

RICCARDO CORRADIN

Bio	Born in Monza 17, July, 1988
Contact information	Department of Economics, Management and Statistics University of Milano-Bicocca riccardo.corradin@unimib.it http://rcorradin.github.io
Research interest	Bayesian nonparametric, computational statistics, applied bayesian modelling

Current position

2024-Pres.	Assistant professor Department of Economics, Management and Statistics.	University of Milano-Bicocca
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Education and employment history

Past positions

2022-2024	Assistant professor School of Mathematical Sciences	University of Nottingham
2019-2021	Postdoctoral researcher Department of Economics, Management and Statistics. Supervisor: Professor Andrea Ongaro.	University of Milano-Bicocca

Studies

2015-2019	Ph.D. in Statistics and Mathematical Finance Dissertation: <i>Contributions to modelling via Bayesian nonparametric mixtures</i> Supervisor: Professor Bernardo Nipoti. Defense: 31 st January 2019.	University of Milano-Bicocca
2013-2015	M.Sc. in Statistical Sciences Supervisor: Professor Bruno Scarpa.	University of Padova
2009-2012	B.Sc. in Statistics and Information Management Supervisors: Professor Riccardo Borgoni, Professor Fulvia Pennoni.	University of Milano-Bicocca

Visiting periods

Sep. 2023	INRIA Grenoble - Rhône-Alpes I was visiting Julien Arbel, working on properties of Bayesian neural networks.
Jul. 2023	Pontificia Universidad Católica de Chile Visiting period with Fernando Quintana, working on combinatorial objects for statistical inference with recurrent patterns.

Mar. 2018	INRIA Grenoble - Rhône-Alpes I was visiting Julyan Arbel, working on asymptotic results for Dirichlet process mixture models under affine transformations.
2017-2018	Trinity College of Dublin I spent a long visiting period, from March 2017 until August 2018, under the supervision of Bernardo Nipoti, where I worked on my Ph.D. research.

Summer schools and short courses

LMS Invited Lecture Series and CRISM: Summer School in Computational Statistics. *University of Warwick* (July, 2018) —●— Imprecise Probability - A Gentle Overview. *Trinity College of Dublin* (November, 2017) —●— Introduction to functional data analysis. *IMATI, Consiglio Nazionale delle Ricerche* (October/November, 2016) —●— ABS16 - 2016 Applied Bayesian Statistics School: Bayes, big data and the Internet. *IMATI, Consiglio Nazionale delle Ricerche* (August, 2016)

Academic experience ---

Publications

Submitted

- 2024+ **Corradin, R.**, Danese L., Ongaro A., KhudaBukhsh W. R. *Model-based clustering of time-dependent observations with common structural changes*.
- 2024+ Camerlenghi, F., **Corradin, R.**, Ongaro A. *Nested Compound Random Measures*.

On referred journals

- 2024 **Corradin, R.**, Beraha M. *Bayesian nonparametric model based clustering with intractable distributions: an ABC approach*. Bayesian Analysis (forthcoming).
- 2024 Argiento R., **Corradin R.**, Guglielmi A., Lanzarone E. *A Bayesian nonparametric model for co-variate driven clustering of blood donors data*. Biometrics (forthcoming).
- 2023 Camerlenghi F., **Corradin R.**, Ongaro A. *Contaminated Gibbs-type priors*. Bayesian Analysis (forthcoming).
- 2022 Canale A., **Corradin R.**, Nipoti B. *Importance conditional sampling for Pitman-Yor mixtures*. Statistics and Computing. 32(40).
- 2022 **Corradin R.**, Danese L., Ongaro A. *Bayesian nonparametric change points detection for multivariate time series with missing observations*. International Journal of Approximate Reasoning, 143, 26–43.
- 2022 **Corradin R.**, Nieto Barajas L.E., Nipoti B. *Optimal stratification of survival data via Bayesian nonparametric mixtures*. Econometrics and Statistics (Part B: Statistics), 22, 17–38.
- 2021 **Corradin R.**, Canale A., Nipoti B. *BNPmix: an R package for Bayesian nonparametric modelling via Pitman-Yor mixtures*. Journal of Statistical Software, 100.
- 2020 Arbel J., **Corradin R.**, Nipoti B. *Dirichlet process mixtures under affine transformations of the data*. Computational Statistics, 36, 577–601.
- 2014 Boscari E., Pujolar J.M., Dupanloup I., **Corradin R.**, Congiu L. *Captive Breeding Programs Based on Family Groups in Polyploid Sturgeons*. PLoS ONE, 9(10).

Proceedings and discussions

- 2023 Marchionni E., **Corradin R.** *Bayesian nonparametric multiple change point detection for time series of compositional data*. Proceedings of 2023 Conference of the Italian Statistical Society.
- 2023 **Corradin R.**, Danese L., KhudaBukhsha W., Ongaro A. *Model-based clustering of non-stationary time series with common historical change times*. Proceedings of 2023 Conference of the Italian Statistical Society.
- 2021 Camerlenghi F., **Corradin R.**, Ongaro A. *On the convex combination of a Dirichlet process with a diffuse probability measure*. Proceedings of 2021 Conference of the Italian Statistical Society.
- 2020 **Corradin R.**, Nieto Barajas L.E., Nipoti B. *Pitman-Yor mixture models for survival data stratification*. Proceedings of 2020 Conference of the Italian Statistical Society.
- 2020 Beraha M, **Corradin R.**, *An ABC algorithm for random partitions arising from the Dirichlet process*. Proceedings of 2020 Conference of the Italian Statistical Society.
- 2019 Canale A., **Corradin R.**, Nipoti B. *Galaxy color distribution estimation via dependent nonparametric mixtures*. Proceedings of 2019 Conference of the Italian Statistical Society.
- 2018 Arbel J., **Corradin R.**, Lewandowski M. *Discussion of "Bayesian cluster analysis: Point estimation and credible balls." by Wade and Ghahramani*. Bayesian Analysis. 13, no. 2, 559–626.

Funding and awards

Grants

International Research Collaboration Fund, **4 336** pounds. *University of Nottingham* (2023) —●— LMS ECR Travel Grant, **500** pounds. *London Mathematical Society* (2022) – cod. ECR-2122-34

Awards

Travel award, 100 dollars. *BayesComp 2023, Levi, FI* (June, 2022) —●— j-ISBA poster award. *2022 ISBA world meeting, Montreal, CA* (June, 2022) —●— Travel award, 500 dollars. *2022 ISBA world meeting, Montreal, CA* (June, 2022) —●— Travel award, accommodation. *BNP12 conference, Oxford, UK* (June, 2019)

Teaching experience

Lecturer

- 2024-2025 Bayesian Statistical Models, *M.Sc. in Statistics and Economics, University of Milano-Bicocca*.
- 2024-2025 Statistics I, *B.Ec. in Marketing, University of Nottingham*.
- 2023-2024 Bayesian Data Analysis (online), *M.Sc. in Statistics, University of Nottingham*.
- 2022-2024 Statistical models and methods, *B.Sc. in Statistics, University of Nottingham*.
- 2021-2022 Bayesian statistics, *Ph.D. in Economics, Statistics and Data Science - curriculum Data Science*.

Co-lecturer / tutor

- 2019-2021 Bayesian statistics, *M.Sc. in Mathematical Engineering, Polytechnic University of Milan*.
- 2020-2021 Inferential statistics, *M.Ec. in International Economics, University of Milano-Bicocca*.
- 2016-2017 Statistics II, *B.Sc. in Statistics, University of Milano-Bicocca*.
- 2016-2017 Generic tutoring *Master in Data Science for Management, Catholic University of Milano*.
- 2015-2016 Statistics I, *B.Ec. in Marketing, University of Milano-Bicocca*.

Scientific memberships and editorial activity

Referee for: Australian & New Zealand Journal of Statistics —●— Bayesian Analysis —●— Biometrical Journal
—●— Biometrika —●— Computational Statistics & Data Analysis —●— Environmetrics —●—
International Journal of Approximate Reasoning —●— Journal for the Royal Statistical Society -
Series C —●— Mathematical Biosciences —●— Statistics & Probability Letters —●— 2021 SBSS
Student Paper Competition —●— The American Statistician

Affiliations: International Society for Bayesian Analysis (ISBA – BNP-ISBA – jISBA – BayesComp) —●— Soci-
età Italiana di Statistica (SIS – ySIS)

Activities

Invited presentations

Nesting compound random measures. *Frontiers of Bayesian Inference and Data Science* (September, 2024) —●—
mathematical foundations of non-parametric methods. *IFPU - “Emerging methods in GW population inference”* (June,
2024) —●— Dependent Bayesian nonparametric models and their application. *Machine Learning: Mathematics and
Applications* (May, 2023) —●— Model-based clustering with intractable distributions. *Bayes Comp 2023* (March, 2023)
—●— Mixtures of normalized nested compound random measures and their application. *CMStatistics 2022* (December,
2022) —●— Nested Compound Random Measures. *51th Scientific meeting of the Italian Statistical Society* (June, 2022)
—●— Contamination of Gibbs-type prior. *2021 ISBA world meeting* (June, 2021) —●— BNPmix: an new package to
estimate Bayesian nonparametric mixtures. *eRum* (June, 2020) —●— Importance conditional sampler for Pitman-Yor and
GM-DDP mixtures. *Bayesian Nonparametrics for complex data* (January, 2020) —●— Importance conditional sampler
for nonparametric mixtures. *CMStatistics 2019* (December, 2019)

Contributed presentations and posters

Posterior Representation of Compound Random Measures. *2022 ISBA world meeting* (June, 2022, poster) —●— Model
based clustering with intractable distributions. *BAYSM 2021* (September, 2021, contributed) —●— On the convex
combination of a Gibbs-type prior with a diffuse probability measure. *50th Scientific meeting of the Italian Statistical
Society* (June, 2021, contributed) —●— Approximate estimation of latent random partitions. *ABC (not) in Svalbard*
(April, 2021, contributed) —●— BNPmix: an R package to estimate Bayesian nonparametric mixtures. *EuroBioC2020*
(December, 2020, contributed) —●— Importance conditional sampler for nonparametric mixture models. *BNP12* (June,
2019, contributed) —●— Galaxy color distribution estimation via dependent nonparametric mixtures. *SIS 2019 – “Smart
Statistics for Smart Applications”* (June, 2019, contributed) —●— Conditional Predictive Sampler for Dirichlet process
mixture model. *LMS Invited Lecture Series and CRISM: Summer School in Computational Statistics* (July, 2018, poster)

Seminars

A journey through model-based clustering with intractable distributions. *King’s College London* (November, 2023) —●—
A journey through model-based clustering with intractable distributions. *Pontificia Universidad Católica de Chile* (July,
2023) —●— A journey through model-based clustering with intractable distributions. *University of Nottingham statistics
seminars* (October, 2022) —●— On the contamination of Gibbs-type priors. *University of Nottingham statistics seminars*
(April, 2021) —●— Dirichlet process mixtures for density estimation and clustering under affine transformations of
the data. *University of Milano-Bicocca* (December, 2017) —●— Dirichlet process mixtures for density estimation and
clustering under affine transformations of the data. *Trinity College of Dublin* (January, 2018) —●— Dirichlet process
mixtures for density estimation and clustering under affine transformations of the data. *Université Grenoble Alpes* (March,
2018) —●— Bayesian Nonparametric Approach for Multiple Functional Data Clustering. *University of Milano-Bicocca*
(February, 2017)

Organization

Session: "Advances in Bayesian methodology" *CMStatistics 2023* (December, 2023) —●— Session: "Advances in Bayesian computation" *CMStatistics 2022* (December, 2022) —●— Session: "Advances in Bayesian nonparametric" *BAYSM:O* (November, 2020)

Administrative roles

Statistics seminars organizer, *University of Nottingham* (2023-2024) —●— APTS representative, *University of Nottingham* (2022-2024) —●— Joint committee, *University of Milano-Bicocca* (2016-2017) —●— Ph.D. students representative, *University of Milano-Bicocca* (2015-2017)

Supervision

Ph.D.

Luca Danese, *University of Milano-Bicocca* (2021 - Present), jointly with A. Ongaro

B.Sc./M.Sc.

Andrea Giulia Bai, *M.Sc. - Politecnico di Milano* (2024) —●— Vecchia Gabriele Dalla, *M.Sc. - Politecnico di Milano* (2024) —●— Binbin Xu, *M.Sc. - University of Nottingham* (2023) —●— Alex Kelly, *M.Sc. - University of Nottingham* (2023) —●— Yiqi Liu, *M.Sc. - University of Nottingham* (2023) —●— Edoardo Marchionni, *M.Sc. - Politecnico di Milano* (2023) —●— Kieran Lee, *B.Sc. - University of Nottingham* (2023) —●— Xiahui Li, *M.Sc. - University of Nottingham* (2022) —●— Mingyu Lai, *M.Sc. - University of Nottingham* (2022) —●— Qihang Zhao, *M.Sc. - University of Nottingham* (2022) —●— Laura Accorto, *M.Sc. - University of Milano-Bicocca* (2021) —●— Simone Borgonovo, *M.Sc. - University of Milano-Bicocca* (2021) —●— Martina Peron, *M.Sc. - University of Milano-Bicocca* (2021) —●— Luca Danese, *M.Sc. - University of Milano-Bicocca* (2020)

IT skills —————

Base	Java, HTML
Intermediate	Linux systems, SAS, SQL, Git
Advanced	L ^A T _E X, R, C++

Software dev and more

Maintainer of the **BNPmix** package, an **R** library for Bayesian nonparametric modelling.

Language skills —————

Italian	Mothertongue
English	Fluent, working level
L ^A T _E X	Fluent, working level

Industry experience —————

2014-2015	Internship	Freedata Labs
	Data analyst on web scraped data of clients and competitors.	