# Marta Catalano

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https://martacatalano.github.io

### **Academic Positions**

| Sep 2021 – Present  | Harrison Early Career Assistant Professor, Statistics Department, Warwick University.   |
|---------------------|---|
| Feb 2021 – Sep 2021 | Postdoctoral Researcher, University of Torino. Supervisor: Pierpaolo De Blasi.          |
| Sep 2020 – Present  | Research Affiliate, "de Castro" Statistics Initiative, Collegio Carlo Alberto, Torino.  |
| Jun 2020 – Present  | Research Affiliate, BayesLab, Bocconi Institute for Data Science and Analytics (BIDSA). |

### 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. Advisor: Paolo Ferragina. Thesis: Information Retrieval on Arpi Dataset. |
| 2012 - 2015 | M.Sc. in Mathematics, Sapienza University of Rome (Italy). Grade: 110/110 with honors.   |
|             | Advisors: Domenico Fiorenza and Paolo Papi. Thesis: Planar 2-algebras and Khovanov Homology.   |
| 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

1. Catalano, M., Lavenant, H., Lijoi, A., Prünster, I. (2022+). A Wasserstein Index of Dependence for Random Measures. Submitted.

### ▶ Peer-reviewed Journals

- 1. 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.
- 2. 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]
- 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

- 1. 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*, Springer, 59-70.
- 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.

# Awards and Funding

| Jun 2022    | Research Development Fund, University of Warwick.  |
|-------------|--|
| Jun 2022    | Heilbronn Small Grants Scheme, Heilbronn Institute for Mathematical Research.              |
| Jun 2022    | Faculty of Science, Engineering and Medicine Postdoctoral Prize, University of Warwick.    |
| Mar 2022    | Finalist, 2021 L.J. Savage Award 'Theory and Methods' sponsored by ASA, ISBA and NBER-NSF. |
| Mar 2022    | Travel grant, BNP 2022 Networking Event.   |
| Mar 2022    | Travel grant, ISBA 2022 World Meeting.   |
| Oct 2021    | j-ISBA Blackwell-Rosenbluth Award.   |
| Apr 2021    | IMS New Researcher Travel Award.   |
| Jan 2021    | ASA-SBSS 2021 Student Paper Competition.   |
| Dec 2020    | Research fellowship (2 months), University of Torino.                                      |
| Nov 2020    | Travel grant, WiML workshop co–located with NeurIPS 2020.                                  |
| Sep 2020    | Special financial support (6 months), Bocconi University.                                  |
| Jun 2019    | Travel grant, 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, Presentations and Schools

| ▷ SEMINARS              |  |
|-------------------------|--|
| 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 presentations |  |
| Dec 2022                | International Indian Statistical Association (Bangalore, India).                     |
| Jul 2022                | Bernoulli Young Researcher Event (virtual).  |

|                         | 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 presentations |          |   |
|                         | Dec 2022 | International Indian Statistical Association (Bangalore, India).  |
|                         | 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).               |
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|-----------------------------|---|--|
| $\mathrm{Jun}\ 2019$        | 2nd Italian Meeting on Probability and Mathematical Statistics (Vietri sul Mare, Italy).                      |  |
| ▷ Contributed presentations |   |  |
| Oct 2022                    | 13th International Conference on Bayesian Nonparametrics (Puerto Varas, Chile).                               |  |
| 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).   |  |
| ▷ Posters                   |   |  |
| 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).  |  |
| ▶ Schools                   |   |  |
| Jul 2018                    | Bocconi Summer School on Graphical Models (Como, Italy).  |  |
|                             | Instructors: S. Lauritzen (University of Copenhagen) and R. Evans (University of Oxford).                     |  |
| Jul 2017                    | Bocconi Summer School on Statistical Causal Learning (Como, Italy).   |  |
|                             | Instructors: B. Schölkopf (Max Planck Institute for Intelligent Systems, Tübingen), I. Tolstikhin (Google AI, |  |
|                             | Zürich) and D. Lopez-Paz (Facebook AI Research, Paris).   |  |

## **Teaching**

Jun 2019

⊳ Module Leader, B.Sc. course Bayesian Forecasting and Intervention, University of Warwick (AY 2021/2022).

SIS 2019: Smart Statistics for Smart Applications (Milan, Italy).

- ${\color{red} \triangleright} \ \ \text{Teaching Assistant, M.Sc. course} \ \ \textit{Data Analysis}, \ \text{Bocconi University (AY 2020/2021, 2019/2020, 2018/2019, 2017/2018)}.$
- ▶ Teaching Assistant, B.Sc. course Mathematics and Statistics, Bocconi University (AY 2018/2019, 2017/2018).

### **Editorial** work

- ▷ Reviewer for Annals of Statistics, Biometrika, Electronic Journal of Statistics, Journal of Business & Economic Statistics, Journal of the American Statistical Association, Statistics & Probability letters.
- ▶ Program Committee Member of the 2021 NeurIPS Workshop Your Model is Wrong: Robustness and Misspecification in Probabilistic Modeling.

#### Professional activities

| Jun 2022              | Organizer of solicited session by y-SIS, 2022 SIS conference (Caserta, Italy).                        |
|-----------------------|---|
| Jan 2022 – Present    | Treasurer, BNP section of ISBA.   |
| $Jun\ 2021-Dec\ 2021$ | Chair, ISBA ad-hoc Committee for Junior Awards.   |
| Jun 2021              | Organizing Committee Member, Junior Live Presentations ISBA@CIRM Mirror Workshop (Marseille, France). |
| Jan 2021 – Present    | Board Member, Young Italian Statistical Society (y-SIS).  |
| Dec 2020              | Volunteer and Poster Mentor, WiML workshop co–located with NeurIPS 2020 (virtual).                    |
| $Jan\ 2020-Sep\ 2021$ | Coordinator, biweekly internal seminar series, Bocconi BayesLab (Milano, Italy).                      |
| Sep 2019              | Volunteer, European Researchers' Night (Milano, Italy).   |

## Memberships

Member of the American Statistical Association, Bernoulli Society, Complex Data Modeling Research Network (MiDas), Institute of Mathematical Statistics, International Society for Bayesian Analysis, Italian Statistical Society (SIS).