Beatrice Franzolini

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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
- 6. 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 and submitted articles

- 7. 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
- 8. De Iorio, M., Heinecke A., Franzolini, B., Cabral, R. (2025+). Singularities in Bayesian inference: crucial or overstated? arXiv:2501.06618
- 9. Franzolini, B., De Iorio, M., and Eriksson, J.G. (2025+). Conditional partial exchangeability: a probabilistic framework for multi-view clustering. arXiv:2307.01152
- 10. Anceschi, N., Fasano, A., Franzolini, B., Rebaudo, G. (2025+). Scalable expectation propagation for generalized linear models. arXiv:2407.02128

Refereed discussions

- 11. 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
- 12. 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

- 13. Franzolini, B. (2025, in press). *How to leverage Bayesian mixtures for dynamic clustering and classification*. In Methodological and Applied Statistics and Demography I: SIS 2024. (Editors: Pollice, A., Mariani, P.) ISBN 978-3-031-64346-0
- 14. 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
- 15. 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
- 16. 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
- 17. 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
- 18. 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

19. 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

Ongoing works

- 20. Multivariate species sampling processes (ongoing, joint work with A. Lijoi, I. Prünster, and G. Rebaudo)
- 21. Hierarchical multiplex networks (ongoing, joint work with D. Durante and V. Ghidini)
- 22. An invariance-based approached to community detection in dynamic networks (ongoing, joint work with F. Gaffi)
- 23. Matrix-variate priors for flexible mixture modeling of grouped data (ongoing, joint work with A. Cremaschi)
- 24. The mediation role of maternal feeding practices in the relationship between maternal mental health and child eating behaviors: a longitudinal study (ongoing, joint with M. Lazarus and A. Fogel)
- 25. Zero-inflated mixture regression (ongoing, joint work with N. Anceschi, A. Fasano, G. Rebaudo)

Conference presentations and seminars

Seminars

- 1. Seminar at the Department of Statistical Science, Duke University, North Carolina, USA. Seminar's title: *TBA*. (April 2025 upcoming).
- 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 upcoming).
- 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. BIRS Workshop on Bayesian Uncertainty Quantification in Large Models, Chennai, India. Talk's title: *TBA*. (December 2025 upcoming).
- 7. SISBayes Workshop, Padova, Italia. Talk's title: *Multivariate species sampling models*. (September 2025 upcoming).
- 8. Bayesian Inference in Stochastic Processes (BISP14), Milan, Italy. Talk's title: Symmetry properties of dependent random partitions. (May 2025 upcoming).
- 9. Early Career Workshop on Nonparametric Statistics @LUISS, Rome, Italy. Talk's title: *Symmetry properties of dependent random partitions*. (May 2025 upcoming).
- 10. 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).
- 11. 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).
- 12. 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).
- 13. 3rd BNP Networking Workshop, Singapore, Republic of Singapore. Talk's title: *Hierarchically extended stochastic block models for multiplex networks*. (July-August 2024).
- 14. 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).

- 15. 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).
- 16. 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).
- 17. 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).
- 18. 4th Italian Meeting on Probability and Mathematical Statistics 2024, Rome, Italy. Talk's title: *Multivariate species sampling models*. (June 2024).
- 19. StaTalk2024@DiSIA UNIFI, Firenze, Italy. Talk's title: *How to leverage Bayesian mixtures for dynamic clustering and classification*. (May 2024).
- 20. 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).
- 21. 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).
- 22. Approximation Methods in Bayesian Analysis @ CIRM, Marseille, France. Talk's title: *Geometry of scale mixtures*. (June 2023).
- 23. 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).
- 24. 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).
- 25. 51st Meeting of the Italian Statistical Society (SIS 2022), Caserta, Italy. Talk's title: *Entropy regularization in probabilistic clustering*. (June 2022).
- 26. 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).
- 27. Foundations of Objective Bayesian Methodology Workshop, Oaxaca, Mexico. Talk's title: *Nonparametric priors with full-range borrowing of information*. (November 2021).
- 28. 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).
- 29. 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

- 30. 14th International Conference on Bayesian Nonparametrics (BNP14 2024), UCLA, Los Angeles, United States. Talk's title: *Hierarchical extended stochastic block model for multiplex networks*. (June 2024 upcoming).
- 31. 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).
- 32. 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).
- 33. 13th International Conference on Bayesian Nonparametrics (BNP13 2022), Puerto Varas, Chile. Talk's title: *Telescopic clustering*. (October 2022).
- 34. Workshop ISBA@CIRM, Marseille, France. Talk's title: *Nonparametric priors with full-range borrowing of information.* (June 2021).
- 35. 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).
- 36. 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 upcoming).
- School of Science and Technology, IE University in Madrid, Spain (Oct 2024)
- Department of Statistical Science, University College London, UK (Dec 2022)

Awards, grants, and funding

- 2024 New Researcher Travel Award, Institute of Mathematical Statistics (IMS)
- 2024 Travel Award, BNP Networking Workshop
- 2024 Travel Award, ISBA World Meeting
- 2023-26 Task member of the National Recovery and Resilience Plan of Italy PE1 FAIR Future Artificial Intelligence Research CUP B43C22000800006 group.
- 2022 Travel Award, BNP World Meeting
- 2022 Travel Award, ISBA World Meeting
- 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

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

O			Type of		
Course title	Level	Univeristy	activity*	Period	Duration
Bayesian Statistical Methods	MSc	Bocconi University	CD	a.y. 2024-25	48h
Bayesian Statistical Methods	MSc	Bocconi University	CD	a.y. 2023-24	48h
Statistics	BSc	Bocconi University	L	a.y. 2020-21	20h
Financial Econometrics and Empirical Finance	MSc	Bocconi University	L	a.y. 2020-21	12h
Statistics	BSc	Bocconi University	L	a.y. 2019-20	40h
Statistics	BSc	Bocconi University	TA	a.y. 2020-21	90h
Financial Economentric and Empirical Finance	MSc	Bocconi University	TA	a.y. 2020-21	18h
Statistics	BSc	Bocconi University	TA	a.y. 2019-20	90h
Financial Econometrics and Empirical Finance	MSc	Bocconi University	TA	a.y. 2019-20	18h
Statistics	BSc	Catholic Uni. of the Sacred Heart	TA	a.y. 2019-20	24h
Statistics	BSc	Bocconi University	TA	a.y. 2018-19	90h
Financial Econometrics and Empirical Finance	MSc	Bocconi University	TA	a.y. 2018-19	18h
Quantitative Methods for Finance	BSc	Bocconi University	TA	a.y. 2018-19	57h
Quantitative Methods for Finance		Bocconi University	TA	a.y. 2018-19	

* CD = Course Director; L = Lecturer; TA = Teaching Assistant

Student supervision

- Thesis Supervisor for Edoardo Campiglio, **MSc student**, Bocconi University, Thesis title: *Nonparametric random structures beyond exchangeability: an application of the dependent Dirichlet process for separate exchangeable arrays.* (expected graduation: Apr 2025)
- Supervisor of Edoardo Campiglio, Research Assistant, BIDSA @ Bocconi University (y. 2024)
- Thesis Supervisor for Vladimir Badalyan, **MSc student**, Bocconi University, Thesis title: *Dependent Stick-Breaking Processes with Common Atoms: Properties, Representations, and Inference.* (graduation: Dec 2024)

- Thesis Supervisor for Noemi Savelkoul, **MSc student**, Bocconi University, Thesis title: *A Bayesian Approach to Lag Selection in Higher-Order Stationary Vector Autoregressions*. (graduation: Dec 2024)
- Thesis Supervisor for Michele Graziano, **MSc student**, Bocconi University, Thesis title: *Temporal Bayesian Non-parametric Classifiers: an Application to Recession Forecasting.* (graduation: Dec 2024)
- Thesis tutor for MSc in Finance students, Bocconi University (a.y. 2016-2017)

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 (v. 2023).
- **Executive board member of the Scientific Committee** for the Blackwell-Rosenbluth award by ISBA and j-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

- 1. 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)
- 6. 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)

10. 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 (expected publication: Jan 2025)

- 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

- 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)
- 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 shdd: 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)