Marta Catalano

mcatalano@luiss.it

Luiss University

`https://martacatalano.github.io`

Academic Positions

Sep 2023 – Present	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.*

- Catalano, M., Lavenant, H. (2025+). Measures of Dependence based on Wasserstein Distances. *Submitted.*

- Catalano, M., Lavenant, H. (2024+). Merging Rate of Opinions via Optimal Transport on Random Measures. *Submitted.*

▷ PEER-REVIEWED PUBLICATIONS

1. 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.*

2. 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.*

3. Catalano, M., Del Sole, C., Lijoi, A., Prünster, I. (2024). A Unified Approach to Hierarchical Random Measures. *Sankhya A, 86 (Suppl 1), 255–287.*

4. 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.*

5. 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.*

6. 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]

7. 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

8. 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.

9. Catalano, M., Lavevant, 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.

10. 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.

11. 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

12. Catalano, M., Franzolini, B., Giordano, M., Rebaudo G. (2024) 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, forthcoming.*

13. Catalano, M., Fasano, A., Giordano, M., Rebaudo G. (2024). 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, forthcoming.*

14. 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.*

15. 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.*

16. 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

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

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

Sep 2025	International Conference of the Royal Statistical Society (Edinburgh, UK).
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	Workshop *Recent Developments in Dependence Modelling* (Ischia, Italy).
Aug 2024	Bernoulli-IMS 11th World Congress in Probability and Statistics (Bochum, Germany).
Jul 2024	Workshop on 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 on Bayesian nonparametrics, Postech (Pohang, Korea).
Apr 2022	BNP Networking Workshop (Nicosia, Cyprus).
Nov 2021	BIRS-CMO Workshop on 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).

Teaching

▷ Module Leader, *Machine Learning*, Luiss University (AY 2023/2024, 2024/2025).

▷ Module Leader, *Advanced Statistics*, Luiss University (AY 2023/2024, 2024/2025).

▷ 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

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

▷ Reviewer for *Annals of Statistics, 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, Operations Research, Springer, Statistica Sinica, Statistics & Probability letters*.

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

▷ Project Evaluator, Research Grants Council (RGC) of Hong Kong.

Professional Activities

▷ SCIENTIFIC COMMITTEE MEMBER

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

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

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 – Present	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).