Beatrice Franzolini

Updated: April 2025

Contact information

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Current positions

Jul 2023–Present Junior Assistant Professor (Italian RTD-A),

Bocconi Institute for Data Science and Analytics - BIDSA,

Bocconi University (Milan, Italy)

Feb 2020–Present Research Affiliate (from Jul 2023: Member of the core faculty),

Bayesian Learning Laboratory - BayesLab,

Bocconi University (Milan, Italy)

Past academic positions

Jan 2022–Jul 2023 Research Fellow, Singapore Institute for Clinical Sciences - SICS

Agency for Science, Technology and Research - A*STAR (Singapore, Republic of Singapore)

Jan 2022–Jul 2023 Member, Division of Biomedical Data Science, Yong Loo Lin School of Medicine

National University of Singapore - NUS (Singapore, Republic of Singapore)

Education

Sep 2017 - Feb 2022 *PhD in Statistics*, **Bocconi University** (Milan, Italy)

Advisors: Antonio Lijoi, Igor Prünster

Thesis: On Dependent Processes in Bayesian Nonparametrics: Theory, Methods,

and Applications.

Final Mark: with honors

Sep 2014 - Apr 2017 Master of Science in Finance, Bocconi University (Milan, Italy)

Advisor: Massimo Guidolin

Thesis: Can a Consumption-Based Stochastic Discount Factor Jointly Price the

Cross-section of Commodity Futures Returns?

Final Mark: 110/110 with honors

Sep 2011- Jul 2014 Bachelor in Statistics, University of Bologna (Bologna, Italy)

Advisor: Luca De Angelis

Thesis: Utility Functions for C-CAPM: an Empirical Analysis to Compare CRRA

Functions with Epstein and Zin Function.

Final Mark: 110/110 with honors

Publications

Articles in refereed journals

1. Cremaschi, A., van den Boom, W., Ng, N.B.H., Franzolini, B., Tan, K.B., Yen, J.C.K., Tan, K.H., Chong, Y.-S., Eriksson, J.G., De Iorio, M. (2025). Post-partum screening for type 2 diabetes in women with a history of gestational diabetes mellitus: A cost-effectiveness analysis in Singapore, *Value in Health Regional Issues*, 45, 101048. https://doi.org/10.1016/j.vhri.2024.101048

- 2. Ascolani, F., Franzolini, B., Lijoi, A., and Prünster, I. (2024). Nonparametric priors with full-range borrowing of information, *Biometrika*, 111(3), 945–969. https://doi.org/10.1093/biomet/asad063
- 3. Franzolini, B., Beskos, A., De Iorio, M., Poklewski-Koziell, W. P., and Grzeszkiewicz, K. (2024). Change-point detection in dynamic Gaussian graphical models: the impact of COVID-19 pandemic on US stock market, *The Annals of Applied Statistics*, 18(1), 555-584. https://doi.org/10.1214/23-AOAS1801
- 4. Franzolini, B. and Rebaudo, G. (2024). Entropy regularization in probabilistic clustering, *Statistical Methods & Applications*, 33(1), 37–60. https://doi.org/10.1007/s10260-023-00716-y
- 5. Franzolini, B., Cremaschi, A., van den Boom, W., and De Iorio, M. (2023). Bayesian clustering of multiple zero-inflated outcomes, *Philosophical Transactions of the Royal Society A*, 381(2247), 1-16. https://doi.org/10.1098/rsta.2022.0145
- Franzolini, B., Lijoi, A., and Prünster, I. (2023). Model selection for maternal hypertensive disorders with symmetric hierarchical Dirichlet processes, *The Annals of Applied Statistics*, 17(1), 313-332. https://doi.org/10.1214/22-AOAS1628

Preprints

- 7. Franzolini, B., De Iorio, M., and Eriksson, J.G. (2025+). Conditional partial exchangeability: a probabilistic framework for multi-view clustering. arXiv:2307.01152
- 8. De Iorio, M., Heinecke A., Franzolini, B., Cabral, R. (2025+). Singularities in Bayesian inference: crucial or over-stated? arXiv:2501.06618
- 9. Cremaschi, A., Franzolini, B., De Iorio, M., Chong, M., Ying, T. J., Michael, N., Gupta, V., Yap, F., Seng Lee, Y., Erikkson, J., and Fogel, A. (2025+). A Bayesian semi-parametric model for longitudinal growth and appetite phenotypes in children. arXiv:2501.17040
- 10. Franzolini, B., Lijoi, A., Prünster, I., Rebaudo, G. (2025+). Multivariate species sampling models. arXiv:2503.24004
- 11. Anceschi, N., Fasano, A., Franzolini, B., Rebaudo, G. (2025+). Scalable expectation propagation for generalized linear models. arXiv:2407.02128

Refereed discussions

- 12. Catalano, M., Franzolini, B., Giordano, M., Rebaudo, G. (2024). A discussion on: "Sparse Bayesian factor analysis when the number of factors is unknown" by Frühwirth-Schnatter, S., Hosszejni, D., Freitas Lopes, H., *Bayesian Analysis*, https://doi.org/10.1214/24-BA1423
- 13. Rebaudo G., Fasano, A., Franzolini, B., and Müller, P. (2023). A discussion on: "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), 287-366. https://doi.org/10.1214/22-BA1309

Refereed proceedings

- 14. Franzolini, B. (2025). *How to leverage Bayesian mixtures for dynamic clustering and classification*. In Methodological and Applied Statistics and Demography II: SIS 2024. (Editors: Pollice, A., Mariani, P.) ISBN 978-3-031-64349-1 https://link.springer.com/chapter/10.1007/978-3-031-64350-7_13
- 15. Bondi, L., Franzolini, B., and Palma, M. (2025) *A longitudinal study of the gender gap in school grades via flexible Bayesian Beta regression*. In Methodological and Applied Statistics and Demography III: SIS 2024, 233–238. (Editors: Pollice, A., Mariani, P.) ISBN 978-3-031-64431-3 https://doi.org/10.1007/978-3-031-64431-3_39
- Franzolini, B., Bondi, L., Fasano, A., and Rebaudo, G. (2023). Bayesian forecasting of multivariate longitudinal zero-inflated counts: an application to civil conflict. In Book of Short Papers CLADAG 2023, 465-468. (Editors: Corretto, P., Giordano G., La Rocca, M., Parrella, M. L., Rampichini, C.) ISBN 9788891935632
- 17. Fasano, A., Anceschi, N., Franzolini, B., and Rebaudo, G. (2023). *Efficient computation of predictive probabilities in probit models via expectation propagation*. In Book of Short Papers CLADAG 2023, 449-452. (Editors: Corretto, P., Giordano G., La Rocca, M., Parrella, M. L., Rampichini, C.) ISBN 9788891935632
- 18. Fasano, A., Anceschi, N., Franzolini, B., and Rebaudo, G. (2023). *Efficient expectation propagation for posterior approximation in high-dimensional probit models*. In Book of Short Papers SIS 2023, 1133-1138. (Editors: Chelli, F. M., Ciommi, M., Mariani, F., Recchioni, M. C.) ISBN 9788891935618

- 19. Franzolini, B. and Rebaudo, G. (2022). *A regularized-entropy estimator to enhance cluster interpretability in Bayesian nonparametrics*. In Book of Short Papers SIS 2022, 387-397. (Editors: Balzanella, A., Bini, M., Cavicchia, C. and Verde, R.). ISBN 9788891932310
- 20. Ascolani, F., Franzolini, B., Lijoi, A., and Prünster, I. (2021). On the dependence structure in Bayesian nonparametric priors. In Book of Short Papers SIS 2021 (Editors: Perna, C., Salvati, N. and Schirripa Spagnolo, F.). ISBN 9788891927361

Conference presentations and seminars

Seminars

- 1. Seminar at the Department of Statistical Science, Duke University, North Carolina, USA. Seminar's title: *Random partitions for multi-view data: how to encode repeated measures design into nonparametric Bayesian models.* (April 2025).
- 2. Seminar at the Department of Economics, University of Bergamo, Italy. Seminar's title: *Extending stochastic block models to multiplex networks via conditional partial exchangeability.* (March 2025).
- 3. Seminar at the ISBA-BNP webinar series. Seminar's title: *Random partitions beyond exchangeability.* (February 2025).
- 4. Seminar at the Department of Mathematics and Statistics, University of Bern, Switzerland. Seminar's title: *Rethinking dynamic and network data modeling: a probabilistic framework based on species sampling models.* (March 2024).

Invited talks

- 5. Nonparametric Bayesian Inference Computational Issues, ICERM, at Brown University, Providence, RI, USA. Talk's title: *TBA*. (January 2026 upcoming).
- 6. 19th International Joint Conference on Computational and Financial Econometrics (CFE) and Computational and Methodological Statistics (CMStatistics), London, UK. Talk's title: *TBA*. (December 2025 upcoming).
- 7. BIRS Workshop on Bayesian Uncertainty Quantification in Large Models, Chennai, India. Talk's title: *TBA*. (December 2025 upcoming).
- 8. SISBayes Workshop, Padova, Italy. Talk's title: Multivariate species sampling models. (September 2025 upcoming).
- 9. Climbing Mortality Models II, final workshop of PRIN CARONTE, Misurina, Italy. Talk's title: *TBA*. (August 2025 upcoming).
- 10. 14th International Conference on Bayesian Nonparametrics (BNP14 2024), UCLA, Los Angeles, United States. Talk's title: *Random partitions for repeated measures design in multi-view and network data*. (June 2024 upcoming).
- 11. Bayesian Inference in Stochastic Processes (BISP14), Milan, Italy. Talk's title: *Symmetry properties of dependent random partitions*. (May 2025 upcoming).
- 12. Early Career Workshop on Nonparametric Statistics @LUISS, Rome, Italy. Talk's title: *Symmetry properties of dependent random partitions*. (May 2025 upcoming).
- 13. International Conference on Recent Developments in the Techniques of Bayesian Paradigm, Banaras Hindu University, Varanasi, India. Talk's title: *Hierarchically extended stochastic block models for multiplex networks*. (January 2025).
- 14. Frontiers of Bayesian Inference and Data Science workshop, BIRS-CMO Workshop, Oaxaca, Mexico. Talk's title: Conditional partial exchangeability: longitudinal and multi-view partitions. (September 2024).
- 15. 11th World Congress in Probability and Statistics Bernoulli-IMS, Bochum, Germany. Talk's title: *Conditional partial exchangeability for multi-view clustering and network data*. (August 2024).
- 16. 3rd BNP Networking Workshop, Singapore, Republic of Singapore. Talk's title: *Hierarchically extended stochastic block models for multiplex networks*. (July-August 2024).
- 17. IMS Interpretable Inference via Principled BNP Approaches in Biomedical Research and Beyond residential research program in Singapore, Singapore, Republic of Singapore. Talk's title: *Multivariate species sampling models for partially exchangeable data and beyond.* (July 2024).
- 18. 2024 World Meeting of the International Society for Bayesian Analysis (ISBA 2024), Venezia, Italy. Talk's title: Conditional partial exchangeability: a probabilistic framework for longitudinal and multi-view clustering. (July 2024).

- 19. International Symposium on Nonparametric Statistics 2024 (ISNPS 2024), Braga, Portugal. Talk's title: *Conditional partial exchangeability: a probabilistic framework for longitudinal and multi-view clustering.* (June 2024).
- 20. 52nd Meeting of the Italian Statistical Society (SIS 2024), Bari, Italy. Talk's title: *How to leverage Bayesian mixtures for dynamic clustering and classification.* (June 2024).
- 21. 4th Italian Meeting on Probability and Mathematical Statistics 2024, Rome, Italy. Talk's title: *Multivariate species sampling models*. (June 2024).
- 22. StaTalk2024@DiSIA UNIFI, Firenze, Italy. Talk's title: How to leverage Bayesian mixtures for dynamic clustering and classification. (May 2024).
- 23. 16th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2023), Berlin, Germany. Talk's title: *Multivariate species sampling models*. (December 2023).
- 24. 6th International Conference on Econometrics and Statistics (ECOSTA 2023), Tokyo, Japan. Talk's title: *Conditional partial exchangeability: A probabilistic framework for multi-view clustering.* (August 2023).
- 25. Approximation Methods in Bayesian Analysis @ CIRM, Marseille, France. Talk's title: *Geometry of scale mixtures*. (June 2023).
- 26. 15th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2022), London, UK. Talk's title: *Bayesian nonparametric multilayer clustering of longitudinal data*. (December 2022).
- 27. 2022 World Meeting of the International Society for Bayesian Analysis (ISBA 2022), Montreal, Canada. Talk's title: *Nonparametric priors with full-range borrowing of information*. (June 2022).
- 28. 51st Meeting of the Italian Statistical Society (SIS 2022), Caserta, Italy. Talk's title: *Entropy regularization in probabilistic clustering*. (June 2022).
- 29. 5th International Conference on Econometrics and Statistics (ECOSTA 2022), Kyoto, Japan. Talk's title: *Model selection for maternal hypertensive disorders with symmetric hierarchical Dirichlet processes*. (June 2022).
- 30. Foundations of Objective Bayesian Methodology Workshop, Oaxaca, Mexico. Talk's title: *Nonparametric priors with full-range borrowing of information*. (November 2021).
- 31. 4th International Conference on Econometrics and Statistics (ECOSTA 2021), <u>Hong Kong</u>, virtual. Talk's title: *Nonparametric priors with full-range borrowing of information.* (June 2021).
- 32. 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2020), London, UK, virtual. Talk's title: *Dependent prior processes for panel count data*. (December 2020).

Contributed talks

- 33. 8th INVALSI data: a tool for teaching and scientific research. (INVALSI Seminar 2023), Rome, Italy. Talk's title: *Grade gender gap: evidence from RiminiInRete.* (November 2023).
- 34. 14th Scientific Meeting Classification and Data Analysis Group (Cladag 2023), Salerno, Italy. Talk's title: *Bayesian forecasting of multivariate longitudinal zero-inflated counts: an application to civil conflict.* (September 2023).
- 35. 13th International Conference on Bayesian Nonparametrics (BNP13 2022), Puerto Varas, Chile. Talk's title: *Telescopic clustering*. (October 2022).
- 36. Workshop ISBA@CIRM, Marseille, France. Talk's title: *Nonparametric priors with full-range borrowing of information*. (June 2021).
- 37. 2021 World Meeting of the International Society for Bayesian Analysis (ISBA 2021), Kunming, China, virtual. Talk's title: *Nonparametric priors with full-range borrowing of information*. (June 2021).
- 38. 50th Meeting of the Italian Statistical Society (SIS 2021), virtual conference Pisa, Italy. Talk's title: *On the dependence structure in Bayesian nonparametric priors*. (June 2021).

Visiting periods

- Department of Statistical Science, Duke University, North Carolina, USA. (Apr 2025).
- School of Science and Technology, IE University in Madrid, Spain (Oct 2024)
- Department of Statistical Science, University College London, UK (Dec 2022)

Grants and funding

- Task member of the National Recovery and Resilience Plan of Italy PE1 FAIR Future Artificial Intelligence Research
 CUP B43C22000800006 group. (PI: Riccardo Zecchina)
- Nov 2021-Jan 2022 Research assistantship, Bocconi Institute for Data Science and Analytics, Bocconi University
- 2021 Merit-based financial support, Department of Decision Sciences, Bocconi University
- 2017-21 Merit-based Ph.D. fellowship, Department of Decision Sciences, Bocconi University
- Apr 2017-Jul 2017 Research assistantship, Department of Finance, Bocconi University
- Jul 2016-Sep 2016 Research assistantship, Department of Finance, Bocconi University

Awards

- 2025 Travel Award, BNP World Meeting
- 2024 New Researcher Travel Award, Institute of Mathematical Statistics (IMS)
- 2024 Travel Award, BNP Networking Workshop
- 2024 Travel Award, ISBA World Meeting
- 2022 Travel Award, BNP World Meeting
- 2022 Travel Award, ISBA World Meeting

Society memberships and research networks

Institute of Mathematical Statistics (IMS); International Society for Bayesian Analysis (ISBA) [sections: Junior-ISBA, Bayesian Nonparametrics, Biostatistics and Pharmaceutical Statistics]; Italian Statistical Society (SIS) [sections: Classification and Data Analysis Group, SISBayes, y-SIS]; Complex Data Modeling Research Network (MiDaS).

Teaching activities

| Course titleLevelUniversityactivity*PeriodBayesian Statistical MethodsMScBocconi UniversityCDa.y. 2024-25Bayesian Statistical MethodsMScBocconi UniversityCDa.y. 2023-24StatisticsBScBocconi UniversityLa.y. 2020-21Financial Econometrics and Empirical FinanceMScBocconi UniversityLa.y. 2020-21StatisticsBScBocconi UniversityLa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2020-21Financial Economentric and Empirical FinanceMScBocconi UniversityTAa.y. 2020-21StatisticsBScBocconi UniversityTAa.y. 2019-20Financial Econometrics and Empirical FinanceMScBocconi UniversityTAa.y. 2019-20StatisticsBScCatholic Uni. of the Sacred HeartTAa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2018-19 | | | Type of | | | O |
|---|----------|--------------|-----------|-----------------------------------|-------|--|
| Bayesian Statistical MethodsMScBocconi UniversityCDa.y. 2023-24StatisticsBScBocconi UniversityLa.y. 2020-21Financial Econometrics and Empirical FinanceMScBocconi UniversityLa.y. 2020-21StatisticsBScBocconi UniversityLa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2020-21Financial Economentric and Empirical FinanceMScBocconi UniversityTAa.y. 2020-21StatisticsBScBocconi UniversityTAa.y. 2019-20Financial Econometrics and Empirical FinanceMScBocconi UniversityTAa.y. 2019-20StatisticsBScCatholic Uni. of the Sacred HeartTAa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2019-20 | Duration | Period | activity* | Univeristy | Level | Course title |
| StatisticsBScBocconi UniversityLa.y. 2020-21Financial Econometrics and Empirical FinanceMScBocconi UniversityLa.y. 2020-21StatisticsBScBocconi UniversityLa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2020-21Financial Economentric and Empirical FinanceMScBocconi UniversityTAa.y. 2020-21StatisticsBScBocconi UniversityTAa.y. 2019-20Financial Econometrics and Empirical FinanceMScBocconi UniversityTAa.y. 2019-20StatisticsBScCatholic Uni. of the Sacred HeartTAa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2018-19 | 48h | a.y. 2024-25 | CD | Bocconi University | MSc | Bayesian Statistical Methods |
| Financial Econometrics and Empirical Finance MSc Bocconi University L a.y. 2020-21 Statistics BSc Bocconi University L a.y. 2019-20 Statistics BSc Bocconi University TA a.y. 2020-21 Financial Economentric and Empirical Finance MSc Bocconi University TA a.y. 2020-21 Statistics BSc Bocconi University TA a.y. 2020-21 Statistics BSc Bocconi University TA a.y. 2019-20 Financial Econometrics and Empirical Finance MSc Bocconi University TA a.y. 2019-20 Statistics BSc Catholic Uni. of the Sacred Heart TA a.y. 2019-20 Statistics BSc Bocconi University TA a.y. 2019-20 Statistics BSc Bocconi University TA a.y. 2019-20 | 48h | a.y. 2023-24 | CD | Bocconi University | MSc | Bayesian Statistical Methods |
| StatisticsBScBocconi UniversityLa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2020-21Financial Economentric and Empirical FinanceMScBocconi UniversityTAa.y. 2020-21StatisticsBScBocconi UniversityTAa.y. 2019-20Financial Econometrics and Empirical FinanceMScBocconi UniversityTAa.y. 2019-20StatisticsBScCatholic Uni. of the Sacred HeartTAa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2018-19 | 20h | a.y. 2020-21 | L | Bocconi University | BSc | Statistics |
| StatisticsBScBocconi UniversityTAa.y. 2020-21Financial Economentric and Empirical FinanceMScBocconi UniversityTAa.y. 2020-21StatisticsBScBocconi UniversityTAa.y. 2019-20Financial Econometrics and Empirical FinanceMScBocconi UniversityTAa.y. 2019-20StatisticsBScCatholic Uni. of the Sacred HeartTAa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2018-19 | 12h | a.y. 2020-21 | L | Bocconi University | MSc | Financial Econometrics and Empirical Finance |
| Financial Economentric and Empirical Finance MSc Bocconi University TA a.y. 2020-21 Statistics BSc Bocconi University TA a.y. 2019-20 Financial Econometrics and Empirical Finance MSc Bocconi University TA a.y. 2019-20 Statistics BSc Catholic Uni. of the Sacred Heart TA a.y. 2019-20 Statistics BSc Bocconi University TA a.y. 2018-19 | 40h | a.y. 2019-20 | L | Bocconi University | BSc | Statistics |
| StatisticsBScBocconi UniversityTAa.y. 2019-20Financial Econometrics and Empirical FinanceMScBocconi UniversityTAa.y. 2019-20StatisticsBScCatholic Uni. of the Sacred HeartTAa.y. 2019-20StatisticsBScBocconi UniversityTAa.y. 2018-19 | 90h | a.y. 2020-21 | TA | Bocconi University | BSc | Statistics |
| Financial Econometrics and Empirical Finance MSc Bocconi University TA a.y. 2019-20 Statistics BSc Catholic Uni. of the Sacred Heart TA a.y. 2019-20 Statistics BSc Bocconi University TA a.y. 2018-19 | 18h | a.y. 2020-21 | TA | Bocconi University | MSc | Financial Economentric and Empirical Finance |
| Statistics BSc Catholic Uni. of the Sacred Heart TA a.y. 2019-20 Statistics BSc Bocconi University TA a.y. 2018-19 | 90h | a.y. 2019-20 | TA | Bocconi University | BSc | Statistics |
| Statistics BSc Bocconi University TA a.y. 2018-19 | 18h | a.y. 2019-20 | TA | Bocconi University | MSc | Financial Econometrics and Empirical Finance |
| , | 24h | a.y. 2019-20 | TA | Catholic Uni. of the Sacred Heart | BSc | Statistics |
| E: 11E .: 1E .: 1E: MO B .:II : : EA 0010.10 | 90h | a.y. 2018-19 | TA | Bocconi University | BSc | Statistics |
| Financial Econometrics and Empirical Finance MSc Bocconi University TA a.y. 2018-19 | 18h | a.y. 2018-19 | TA | Bocconi University | MSc | Financial Econometrics and Empirical Finance |
| Quantitative Methods for Finance BSc Bocconi University TA a.y. 2018-19 | 57h | a.y. 2018-19 | TA | Bocconi University | BSc | Quantitative Methods for Finance |

^{*} CD = Course Director; L = Lecturer; TA = Teaching Assistant

Student supervision

Supervision of research assistants

- Edoardo Stefanelli, Research Assistant, Bocconi Institute for Data Science and Analytics @ Bocconi University (joint supervision with F. Gaffi - y. 2025)
- Edoardo Campiglio, **Research Assistant**, Bocconi Institute for Data Science and Analytics @ Bocconi University (y. 2024)

Thesis supervision

- Edoardo Campiglio, **MSc student**, Bocconi University, Thesis title: *Nonparametric random structures beyond exchangeability: an application of the dependent Dirichlet process for separate exchangeable arrays.* (graduation: Apr 2025)
- Vladimir Badalyan, MSc student, Bocconi University, Thesis title: Dependent Stick-Breaking Processes with Common Atoms: Properties, Representations, and Inference. (graduation: Dec 2024)
- Noemi Savelkoul, MSc student, Bocconi University, Thesis title: A Bayesian Approach to Lag Selection in Higher-Order Stationary Vector Autoregressions. (graduation: Dec 2024)
- Michele Graziano, MSc student, Bocconi University, Thesis title: Temporal Bayesian Nonparametric Classifiers: an Application to Recession Forecasting. (graduation: Dec 2024)
- Thesis tutor for MSc in Finance students, Bocconi University (Jun 2016 Jul 2017)

Service and Outreaching

- Service to Scientific Societies
 - Chair for j-ISBA section of ISBA junior section of the International Society for Bayesian Analysis (y. 2024).
 - Chair-Elect for j-ISBA section of ISBA junior section of the International Society for Bayesian Analysis (y. 2023).
 - Executive board member of the Scientific Committee for the Blackwell-Rosenbluth award by ISBA and i-ISBA (y. 2023)

• Conferences organization

- Member of the Scientific Committee for the 8th Games and Decisions in Risk and Reliability Workshop, at Bocconi University, Milan, Italy. (y. 2025)
- Member of the Local Organizing Committee for the 8th Games and Decisions in Risk and Reliability Workshop, at Bocconi University, Milan, Italy. (y. 2025)
- Member of the Scientific Committee for the BAyesian Young Statisticians Meeting 2025 (BAYSM 2025), online. (y. 2025)
- Member of the Organizing Committee for the BAyesian Young Statisticians Meeting 2025 (BAYSM 2025), online. (y. 2025)
- Member of the Scientific Committee for the Satellite workshop to International Society for Bayesian Analysis (ISBA) world meeting, at Università della Svizzera Italiana (USI), Lugano, Switzerland. (y. 2024)
- Chair of the Scientific Committee for the BAyesian Young Statisticians Meeting 2023 (BAYSM 2023), online.
 (y. 2023)

- Session organizer for

- the 19th International Joint Conference on Computational and Financial Econometrics (CFE) and Computational and Methodological Statistics (CMStatistics), London, UK. Sessions' title: "Track on Bayesian semi- and non-parametric methods" (3 solicited sessions y. 2025)
- 2. the Bayesian Inference in Stochastic Processes (BISP14) Workshop, Milan, Italy. (solicited session y. 2025)
- 3. the 18th International Joint Conference on Computational and Financial Econometrics (CFE) and Computational and Methodological Statistics (CMStatistics), London, UK. Session title: "Recent advances in Bayesian methods" (solicited session y. 2024)
- 4. the 2024 International Day of Women in Statistics and Data Science (IDWSDS) Session title: "Recent advances in Bayesian methods for covariance estimation and network data" conference (y. 2024)
- 5. the RSS International Conference 2024 (RSS 2024), Brighton, UK. Session title: "Bayesian methods for spatio-temporal data that don't take ages" (y. 2024)
- the Bernoulli-IMS 2024 World Congress, Bochum, Germany Session title: "New Trends in Bayesian Nonparametrics" (y. 2024)
- 7. the Joint Statistical Meeting 2024 (JSM 2024), Portland, Oregon Session title: "Blackwell-Rosenbluth Award" (y. 2024)

- 8. the 4th Italian Meeting on Probability and Mathematical Statistics 2024, Rome, Italy Session title: "Recent Advances in Bayesian Nonparametric Statistics" (y. 2024)
- 9. the International Symposium on Nonparametric Statistics 2024 (ISNPS 2024), Braga, Portugal. Session title: "Random partitions and Bayesian dependent clustering". (solicited session y. 2024)
- the 6th International Conference on Econometrics and Statistics (ECOSTA 2023), Tokyo, Japan. Session title: "Advances in Bayesian nonparametrics and model-based clustering". (solicited session y. 2023)

• Editorial and referee activities

- Editor for New Trends in Bayesian Statistic Springer Proceedings in Mathematics & Statistics (in press)
- Referee for
 - * Journals: Bayesian Analysis, Biostatistics, Computational Statistics and Data Analysis, Electronic Journal of Statistics, Journal of Nonparametric Statistics, Journal of the American Statistical Association, Journal of the Royal Statistical Society Series A and C, Stat, Statistical Science, Statistics and Computing, Statistics and Probability Letters and The American Statistician.
 - * Conferences and conference proceedings: BAYSM, NeurIPS.
 - * Competitive grant funding of Italian Ministry for University and Scientific Research.
- Coordinator, monthly reading group of Statistics, at NUS and A*STAR, 2022-2023 (Singapore, Republic of Singapore).
- Writing assistantship for Chapter 1 of the book "Essentials of time series for financial applications, Guidolin M. and Pedio M., Academic Press, 2018."

• Volunteer and outreach activities

- Volunteer activity for Bocconi University at the Matematiche a Milano 2025 event (Milan, Italy)
- Data analyses for RiminiInRete, a digital database for studying and improving Rimini's school system (y. 2021-present, Rimini, Italy),
- Webinar "STEM Morning Science, Technology, Engineering, Mathematics" for high-school students at the University of Bologna (y. 2022, online).
- Training course "Statistics and Data-analysis with Excel" for high-school and elementary teachers (y. 2022, online)
- Webinar "About the relationship between students behavior and civic education grades" for high-school and elementary school teachers (y. 2022, online)
- Seminar "Gender Differences in Primary and Secondary Schools in the Province of Rimini: Evidence from the RIR Project" for high-school and elementary school teachers (y. 2021, online)
- Volunteer activity for for Bocconi University at the European Researchers' Night 2019 (Milan, Italy)
- Fondazione Rodolfo Debenedetti, project: racCONTAMI 2018, Third Census of Homeless People in Milan (Milan, Italy).

Public softwares

- 1. GitHub repository EPglm: R codes for Scalable expectation propagation for generalized linear models.
- 2. GitHub repository BMMclassifier: R codes for How to leverage Bayesian mixtures for dynamic clustering and classification.
- 3. GitHub repository Furbl: Python and R codes for *Nonparametric priors with full-range borrowing of information*.
- 4. GitHub repository CPE: R code for Conditional partial exchangeability: a probabilistic framework for multi-view clustering.
- 5. GitHub repository ERC: R code for Entropy regularization in probabilistic clustering.
- 6. GitHub repository DynamicGGM: R code for Change point detection in dynamic Gaussian graphical models.
- 7. GitHub repository MFMmultiHurdle: R code for Bayesian Clustering of Multiple Zero-Inflated Outcomes.
- 8. GitHub repository shddp: Python code for Model Selection for Maternal Hypertensive Disorders with Symmetric Hierarchical Dirichlet Processes.

Other education

- 2023 Grant writing, Introduction to grant writing: writing effective grant proposals (Singapore) Instructor: J. Lebrun
- 2018 Graphical Models, Bocconi Summer School in Advanced Statistics and Probability (Como, Italy)
 - Instructors: S. Lauritzen (University of Copenhagen) and R. Evans (University of Oxford)
- 2018 Bocconi Excellence in Advanced Teaching (BEAT) by BUILT (Milan, Italy)

Other work experience

2016–2019 Contributing editor, Zanichelli editore S.p.A, (Bologna, Italy)