

## Contact information

Address : Singapore Institute of Clinical Sciences, 30 Medical Drive, Brenner Center, Singapore 117609

Email : [franzolini@pm.me](mailto:franzolini@pm.me) or [Beatrice.Franzolini@sics.a-star.edu.sg](mailto:Beatrice.Franzolini@sics.a-star.edu.sg)

Website : <https://beatricefranzolini.github.io>

## Current position

Jan 2022–present *Postdoctoral Research Fellow*, Agency for Science, Technology and Research (Singapore)

## Education

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

*Thesis:* On Dependent Processes in Bayesian Nonparametrics:  
Theory, Methods, and Applications

*Advisors:* Antonio Lijoi, Igor Prünster

*Final Mark:* with honours (cum laude)

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

*Thesis:* Can a Consumption-Based Stochastic Discount Factor  
Jointly Price the Cross-section of Commodity Futures Returns?

*Advisor:* Massimo Guidolin

*Final Mark:* with honours (110/110 cum laude)

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

*Thesis:* Utility Functions for C-CAPM: an Empirical Analysis to Compare  
CRR Functions with Epstein and Zin Function.

*Advisor:* Luca De Angelis

*Final Mark:* with honours (110/110 cum laude)

## Past Academic positions

Nov 2021–Jan 2022 *Research assistant*, Bocconi Institute for Data Science and Analytics (Milan, Italy)

Sep 2017–Jan 2022 *PhD student in Statistics* (with merit-based fellowship), Bocconi University (Milan, Italy)

Sep 2019–Aug 2021 *Adjunct professor*, Bocconi University (Milan, Italy)

Sep 2018–Aug 2021 *Teaching assistant*, Bocconi University (Milan, Italy)

Sep 2019–Aug 2020 *Teaching assistant*, Catholic University of the Sacred Heart (Milan, Italy)

Apr 2017–Jul 2017 *Research assistant*, Bocconi University (Milan, Italy)

Jul 2016–Jul 2017 *Tutor*, Bocconi University (Milan, Italy)

Jul 2016–Sep 2016 *Research assistant*, Bocconi University (Milan, Italy)

## Research interests

Bayesian nonparametrics, Bayesian modelling of complex data, and biostatistics.

## Papers and scientific publications

- **Franzolini, B.**, Lijoi, A., and Prünster, I. (2022) *Model selection for maternal hypertensive disorders with symmetric hierarchical Dirichlet processes*, The Annals of Applied Statistics, forthcoming.
- **Franzolini, B.** and Rebaudo, G. (2022). *A regularized-entropy estimator to enhance cluster interpretability in Bayesian nonparametrics*. In Book of Short Papers SIS 2022.
- 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

## Submitted and working papers

- Ascolani, F., **Franzolini, B.**, Lijoi, A., and Prünster, I. (2022+). *Nonparametric priors with full-range borrowing of information* (submitted)
- **Franzolini, B.**, Cremaschi, A., van den Boom, W. and De Iorio, M. (2022+). *Bayesian clustering of multiple zero-inflated outcomes* (submitted)
- **Franzolini, B.**, Lijoi, A., Prünster, I. and Rebaudo, G. (2022+). *Multivariate species sampling models* (in preparation)
- **Franzolini, B.**, Lijoi, A. and Prünster, I. (2022+). *Dependent processes for panel count data* (in preparation)
- **Franzolini, B.**, Beskos, A. and De Iorio, M. (2022+). *Dynamic Gaussian Graphical Models* (in preparation)
- **Franzolini, B.** and De Iorio, M. (2022+). *Multilayer clustering via dependent nonparametric priors: an application to zero-excess data* (in preparation)

## Conferences, talks and seminars

### Invited talks

- 2022 World Meeting of the International Society for Bayesian Analysis (ISBA 2022), Montreal, Canada (June 2022).
- 51st Meeting of the Italian Statistical Society (SIS 2022), Caserta, Italy (June 2022).
- 5th International Conference on Econometrics and Statistics (ECOSTA 2022), Kyoto, Japan (June 2022).
- Foundations of Objective Bayesian Methodology workshop, Oaxaca, Mexico (November 2021).
- 4th International Conference on Econometrics and Statistics (ECOSTA 2021), virtual conference - Hong Kong (June 2021).
- 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMSTATISTICS 2020), virtual conference (December 2020).

- 45th Arkansas Spring Lectures Series - Mathematical Sciences, virtual lectures - Fayetteville, USA (November 2020).

### Contributed talks

- Workshop ISBA@CIRM, Marseille, France (June 2021).
- 2021 World Meeting of the International Society for Bayesian Analysis (ISBA 2021), virtual conference (June 2021).
- 50th Meeting of the Italian Statistical Society (SIS 2021), virtual conference - Pisa, Italy (June 2021).

## Referee Activities

Referee for *Bayesian Analysis*, *Biostatistics*, *Journal of the American Statistical Association*, and *Stat.*

## Society memberships

Institute of Mathematical Statistics (IMS) ; International Society for Bayesian Analysis (ISBA); Italian Statistical Society (SIS); Complex Data Modeling Research Network (MiDaS).

## Teaching activities

Course title	Level	Univeristy	Type of activity*	Period	Duration
Statistica	BSc	Bocconi University	T	a.y. 2020-2021	20h
Financial Econometric and Empirical Finance	MSc	Bocconi University	T	a.y. 2020-2021	12h
Statistica	BSc	Bocconi University	TA	a.y. 2020-2021	90h
Financial Econometric and Empirical Finance	MSc	Bocconi University	TA	a.y. 2020-2021	18h
Statistica	BSc	Bocconi University	T	a.y. 2019-2020	40h
Statistica	BSc	Bocconi University	TA	a.y. 2019-2020	90h
Financial Econometric and Empirical Finance	MSc	Bocconi University	TA	a.y. 2019-2020	18h
Statistics	BSc	Catholic University of the Sacred Heart	TA	a.y. 2019-2020	24h
Statistica	BSc	Bocconi University	TA	a.y. 2018-2019	90h
Financial Econometric and Empirical Finance	MSc	Bocconi University	TA	a.y. 2018-2019	18h
Metodi quantitativi per la finanza	BSc	Bocconi University	TA	a.y. 2018-2019	57h

\* T = as lecturer; TA = as teaching assistant

## Other education

- 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)

## Non-academic work experience

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

## Volunteer work

- 2019    Volunteer for the European Researchers' Night (Milan, Italy)
- 2018    Volunteer for Fondazione Rodolfo De Benedetti, project: racCONTAMI 2018 (Milan, Italy)
- 2016    Volunteer for Pane Quotidiano (Milan, Italy)

## Language skills

Italian (native speaker), English (good), Spanish (basic).

## Computer skills

R, Python, MATLAB, LaTeX (good) and Stata, SAS (basic).