




MATTEO GIORDANO

CURRICULUM VITAE

March, 2023

Università degli Studi di Torino
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ACADEMIC POSITIONS

Current positions

Assistant Professor (RTDA SECS-S/01), *Mar. 2023 - present*
Università degli Studi di Torino

Research areas: Frequentist analysis of Bayesian nonparametric statistics, statistical inverse problems, inference for diffusion processes, inference for point processes, inference on manifolds

Research Affiliate, “de Castro” Statistics Initiative, *Mar. 2023 - present*
Collegio Carlo Alberto, Torino

Past positions

Postdoctoral Research Assistant in Statistics, University of Oxford *Oct. 2021 - Feb. 2023*
Mentor: Prof. Judith Rousseau

Visiting Professor in Statistics, Università degli Studi di Torino *Mar. 2022 - May 2022*

Research Assistant in Mathematics, University of Cambridge *Oct. 2018 - Sept. 2021*

Visiting Professor in Statistics, Università degli Studi di Torino *Mar. 2021 - May 2021*

EDUCATION

Ph.D. in Mathematical Statistics, University of Cambridge *Oct. 2017 - Sept. 2021*
Thesis title: Asymptotic theory for Bayesian nonparametric inference in statistical models arising from partial differential equations
Supervisor: Prof. Richard Nickl

M.Sc. in Mathematics, Università degli Studi di Torino *Oct. 2015 - July 2017*
Final grade: 110/110 cum laude and mention

Thesis title: Continuous-time birth-and-death processes and Pólya urn schemes

Thesis supervisors: Prof. Matteo Ruggiero and Prof. Pierpaolo De Blasi

**Master in Statistics and Applied Mathematics,
Collegio Carlo Alberto, Torino**

Sept. 2015 - July 2017

Final grade: Distinction

**B.Sc. in Mathematics for Finance and Insurance,
Università degli Studi di Torino**

Oct. 2012 - July 2015

Final grade: 110/110 cum laude

Maturità Scientifica, Liceo Scientifico A. Avogadro, Biella, Italy

Sept. 2007 - July 2012

Final grade: 100/100

PUBLICATIONS AND PREPRINTS

Preprints

1. Giordano, M. (2022)
Besov priors in density estimation: optimal posterior contraction rates and adaptation
arXiv preprint, [arXiv:2208.14350](https://arxiv.org/abs/2208.14350)

Publications

6. Giordano, M., Ray, K., and Schmidt-Hieber, J. (2022)
On the inability of Gaussian process regression to optimally learn compositional functions
Accepted for publication in *Advances in Neural Information Processing Systems 36 (NeurIPS 2022)*
5. Giordano, M., and Ray, K. (2022)
Nonparametric Bayesian inference for reversible multi-dimensional diffusions
The Annals of Statistics, Vol. 50, No. 5, pp. 2872–2898, DOI: [10.1214/22-AOS2213](https://doi.org/10.1214/22-AOS2213)
4. Giordano, M. (2021)
Asymptotic theory for Bayesian nonparametric inference in statistical models arising from partial differential equations
Doctoral thesis, University of Cambridge, DOI: [10.17863/CAM.78120](https://doi.org/10.17863/CAM.78120)
3. Giordano, M., and Nickl, R. (2020)
Consistency of Bayesian inference with Gaussian process priors in an elliptic inverse problem
Inverse Problems, Vol. 36, No. 8, pp. 1-35, DOI: [10.1088/1361-6420/ab7d2a](https://doi.org/10.1088/1361-6420/ab7d2a)
2. Giordano, M., and Kekkonen, H. (2020)
Bernstein-von Mises theorems and uncertainty quantification for linear inverse problems
SIAM/ASA Journal on Uncertainty Quantification, Vol. 8, No. 1, pp. 342-373,
DOI: [10.1137/18M1226269](https://doi.org/10.1137/18M1226269)
1. Giordano, M., De Blasi, P., and Ruggiero, M. (2020)
A reversible allelic partition process and Pitman sampling formula
ALEA, Latin American Journal of Probability and Mathematical Statistics, Vol. 17, No. 1, pp. 375-388, DOI: [10.30757/ALEA.v17-15](https://doi.org/10.30757/ALEA.v17-15)

Participation to research groups and projects

- Statistical Theory and Methodology Research Group** *Oct. 2022 - Feb. 2023*
University of Oxford, Department of Statistics
- ERC project *General Theory for Big Bayes (GTBB)*** *Oct. 2021 - Feb. 2023*
Principal investigator: Prof. Judith Rousseau
Hosted by: University of Oxford
- Computational Statistics and Machine Learning Research Group (OxCSML)** *Oct. 2021 - Feb. 2023*
University of Oxford, Department of Statistics
- ERC project *Uncertainty Quantification and Modern Statistical Inference (UQMSI)*** *Oct. 2017 - Sept. 2021*
Principal investigator: Prof. Richard Nickl
Hosted by: University of Cambridge

Talks and posters

Invited talks

- OxWaSP and StatML CDT Summer Event 2022, University of Oxford (July 2022)
- BNP-ISBA Webinars (June 2022)
- AMS Spring Western Sectional Meeting, Special Session on Mathematical Advances in Bayesian Statistical Inversion and Markov Chain Monte Carlo Sampling Algorithms (May 2022)
- Applied and Computational Mathematics Seminars, Tulane University (March 2022)
- Oxford Computational Statistics and Machine Learning (OxCSML) Seminars, University of Oxford (Nov. 2021)
- The International Bayes Club (May 2021)
- Oxford Bayesian Reading Group, University of Oxford (Oct. 2020)
- Cambridge Analysts' Knowledge Exchange (CAKE) Seminars, University of Cambridge (Nov. 2019)
- Young Researchers' Meeting in Mathematical Statistics, Paris, France (Sept. 2018)

Contributed talks

- Welcome Home Workshop, Università degli Studi di Torino (Dec. 2022)
- BNP13 - 13th International Conference on Bayesian Nonparametrics, Puerto Varas, Chile (October 2022)
- International Symposium on Nonparametric Statistics (ISNPS) 2022, Paphos, Cyprus (June 2022)
- Welcome Home Workshop, Università degli Studi di Torino (Dec. 2021)
- 8th European Congress of Mathematics (8ECM) (June 2021)

- Welcome Home Workshop, Università degli Studi di Torino (Dec. 2020)
- 32nd European Meeting of Statisticians (EMS), Palermo, Italy (July 2019)
- Joint CDT Colloquium 2019 - Interplay of Probability, Statistics and Analysis, University Warwick (Apr. 2019)

Posters

- NeurIPS 2022 - Thirty-sixth Conference on Neural Information Processing Systems, New Orleans, Louisiana (November 2022)

Roles at conferences and seminars

Organisational roles

Oxford Bayesian Reading Group, University of Oxford *Oct. 2021 - present*
 Role: Organiser (with D. Moss)

Joint CDT Colloquium 2019 - Interplay of Probability, Statistics and Analysis, University of Warwick *Apr. 2019*
 Role: Local coordinator (with Dr. D. Heydecker) for the Cambridge Centre for Analysis CDT

Other roles

NeurIPS 2022 High School Outreach Program *Nov. 2022*
 Role: Group leader, supervising a pod of high-school students throughout the program

Welcome Home Workshop, Università degli Studi di Torino *Dec. 2021*
 Role: Conductor (with Dr. C. Caraci) of round table on: The experience of undertaking a Ph.D. and research activities abroad

Foundations of Bayesian Inference for Complex Statistical Model, Mathematisches Forschungsinstitut Oberwolfach, Germany *May 2021*
 Role: Video conference assistant (with S. Franssen)

Editorial activity

Referee *Oct. 2021 - present*
 Annales de l'Institut Henri Poincaré (B) Probabilités et Statistiques, Annals of Statistics, Bayesian Analysis, Bernoulli, Journal of Multivariate Analysis, Journal of Nonparametric Statistics, Journal of Statistical Planning and Inference, Electronic Journal of Statistics, SIAM/ASA Journal on Uncertainty Quantification, Statistics and Computing

Other research-related activities

CCA external research project, GlaxoSmithKline, Cambridge *Jan. 2018 - Mar. 2018*
 Project goal: Development of a Bayesian algorithm for MRI image analysis (coded in MATLAB)
 External supervisor: Dr. Marius De Groot

TEACHING

Courses

- Università degli Studi di Torino** *A.y. 2022 - 2023*
Course: [Statistics](#)
B.Sc. in Economics
- Università degli Studi di Torino** *A.y. 2021 - 2022*
Course: [Probability and Statistics](#)
B.Sc. in Economics (Economics and Data Science curriculum)
- Università degli Studi di Torino** *A.y. 2020 - 2021*
Course: [Probability and Statistics](#)
B.Sc. in Economics (Economics and Data Science curriculum)

Teaching assistanship

- Jesus College, University of Oxford** *Nov. 2022 - Jan. 2023*
Tutorial classes for undergraduate course Analysis I (1st year) of the B.Sc. in Mathematics
- University of Cambridge** *Oct. 2018 - June 2020*
Tutorial classes (supervisions) for undergraduate courses Statistics IB (2nd year), Principle of Statistics (3rd year) and Statistical Modelling (3rd year) of the Mathematical Tripos
- Università degli Studi di Torino** *Oct. 2013 - Feb. 2014*
Teaching assistant for undergraduate course Informatics (1st year) of the B.Sc. in Mathematics for Finance and Insurance

Other teaching experiences and teaching-related roles

- University of Cambridge** *May 2021*
Assessor for the CATAM Computational Projects 2020-2021
- Istituto di Istruzione Superiore Q. Sella, Biella, Italy** *Mar. 2017*
Introductory workshop on statistical analysis for 3rd year students in upper secondary school

AWARDS, GRANTS AND SCHOLARSHIPS

Doctoral awards

- Doctoral Research Award in the Natural & Life Sciences (Recognition Award), ABTA** *Sept. 2022*
UK wide academic competition for early career researchers
- Salje Medal in the Sciences, Clare Hall, Cambridge** *Mar. 2022*
Award for the most outstanding Ph.D. in the Sciences among students of Clare Hall, University of Cambridge

PhD Prize in Maths and Data Science 2021 (3rd Prize), G-Research
Award for the best Ph.D. draft dissertations

Apr. 2021

Other awards, grants and scholarships

NeurIPS 2022 Scholar Award

Oct. 2022

Grant providing financial support for attendance at NeurIPS 2022

Travel Grant, The Lockey Fund, University of Oxford

July 2022

Grant for attendance at overseas scientific conferences

Degree Award, Edisu Piemonte

Feb. 2018

Award for M.Sc. graduates

Caligara Award, Collegio Einaudi, Torino

Oct. 2017

Award for the best M.Sc. thesis in scientific disciplines among students of Collegio Einaudi

Allievi Honors Program Scholarship,

Sept. 2015 - July 2017

Collegio Carlo Alberto, Torino

Scholarship supporting students of the Allievi Honors Program

Scholarship, Edisu Piemonte

Sept 2013 - July 2017

Scholarship covering university fees, maintenance and housing expenses

Degree Award, Edisu Piemonte

Feb. 2016

Award for B.Sc. graduates

***Posto di studio gratuito*, Collegio Einaudi, Torino**

Sept. 2013 - July 2014

Award covering housing expenses for overall top four students of Collegio Einaudi

(SOME) EXTRACURRICULAR ACTIVITIES

Clare Hall Mathematical Association (CHMA)

Oct. 2017 - present

I am an Ordinary Member of the CHMA. I served as Secretary of the Association from June 2018 to June 2019

Rowing

Oct. 2017 - present

I was selected for the Cambridge University Boat Club 2020 Development Squad. I served as captain of the Clare Hall Boat Club (CHBC) men's rowing team during the academic year 2019-2020, and previously as co-captain during the academic year 2018-2019. I rowed in the CHBC men's first boat and won Blades in the Cambridge Bumps races in 2018 and 2019