Marta Catalano

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Academic Positions

Sep 2026 – Present	Associate Professor of Statistics, Luiss University.
Sep 2023 – Sep 2026	Assistant Professor of Statistics, Luiss University.
Sep 2021 – Sep 2023	Harrison Early Career Assistant Professor, Warwick University.
Feb 2021 – Sep 2021	Postdoctoral Researcher, University of Torino. Supervisor: Pierpaolo De Blasi.

Education

2016 – 2021	**Ph.D. in Statistics**, Bocconi University (Milan, Italy). Advisors: Antonio Lijoi and Igor Prünster. Thesis: *On Complex Dependence Structures in Bayesian Nonparametrics: a Distance-based Approach.*
2016 – 2017	**Master in Big Data Analytics** & **Social Mining**, University of Pisa and CNR (Italy). Grade: Excellent.
2012 – 2015	**M.Sc. in Mathematics**, Sapienza University of Rome (Italy). Grade: 110/110 with honors.
2012 – 2013	**Erasmus Program**, École Normale Supérieure de Lyon (France).
2009 – 2012	**B.Sc. in Mathematics**, Sapienza University of Rome (Italy). Grade: 110/110 with honors.

Publications

▷ Preprints

- Catalano, M., Lavenant, H., Mascari, F. (2025+). Measuring Partial Exchangeability with Reproducing Kernel Hilbert Spaces. *Submitted.*

▷ Peer-reviewed Publications

1. Catalano, M., Lavenant, H. (2026). Measures of Dependence based on Wasserstein Distances. *Statistical Science, to appear.*
2. Catalano, M., Del Sole, C. (2026). Hierarchical Random Measures without Tables. *Bayesian Analysis, to appear.*
3. Catalano, M., Lavenant, H. (2026). Merging Rate of Opinions via Optimal Transport on Random Measures. *Bernoulli, 32(3), 1737-1762.*
4. Catalano, M., Lavenant, H. (2024). Hierarchical Integral Probability Metrics: A distance on random probability measures with low sample complexity. *Proceedings of the 41st International Conference on Machine Learning, 235:5841-5861.*
5. Catalano, M., Lavenant, H., Lijoi, A., Prünster, I. (2024). A Wasserstein Index of Dependence for Random Measures. *Journal of the American Statistical Association, 119(547), 2396–2406.*
6. Catalano, M., Del Sole, C., Lijoi, A., Prünster, I. (2024). A Unified Approach to Hierarchical Random Measures. *Sankhya A*, 86 (Suppl 1), 255–287.
7. Catalano, M., Lijoi, A., Prünster, I., Rigon, T. (2023). Bayesian modeling via discrete nonparametric priors. *Japanese Journal of Statistics and Data Science, 6, 607–624.*
8. Catalano, M., De Blasi, P., Lijoi, A., Prünster, I. (2022). Posterior Asymptotics for Boosted Hierarchical Dirichlet Process Mixtures. *Journal of Machine Learning Research, 23 (80), 1-23.*
9. Catalano, M., Lijoi, A., Prünster, I. (2021). Measuring Dependence in the Wasserstein Distance for Bayesian Nonparametric Models. *The Annals of Statistics, 49 (5), 2916-2947.* [Winner of the ASA-SBSS 2021 Student Paper Competition]
10. Catalano, M., Lijoi, A., Prünster, I. (2020). Approximation of Bayesian Models for Time-to-event Data. *Electronic Journal of Statistics, 14, 3366-3395.*

▷ Conference Proceedings and Book Chapters

11. Catalano, M., Lavenant, H., Mascari, F. (2025+). Quantifying dependence for partially exchangeable models. To appear in *Statistical Methods for Data Analysis and Decision Sciences (SDS 2025)*, Springer.
12. Catalano, M., Del Sole, C. (2023). A Note on the Dependence Structure of Hierarchical Completely Random Measures. In *Bayesian Statistics, New Generations New Approaches. BAYSM 2022*, 463, 77–85, Springer, Cham.
13. Catalano, M., Lavenant, H., Lijoi, A., Prünster, I. (2022). Wasserstein distance and applications to Bayesian nonparametrics. *Book of Short Papers of the Italian Statistical Society,* Pearson, 1491-1496.
14. Catalano, M., Lijoi, A., Prünster, I. (2021). Transport Distances on Random Vectors of Measures: Recent Advances in Bayesian Nonparametrics. In *Advances in Probability and Mathematical Statistics*, Birkhäuser (Springer), 59-70.
15. Catalano, M., Lijoi, A., Prünster, I. (2019). Bayesian Model Comparison based on Wasserstein Distances. *Book of Short Papers of the Italian Statistical Society,* Pearson, 167-172.

▷ Discussions

16. Catalano, M., Legramanti, S. (2026+) Contributed discussion to"Robust Probabilistic Inference via a Constrained Transport Metric" by A. Chakraborty, A. Bhattacharya and D. Pati *Bayesian Analysis, forthcoming.*
17. Catalano, M., Gaffi, F. (2025) Contributed Discussion on "A Tree Perspective on Stick-breaking Models in Covariate-dependent Mixtures" by A. Horiguchi, C. Chan, and L. Ma *Bayesian Analysis, 20(3), 1198-1200.*
18. Catalano, M., Franzolini, B., Giordano, M., Rebaudo G. (2025) Contributed Discussion on "Sparse Bayesian Factor Analysis When the Number of Factors Is Unknown" by Früwirth-Schnatter, S., Hosszejni, D., and Freitas Lopes, H. *Bayesian Analysis, 20(1), 213-344.*
19. Catalano, M., Fasano, A., Giordano, M., Rebaudo G. (2025). A discussion on: 'Data fission: splitting a single data point' by Leiner, J., Duan, B., Wasserman, L. and Ramdas, A. *Journal of the American Statistical Association, 120(549), 158.*
20. Catalano, M., Fasano, A., Giordano, M., Rebaudo G. (2024). M. Catalano, A. Fasano, M. Giordano, and G. Rebaudo's contribution to the Discussion of 'Root and community inference on the latent growth process of a network' by Crane and Xu. *Journal of the Royal Statistical Society Series B, 86, 874–875.*
21. Catalano, M., Fasano, A., Rebaudo G. (2023). Marta Catalano, Augusto Fasano, and Giovanni Rebaudo's contribution to the discussion of 'Martingale posterior distributions' by Fong, Holmes and Walker. *Journal of the Royal Statistical Society Series B: Statistical Methodology, 85, 1406–1407.*
22. Ascolani, F., Catalano, M., Prünster, I. (2023). Invited discussion of "Evaluating Sensitivity to the Stick-Breaking Prior in Bayesian Nonparametrics" by Giordano, R., Liu, R., Jordan, M. I., and Broderick, T. *Bayesian Analysis, 18(1):287.*

Research Awards

Jun 2022	Faculty of Science, Engineering and Medicine Postdoctoral Prize, University of Warwick.
May 2022	Lifetime Members Junior Researcher Award, International Society for Bayesian Analysis (ISBA).
Mar 2022	Finalist, L.J. Savage Award 'Theory and Methods', American Statistical Association (ASA), ISBA, NBER-NSF.
Oct 2021	Blackwell-Rosenbluth Award, j-ISBA.
Apr 2021	New Researcher Travel Award, Institute of Mathematical Statistics (IMS).
Jan 2021	2021 Student Paper Competition, ASA-SBSS.

Funding

Apr 2025	Outgoing Research Mobility Period, Luiss University.
Jun 2022	Research Development Fund, University of Warwick.
Jun 2022	Heilbronn Small Grant, Heilbronn Institute for Mathematical Research (Bristol).
Mar 2022	Travel grant, BNP 2022 Networking Event.
Mar 2022	Travel grant, ISBA 2022 World Meeting.
Nov 2020	Travel grant, WiML workshop co–located with NeurIPS 2020.
Sep 2020	Special financial support (6 months), Bocconi University.
Jun 2019	Travel grant, Objective Bayes Methodology (O'Bayes) 2019 conference.
Jun 2019	Travel grant, BNP12 conference.
Sep 2016	Ph.D. scholarship (4 years), Bocconi University.
Apr 2016	Merit-based partial tuition waiver, Pisa University.
2009 – 2012	Excellence path (merit-based additional training activities), Sapienza University.
2009 – 2012	Student award (merit-based 3 years full tuition waiver), Sapienza University.

Seminars and Conference Presentations

▷ Seminars

Apr 2026	Department of Statistical Sciences, Sapienza University (Rome, Italy).
Apr 2026	Department of Mathematics and Statistics, University of North Carolina at Charlotte (Charlotte, US).
Mar 2026	Department of Statistical Science, Duke University (Durham, US).
Feb 2025	Seminar, Gatsby Computational Neuroscience Unit (London, UK).
May 2024	Webinar series, Bayesian Nonparametric Section of ISBA (virtual).
May 2023	Statistics Seminars, Imperial College London (London, UK).
Dec 2022	Statistics Seminars, Collegio Carlo Alberto (Torino, Italy).
Nov 2022	Department of Mathematics, University of York (York, UK).
May 2022	StatML CDT, Imperial College London & University of Oxford (London, UK).
May 2022	S3AI, JK Universität Linz (virtual).
May 2022	School of Mathematics, University of Edinburgh (Edinburgh, UK).
Mar 2022	Department of Economics and Finance, Luiss (Rome, Italy).
Mar 2022	School of Mathematics, Cardiff University (Cardiff, UK).
Feb 2022	Department of Mathematics, University of Warwick (Coventry, UK).
Nov 2021	Department of Statistics, University of Warwick (Coventry, UK).
Nov 2021	Department of Statistical Science, University College London (London, UK).
May 2021	Department of Economics, University of Bergamo (Bergamo, Italy, virtual).
Feb 2021	Department of Statistics and Data Science, Cornell University (Ithaca, NY, virtual).

▷ Invited Talks at Conferences

Jun 2027	Isaac Newton Institute workshop *Optimal transport: applications and statistical modelling* (Cambridge, UK).
May 2027	Bayes Comp (Texas, US).
Jul 2026	Oberwolfach workshop *Bayesian methods* (Oberwolfach, Germany).
Jul 2026	BNP Networking Workshop (Seoul, Korea).
Jul 2026	ISBA Satellite Meeting *Information Geometry, Privacy and Monte Carlo* (Tokyo, Japan)
Jun 2026	ISBA 2026 World Meeting (Nagoya, Japan)
Jun 2026	5th Italian Meeting on Probability and Mathematical Statistics (Palermo, Italy)
Jan 2026	Workshop *Nonparametric Bayesian Inference - Computational Issues*, ICERM (Providence, US).
Sep 2025	The Mathematics of Subjective Probability 2025 (Milan, Italy).
Sep 2025	International Conference of the Royal Statistical Society (Edinburgh, UK).
Aug 2025	8th International Conference on Econometrics and Statistics (Tokyo, Japan).

Jun 2025	14th International Conference on Bayesian Nonparametrics (Los Angeles, US).
Apr 2025	Third Conference of the Statistics and Data Science Group of the Italian Statistical Society (Milan, Italy).
Jan 2025	International Conference on Recent Developments in the Techniques of Bayesian Paradigm (Varanasi, India).
Dec 2024	Plenary speaker, VII Latin American Congress of Bayesian Statistics & 17th Brazilian Meeting of Bayesian Statistics (Belo Horizonte, Brazil).
Sep 2024	BIRS-CMO Workshop *Frontiers of Bayesian Inference and Data Science* (virtual).
Sep 2024	Workshop *Recent Developments in Dependence Modelling* (Ischia, Italy).
Aug 2024	Bernoulli-IMS 11th World Congress in Probability and Statistics (Bochum, Germany).
Jul 2024	Workshop *Bayesian learning and network analysis*, Vietnam Institute for Advanced Study in Mathematics (Hanoi, Vietnam).
Jul 2024	Interpretable Inference via Principled BNP Approaches in Biomedical Research and Beyond, National University of Singapore (Singapore).
Jun 2024	International Symposium on Nonparametric Statistics (Braga, Portugal).
Jun 2024	4th Italian Meeting on Probability and Mathematical Statistics (Roma, Italy).
Apr 2024	Workshop *Applications of Optimal Transport*, Institut d'Études Scientifiques de Cargèse (Corsica, France).
Nov 2023	Autumn School in Bayesian Statistics at CIRM (Marseille, France).
Aug 2023	6th International Conference on Econometrics and Statistics (Tokyo, Japan).
Jun 2023	Workshop *Distance-based Methods in Machine Learning*, UCL (London, UK).
Apr 2023	SIAM-IMA Student Chapter Conference, University of Manchester (Manchester, UK).
Jun 2023	Emerging Topics in Applications of Optimal Transport, ETH (Zürich, Switzerland).
Dec 2022	International Indian Statistical Association (Bangalore, India).
Oct 2022	13th International Conference on Bayesian Nonparametrics (Puerto Varas, Chile).
Jul 2022	Bernoulli Young Researcher Event (virtual).
Jun 2022	16th World Meeting of the International Society of Bayesian Analysis (Montreal, Canada).
Jun 2022	3rd Italian Meeting on Probability and Mathematical Statistics (Bologna, Italy).
May 2022	Workshop *Bayesian nonparametrics*, Postech (Pohang, Korea).
Apr 2022	BNP Networking Workshop (Nicosia, Cyprus).
Nov 2021	BIRS-CMO Workshop *Foundations of Objective Bayesian Methodology* (Oaxaca, Mexico).
Nov 2021	Junior Bayes Beyond the Borders (virtual).
Oct 2021	OxWaSP Annual Workshop (virtual).
Aug 2021	Joint Statistical Meetings (virtual).
Jun 2021	15th World Meeting of the International Society of Bayesian Analysis (virtual).
Jun 2021	4th International Conference on Econometrics and Statistics (virtual).
Apr 2021	One World YoungStatS webinar (virtual).
Dec 2020	13th International Conference of the ERCIM WG on Computational and Methodological Statistics (virtual).
Nov 2020	BAYSM:O Bayesian Young Statisticians Meeting: Online (virtual).
Dec 2019	15th Latin American Congress of Probability and Mathematical Statistics (Mérida, Mexico).
Jun 2019	SIS 2019: Smart Statistics for Smart Applications (Milan, Italy).
Jun 2019	2nd Italian Meeting on Probability and Mathematical Statistics (Vietri sul Mare, Italy).

▷ Contributed Talks at Conferences

Jun 2022	51st Scientific Meeting of the Italian Statistical Society (Caserta, Italy).
May 2022	100 UMI - 800 UniPD (Padova, Italy).
Aug 2020	Bernoulli-IMS One World Symposium 2020 (virtual).

▷ Poster Presentations

Dec 2020	15th Women in Machine Learning Workshop co–located with NeurIPS 2020 (virtual).
Dec 2020	Joint Affinity Groups, NeurIPS 2020 (virtual).
Jun 2019	Objective Bayes Methodology Conference (Warwick, UK).
Jun 2019	12th International Conference on Bayesian Nonparametrics (Oxford, UK).

Research Visits

Mar 2026	Department of Statistical Science, Duke University (Durham, US).
Apr 2025	Department of Applied Mathematics, Hong Kong Polytechnic University (Hong Kong).
Mar 2024	Department of Mathematics, University of Maryland at College Park (College Park, US).
Apr 2023	Department of Statistics and Data Sciences, University of Texas at Austin (Austin, US).
Dec 2022	Statistics Initiative, Collegio Carlo Alberto (Torino, Italy).
June 2022	Statistics and Data Science Lab, Pohang University of Science and Technology (Pohang, Korea).
Dec 2021	Department of Statistics and Data Sciences, University of Texas at Austin (Austin, US).

Supervision

▷ PhD students

Feb 2027 (exp)	George Kanchaveli, PhD in Statistics and Computer Science, Bocconi University, co-supervised with Hugo Lavenant.
Jul 2026	Francesco Mascari, PhD in Statistics and Computer Science, Bocconi University, co-supervised with Hugo Lavenant. (now Software Engineer, Google).

▷ Research Internships

May-Aug 2025	Florian Ochs, BSc student, University of Duisburg-Essen (now MSc student, Oxford).
Jul 2023	Stefano Sperti, BSc student, University of Turin, co-supervised with Dario Spanò (University of Warwick).
Jul 2023	Dingbang Ren, BSc student, University of Glasgow (now PhD student, University of California, Santa Cruz).

▷ Master students

Nov 2025	Leonardo Pulicati, MSc in Data Science and Management, Luiss University, *Gaussian Processes: from theory to applications*.
Oct 2025	Viviana Luisa Palade, MSc in Economics and Finance, Luiss University, *Dynamic Linear Models: a Bayesian computational approach*.
Jul 2025	Thi Kieu Trang Dong, MSc in Data Science and Management, Luiss University, *Clustering with mixture models*.
Jul 2025	Martina Romano, MSc in Data Science and Management, Luiss University, *Bayesian hierarchical models*.

Teaching

- ▷ Module Leader, *Bayesian Learning for Complex Data and Dynamic Systems*, Ph.D. in Data Science, Luiss University (AY 2026/2027)
- ▷ Module Leader, *Statistical Foundations of Data Science*, Luiss University (AY 2026/2027).
- ▷ Module Leader, *Mathematical Foundations of Economics*, Ph.D. in Economics, Luiss University (AY 2025/2026, 2026/2027).
- ▷ Module Leader, *Machine Learning*, Luiss University (AY 2023/2024, 2024/2025, 2025/2026, 2026/2027).
- ▷ Module Leader, *Advanced Statistics*, Luiss University (AY 2023/2024, 2024/2025, 2025/2026).
- ▷ Module Leader, *Bayesian Forecasting and Intervention*, University of Warwick (AY 2022/2023, 2021/2022).
- ▷ International Visiting Professor, short course *Dependent Nonparametric Priors via Completely Random Measures*, University of Torino (AY 2022/2023).
- ▷ Teaching Assistant, *Numerical and Statistical Methods for Finance*, University of Torino (AY 2020/2021).
- ▷ Teaching Assistant, *Data Analysis*, Bocconi University (AY 2020/2021, 2019/2020, 2018/2019, 2017/2018).
- ▷ Teaching Assistant, *Mathematics and Statistics*, Bocconi University (AY 2018/2019, 2017/2018).

Editorial Work

- ▷ Associate Editor, *ACM Transactions on Probabilistic Machine Learning* (2025–Present).
- ▷ Editorial Board Member, *ACM Transactions on Probabilistic Machine Learning* (2023–2025).

▷ Reviewer for Journals: *Annals of Statistics, Applied Probability Journals, Bayesian Analysis, Biometrika, Electronic Journal of Statistics, Foundations of Data Science, Journal of Business & Economic Statistics, Journal of Computational and Graphical Statistics, Journal of Machine Learning Research, Journal of the American Statistical Association, Journal of the Royal Statistical Society: Series B, Operations Research, Springer, Statistica Sinica, Statistical Science, Statistics & Probability Letters, The American Statistician.*

▷ Reviewer for Awards: *ASA-SBSS Student Paper Competition.*

▷ Program Committee Member, 2021 NeurIPS Workshop *Your Model is Wrong: Robustness and Misspecification in Probabilistic Modeling.*

▷ Project Evaluator: *Research Grants Council* (RGC), Hong Kong; *Superior Council of the National Fund for Scientific and Technological Development* (Fondecyt), Chile.

Professional Activities

▷ Scientific Committee Member

Dec 2026	2026 IMS International Conference on Statistics and Data Science (Split, Croatia).
Dec 2025	BIRS-CMI Workshop *Bayesian Uncertainty Quantification in Large Models* (Chennai, India).
Aug 2025	8th International Conference on Econometrics and Statistics (Tokyo, Japan).
Sep – Dec 2024	L.J. Savage Award Committee for 'Theory and Methods', American Statistical Association (ASA), ISBA, NBER-NSF.
Aug 2024	3rd Bayesian Nonparametrics Networking Workshop (Singapore).
Apr 2024	Workshop *Applications of Optimal Transport*, Institut d'Études Scientifiques de Cargèse (Corsica, France).
Jun 2023	Workshop *Approximation Methods in Bayesian Analysis*, CIRM (Marseille, France).
Aug 2022	j-ISBA Blackwell-Rosenbluth Award 2022.

▷ Session Organizer

Dec 2026	Invited session, 2026 IMS International Conference on Statistics and Data Science (Split, Croatia).
Sep 2026	Invited session, 12th International Conference on Soft Methods in Probability and Statistics (Lecce, Italy).
Jun 2026	Invited session, 18th World Meeting of the International Society of Bayesian Analysis (Nagoya, Japan)
June 2026	5th Italian Meeting on Probability and Mathematical Statistics (Palermo, Italy).
Aug 2025	8th International Conference on Econometrics and Statistics (Tokyo, Japan).
Aug 2024	Bernoulli-IMS 11th World Congress in Probability and Statistics (Bochum, Germany).
Jul 2024	Invited session, 17th World Meeting of the International Society of Bayesian Analysis (Venice, Italy)
Jun 2024	4th Italian Meeting on Probability and Mathematical Statistics (Roma, Italy).
Aug 2023	6th International Conference on Econometrics and Statistics (Tokyo, Japan).
Jun 2023	Workshop *Approximation Methods in Bayesian Analysis*, CIRM (Marseille, France).
Jun 2022	Solicited session by y-SIS, 2022 SIS conference (Caserta, Italy).

▷ Organizing Committee Member

Dec 2025	BIRS-CMI Workshop *Bayesian Uncertainty Quantification in Large Models* (Chennai, India).
May 2025	Early Career Workshop in Nonparametric Statistics, Luiss University (Rome, Italy).
Jun 2023	Workshop *Approximation Methods in Bayesian Analysis*, CIRM (Marseille, France).
Jun 2022	BNP poster awards, ISBA 2022 (Montreal, Canada).
Jun 2021	Junior Live Presentations ISBA@CIRM Mirror Workshop (Marseille, France).
Dec 2020	Volunteer and Poster Mentor, WiML workshop co–located with NeurIPS 2020 (virtual).

▷ Service to Scientific Societies

2024 – Present	Peer Mentor, j-ISBA Peer Mentoring Scheme.
2022 – 2023	Treasurer, BNP section of ISBA.
2021	Chair, ISBA *ad-hoc* Committee for Junior Awards.
2021 – 2022	Board Member, Young Italian Statistical Society (y-SIS).

▷ Service to the Department

2025	Co-organizer (with M. Scarsini), Optimal Transport Reading Group, Luiss University (Rome, Italy).
2023	Organizing Committee Member, Statistics Internship Scheme, University of Warwick (Coventry, UK).
2022	Coordinator, *Tour of Statistics* seminar series, University of Warwick (Coventry, UK).
2020 – 2021	Coordinator, biweekly internal seminar series, Bocconi BayesLab (Milano, Italy).
Sep 2019	Volunteer, European Researchers' Night (Milano, Italy).

Research Networks and Scientific Societies

▷ Research Affiliate, BayesLab, Bocconi Institute for Data Science and Analytics (2020–Present).

▷ Member of the international *Complex Data Modeling Research Network* (2020–Present).

▷ Research Affiliate, "de Castro" Statistics Initiative, Collegio Carlo Alberto, Torino (2020–2023).

▷ Member of *Women in Machine Learning* (2021–Present).

▷ Member of Scientific Societies: *American Statistical Association*, *Bernoulli Society*, *National group for Mathematical Analysis, Probability and their Applications* (GNAMPA), *Institute of Mathematical Statistics*, *International Society for Bayesian Analysis*, *Italian Statistical Society* (SIS).