018
2016	B.Sc. in MATHEMATICS Università di Roma Tor Vergata , Italy
2014	M.Mus. in ORCHESTRAL REPERTOIRE AND CHAMBER MUSIC, <i>cum laude</i> Conservatorio Licinio Refice , Frosinone, Italy
2011	B.Mus. in CLARINET Conservatorio Licinio Refice , Frosinone, Italy

ACADEMIC POSITIONS

2024 - NOW	Postdoctoral Associate , University of Maryland, College Park, MD, USA
2023 - 2024	Postdoctoral Fellow , University of Notre Dame, IN, USA
2022 - 2023	Ph.D. Candidate , Bocconi University, Milano, Italy
2018 - 2022	Ph.D. Student , Bocconi University, Milano, Italy

INDUSTRY EXPERIENCE

2016 - 2017	Quantitative analyst intern , Ladbroke's Coral, Roma, Italy
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AWARDS&FUNDING

2025	BNP14 Travel Award, International Society for Bayesian Analysis
2024	★ ISBA2024 Travel Award, University of California, Los Angeles ★ Financial support from SNSF Scientific Exchange grant IZSEZ0225139
2023	★ Robert and Sara Lumpkins Postdoctoral Fellowship (3.5 years), University of Notre Dame ★ Student Paper Award, American Statistical Association - Section on Bayesian Statistical Science
2022	★ Special financial support for PhD candidates, Bocconi University and Fondazione Invernizzi ★ ISBA2022 Travel Award, International Society for Bayesian Analysis ★ BNP2022 Travel Award, International Society for Bayesian Analysis
2018	PhD Scholarship (4 years), Bocconi University
2014	'V. Mancini' Award for Best Graduate Student - Winds Section, Conservatorio Licinio Refice

SERVICE

- Reviewer** *Bayesian Analysis*
Electronic Journal of Statistics
Journal of the American Statistical Association
Journal of Econometrics
Statistics and Computing
Statistics and Probability Letters
Stochastic Processes and their Applications
- Committee member** 2024 ASA-SBSS Student Paper Award

RESEARCH SUPERVISION

- 2025 | Edoardo Stefanelli, Research Assistant, BIDSa, Bocconi University
(with Beatrice Franzolini)

RESEARCH NETWORKS AND SOCIETIES

- Member of International Society for Bayesian Analysis, ISBA
Institute of Mathematical Statistics, IMS
BayesLab of Bocconi Institute for Data Science and Analytics, BIDSa
Complex Data Modeling Research Network, led by MiDaS
Società Italiana di Statistica, SIS
International Indian Statistical Society, IISA
American Statistical Society, ASA
- Organizer of BayesLab reading group

PUBLICATIONS

Working papers

- GAFFI, F., JOSEPHS, N., LIN, L. **Dependent random partitions for network-linked regression.**
- GAFFI, F., JOSEPHS, N., LIN, L. **Exchangeable random permutations for graph matching.**
- FRANZOLINI, B., GAFFI, F. **An invariance-based approach to node clustering in dynamic networks.**
- GAFFI, F., LIJOI, A., PRÜNSTER, I. **Transition probabilities of continual Young diagrams and Dirichlet random means.**

Journal papers

- DURANTE D., GAFFI F., LIJOI, A., PRÜNSTER, I. (2025). **Partially exchangeable stochastic block models for (node-colored) multilayer networks.** To appear in *Journal of the American Statistical Association - Theory and Methods*. arXiv:2410.10619. [2023 ASA-SBSS Student Paper Award winner]
- GAFFI, F., LIJOI, A., PRÜNSTER, I. (2025). **Random probability measures with fixed mean distribution.** To appear in *The Annals of Applied Probability*.

Conference proceedings

GAFFI, F. (2025). **Conditionally partially exchangeable partitions for dynamic networks**. To appear in *New Trends in Bayesian Statistics*, Springer Proceedings in Mathematics and Statistics.

GAFFI, F., LIJOI, A., PRÜNSTER, I. (2022). **Specification of the base measure of nonparametric priors via random means**. In *New Frontiers in Bayesian Statistics*, pages 91-100, vol. 405, Springer Proceedings in Mathematics and Statistics.

Theses

GAFFI, F. (2023). **Modelling with discrete random probability measures**. Bocconi University, Milano.

GAFFI, F. (2018). **Functional data analysis on $\mathcal{L}^2(\mathbb{S}^2)$** . Università di Roma Tor Vergata, Roma.

Teaching related

FORTINI, S., GAFFI, F. (2021). **Introduction to Probability. BAI 30456**. Bai series. Volume 2. Egea, Milano.

PRESENTATIONS

Invited talks

DECEMBER 2025	Bayesian Uncertainty Quantification in Large Models , Chennai Mathematical Institute, India.
JUNE 2025	BNP14 , 14th International Conference on Bayesian Nonparametrics, University of California Los Angeles, USA.
JANUARY 2025	Recent Developments in the Techniques of the Bayesian Paradigm , Banaras Hindu University, Varanasi, India.
SEPTEMBER 2024	Frontiers of Bayesian Inference and Data Science , Casa Matemática Oaxaca, Mexico.
AUGUST 2024	Bernoulli-IMS2024 , 11th World Congress in Probability and Statistics, Ruhr-Universität Bochum, Germany.
JULY 2024	ISBA2024 , World Meeting of the International Society for Bayesian Analysis, Università Ca' Foscari, Venezia, Italy.
JUNE 2024	Satellite workshop to ISBA World Meeting , Università della Svizzera Italiana, Lugano, Switzerland. Fourth Italian Meeting on Probability and Mathematical Statistics , Roma, Italy.
AUGUST 2023	JSM2023 , Joint Statistical Meetings, Toronto, Canada. EcoSta2023 , 6th International Conference on Econometrics and Statistics, Waseda University, Tokyo, Japan.
JUNE 2023	10th International Purdue Symposium on Statistics , Purdue University, West Lafayette, USA.
DECEMBER 2022	IISA2022 , International Indian Statistical Association Conference, Indian Institute of Science, Bengaluru, India.
JUNE 2022	Third Italian Meeting on Probability and Mathematical Statistics , Alma Mater Studiorum, Bologna, Italy.
JUNE 2021	EcoSta2021 , 4th International Conference on Econometrics and Statistics, virtual.

Contributed talks

MAY 2025	BISP14 , 14th Bayesian Inference for Stochastic Processes workshop, Consiglio Nazionale delle Ricerche, Milano, Italy.
APRIL 2025	BaYSM2025 , Bayesian Young Statisticians Meeting, virtual.
NOVEMBER 2023	BaYSM2023 , Bayesian Young Statisticians Meeting, virtual.
JUNE 2022	ISBA2022 , World Meeting of the International Society for Bayesian Analysis, Montréal, Canada.
APRIL 2022	BNP2022 , BNP Networking event, University of Cyprus, Nicosia, Cyprus.
SEPTEMBER 2021	BaYSM2021 , Bayesian Young Statisticians Meeting, virtual.
JUNE 2021	ISBA2021 , World Meeting of the International Society for Bayesian Analysis, virtual. ISBA@CIRM , Junior session of ISBA2021 mirror event, Centre International de Rencontres Mathématiques, Marseille, France.

Poster sessions

JUNE 2024	BaYSM2024 , Bayesian Young Statisticians Meeting, Università Ca' Foscari, Venezia.
JUNE 2023	Approximation Methods in Bayesian Analysis , Centre International de Rencontres Mathématiques, Marseille, France.
OCTOBER 2022	BNP13 , 13th International Conference on Bayesian Nonparametrics, Puerto Varas, Chile.

SUMMER SCHOOLS

JULY 2019	<i>Random graphs and complex networks: structure and function</i> , Bocconi Summer School in Advanced Statistics and Probability, Como, Italy
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TEACHING

2024 - NOW	Lecturer , University of Maryland, College Park <ul style="list-style-type: none">★ Applied probability and statistics, B.Sc. in Computer Science (3 semesters)
2023 - 2024	Lecturer , University of Notre Dame <ul style="list-style-type: none">★ Probability, B.Sc. in Applied Mathematics and Statistics (1 semester)
2020 - 2023	Adjunct lecturer , Bocconi University <ul style="list-style-type: none">★ Probability, B.Sc. in Mathematics for AI (2 semesters)★ Probability, Ph.D. in Economics and Finance (3 semesters)★ Statistics, B.Sc. in Economics (2 semesters)
2019 - 2023	Teaching assistant , Bocconi University <ul style="list-style-type: none">★ Optimal control, M.Sc. in Data Science (3 semesters)★ Statistics, B.Sc. in Economics (4 semesters)★ Stochastic processes, M.Sc. in Data Science (4 semesters)★ Probability, B.Sc. in Mathematics for AI (2 semesters)
2017 - 2018	Teaching assistant , Università di Roma Tor Vergata <ul style="list-style-type: none">★ Discrete mathematics, B.Sc. in Computer Science

COMPUTER SKILLS

Programming languages: C/C++, LATEX
Software: R, MATLAB
Environments: Microsoft Windows, Linux distributions