

ALICE GIAMPINO

Postdoctoral Researcher

*Department of Economics, Management and Statistics
University of Milano-Bicocca*

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RESEARCH INTERESTS

I am focused on Bayesian Analysis, in particular Bayesian Nonparametrics, and on innovative perspectives in model-based clustering. My research explores Bayesian clustering methods for high-dimensional data and multivariate time series, as well as topic modeling techniques with distributions defined on the simplex. I enjoy exploring different fields of application to discover what Bayesian statistics can reveal.

EDUCATION

Postdoctoral researcher in Statistics (Dec 2023 - Ongoing)

University of Milano-Bicocca

Project title: *Bayesian models for complex data*

Supervisor: Prof. Sonia Migliorati

- o Visiting researcher at University of California, Los Angeles (UCLA), USA (June - August 2025)

PhD in Economics & Statistics, curriculum Statistics (Nov 2019 - Nov 2023)

University of Milano-Bicocca

Defense: 28/02/2024

- o Thesis: *Innovative approaches to Bayesian clustering methods: parametric and nonparametric perspective*,
<https://hdl.handle.net/10281/461718>
- o Supervisor: Prof. Bernardo Nipoti
- o Co-supervisor: Prof. Michele Guindani
- o Visiting researcher at University of California, Irvine (UCI), USA (May 2022 - May 2023)

M.Sc. in Statistics & Economics (Oct 2017 - Sep 2019)

University of Milano-Bicocca

- o Thesis: *Dirichlet Process and Hierarchical Models*;
- o Supervisor: Prof. Sonia Migliorati
- o Final grade: 110/110 with honors

B.Sc. in Statistics & Economics (Oct 2014 - Sep 2017)

University of Milano-Bicocca

- o Thesis (in italian): *Regression trees: application to a real data case*
- o Supervisor: Prof. Sonia Migliorati
- o Final grade: 110/110 with honors

PUBLICATIONS

- A. Giampino, R. Ascari, S. Migliorati, “A flexible mixed-membership model for community and enterotype detection for microbiome data”. Computational Statistics and Data Analysis, 210 (2025): 108181. <https://doi.org/10.1016/j.csda.2025.108181>
- A. Giampino, A. Canale, B. Nipoti, “A Bayesian Model for Co-clustering Ordinal Data with Informative Missing Entries”. Statistics and Computing, 35, no. 5 (2025): 164. <https://doi.org/10.1007/s11222-025-10703-w>
- A. Giampino, B. Nipoti, M. Vannucci, M. Guindani, “Local Level Dynamic Random Partition Models for Change-point Detection”. Bayesian Analysis, Bayesian Analysis Advance Publication, 1-30, (2025). <https://doi.org/10.1214/25-BA1560>

BOOKS CHAPTER & PROCEEDINGS

- A. Giampino, R. Ascari, S. Migliorati, “Microbiome enterotype detection via a latent variable allocation model”, Methodological and Applied Statistics and Demography IV (SIS 2024), pp. 96-101. Cham: Springer Nature Switzerland (2025). https://doi.org/10.1007/978-3-031-64447-4_16
- A. Giampino, R. Ascari, S. Migliorati, “A Flexible Generalization of the Latent Dirichlet Allocation”, Data Analysis and Related Applications 4: New Approaches, Volume 12 (ASMDA 2023), Wiley, (2024) <https://doi.org/10.1002/9781394316915.ch8>
- R. Ascari, A. Giampino, “A flexible topic model”, 14th Scientific Meeting of the Classification and Data Analysis Group (CLADAG 2023), Pearson, (2023), ISBN: 9788891935632. <https://it.pearson.com/content/.../CLADAG-2023.pdf>

PROJECTS

Currently research projects

- A. Giampino, R. Ascari, S. Migliorati, “Sub-topic detection with extended flexible latent Dirichlet allocation”, (2025+)
- A. Giampino, R. Ascari, S. Migliorati, “A flexible latent Dirichlet model for modelling taxa communities”, (2025+)
- A. Giampino, S. Migliorati, M. Guindani, “Temporal communities behaviour”, (2025+)
- A. Giampino, S. Migliorati, J. Vandekerckhove, M. Guindani, “A Bayesian Finite Mixture Model for Cognitive Data”, (2025+)
- J. Zonca, A. Giampino, C. Reverberi, P. Cherubini, “The advice gap: adaptive yet suboptimal advice integration” (2025+), PsyArXiv <https://doi.org/10.31234/osf.io/4qkjev1>
Submitted to: Nature Communications

Book of Abstract

- A. Giampino, R. Ascari, S. Migliorati, “*A Flexible Latent Dirichlet Model for Modeling Taxa Communities*”, Book of Abstract, ISBN 9788899594244, CLADAG (Sep 2025)
- A. Giampino, A. Canale & B. Nipoti, “*Bayesian co-clustering of ordinal data with informative censoring*”, Book of Abstract, ISBN 978-9925-7812-8-7, CMStatistics (Dec 2024)
- A. Giampino, M. Guindani, B. Nipoti & M. Vannucci, “*Changepoint detection with random partition models*”, Book of Abstract, ISBN 978-9925-7812-7-0, CMStatistics (Dec 2023)
- R. Ascari & A. Giampino, “*A Flexible Topic Model*”, Book of Abstract, ISBN 9788891935632, CLADAG (Sep 2023)
- R. Ascari & Giampino A. “*A generalization of the latent Dirichlet allocation*”, Book of Abstract, ISBN 978-9925-7812-6-3, CMStatistics (Dec 2022)
- A. Giampino, R. Ascari & S. Migliorati “*LEFDA: An extension of the classical LDA*”, Book of Abstract, ISBN 978-90-73592-40-7, COMPSTAT (Aug 2022)

R PACKAGES

- **FlexPhiLDA**: a package with an extension of LDA for topic and community distribution, as a new topic modelling technique
<https://github.com/AliceGiampino/FlexPhiLDA>
- **EFLDA**: a package for topic modelling technique exploiting LDA and the Extended Flexible LDA
<https://github.com/AliceGiampino/EFLDA>
- **Gradient**: a package to compute steepest descent or gradient descent to fit linear regression models
<https://github.com/vincnardelli/gradient>.

Other Projects

PhD courses projects

- Post selection inference fMRI Data
<https://github.com/AliceGiampino/fMRI-Analysis>
- Forest Fire Bayesian Analysis
[https://github.com/AliceGiampino/Forest-Fire_Bayesian – Analysis](https://github.com/AliceGiampino/Forest-Fire_Bayesian_Analysis)

Master degree projects

- Outlier detection (R) <https://alicegiampino.github.io/SL/>
- Ames House Price prediction (R)
<https://alicegiampino.github.io/DMcompetitions/AmesHousePrice.html>
- Fraud detection (Knime, R) <https://github.com/AliceGiampino/ML>

TEACHING
&
WORKING
EXPERIENCE

Lecturer - Statistical Inference I (From 2024 - Ongoing)

- o *PhD in Economy, Statistics and Data Science*, University of Milano-Bicocca (16h)

Lecturer - Experimental Design (From 2023 - Ongoing)

- o *Marketing and Global Markets*, University of Milano-Bicocca (35h)

Teacher assistant/Second Instructor - Statistics (From 2023 - Ongoing)

- o *Informatic Engineering*, University of Bergamo (24h)

Tutor/Teacher Assistant - Statistics III (GLM) (From 2024 - Ongoing)

- o Bachelor in Statistics, University of Milano-Bicocca (15h)

Tutor/Teacher Assistant - Statistical Model (From 2018 - Ongoing)

- o Bachelor in Statistics, University of Milano-Bicocca (20h)

Tutor/Teacher Assistant - R for multivariate statistical analysis
(Dec 2024 - Jan 2025)

- o Bachelor in Statistics, University of Milano-Bicocca (21h)

PNRR Statistics (From 2024 - Ongoing)

- o Promote Statistics at high school students with projects on different topics, University of Milano-Bicocca

PLS Project (Scientific Degrees Plan) (From 2020 - Ongoing)

- o Promote Statistics at high school students with projects on different topics, University of Milano-Bicocca

Consultancy for TRUSTiCERT S.r.l. (Jun 2021 - Jul 2022)

- o *Statistical analyses for specific product to be approved by U.S. Food and Drug Administration*

Teacher assistant/Second Instructor - Bayesian Learning and Monte Carlo Methods (2019/2020)

- o *Electric Engineering*, Polytechnique of Milan (20h)

Tutor/Teacher Assistant - Disability & SLD support in preparing exams (May - Jun 2024)

- o Department of Statistics, University of Milano-Bicocca (20h)

Internship - Gender Equality Project (Apr - Jun 2019)

- o University of Milano-Bicocca

Internship - Reply S.p.A. (May - Jul 2018)

- o Data Science Bootcamp (The Data Incubator)

CONFERENCES
&
WORKSHOP

Next - CMStatistics (Dec 2025, London, UK)

- o Invited talk: *“Modeling Eurovision 2025 Songs with a Flexible Topic Modeling Approach”*

CLADAG (Sep 2025, Naples, Italy)

- o Invited talk: *“A Flexible Latent Dirichlet Model for Modeling Taxa Communities”*

BNP Meeting (Jul 2025, Los Angeles, US)

- o Contributed talk: *“Local Level Dynamic Random Partition Models For Changepoint Detection”*

CMStatistics (Dec 2024, London, UK)

- o Invited talk: *“Co-clustering ordinal data with informative censoring.”*

BAYSM - ISBA (June 2024, Venice, Italy)

- o Poster: *“Changepoint detection with random partition models”*

SIS (June 2024, Bari, Italy)

- o Contributed talk: *“Microbiome enterotype detection via a latent variable allocation model”*

CMStatistics (Dec 2023, Berlin, Germany)

- o Invited talk: *“Changepoint detection with random partition models”*

Workshop - Approximation Methods in Bayesian Analysis (Jun 2023, CIRM, Marseille, France)

- o Contributed talk and poster: *“A Bayesian Method for Co-clustering Multivariate Ordinal Data with Informative Censoring”*

ASMDA (Jun 2023, Crete, Greece)

- o Talk: *“A flexible generalization of the Latent Dirichlet distribution”*

OBayes (Sep 2022, Santa Cruz, US)

- o Poster: *“A Bayesian Method for Co-clustering Multivariate Ordinal Data with Informative Censoring”*

COMPSTAT (Aug 2022, Bologna, Italy)

- o Contributed talk: *“LEFDA: An extension of the classical Latent Dirichlet Allocation”*

ISBA (Jun 2022, Montreal, Canada)

- o Poster: *“A Bayesian Method for Co-clustering Multivariate Ordinal Data with Informative Censoring”*

AWARDS

- o BNP Travel award (June 2025)
- o ISBA Travel award (June 2024)
- o Ph.D. Fellowship - University of Milano-Bicocca (Nov 2019 - Oct 2023)
- o OBayes Travel award (Sep 2022)
- o ISBA Travel award (Jun 2022)
- o SUS5 (Stats Under the Stars) (Jun 2019)
Winner of the Italian statistical hackathon

COMPUTER SKILLS

Languages:

- High level knowledge: R, C++, Python, SQL
- Basic level knowledge: Javascript.

Software: SPSS, SAS (Base), SAS Viya (certified October 2019), STATA.

Other skills: Latex, Git, HTML, Office package.

LANGUAGES

Italian – Mother Tongue

English – High level

OTHER INFORMATION

• Funding:

Member of the local unit of Milano-Bicocca of the PRIN 2022 (included after funding). Funding provided by MUR Ministero dell'Università e della Ricerca, Grant no. 2022CLTYP4, funded by the European Union – Next Generation EU.

• Seminar:

A Bayesian Model for Co-clustering Ordinal Data with Informative Missing Entries, CNR IMATI (Italian National Research center), Milan, 5 Nov 2024

• Research groups:

- Member of Prof. Michele Guindani & Prof. Marina Vannucci's research group. Discussion of research topics and articles related to Bayesian statistics, Deep Learning and Network analysis (2022 - Ongoing).
- Member of Prof. Sonia Migliorati & Roberto Ascari research group. Discussion of research topics and articles related to Bayesian inference (2021 - Ongoing)

• Membership:

- International Society for Bayesian Analysis
- Società Italiana di Statistica

• Referee for: Biometrics; Computational Statistics and Data Analysis.

• Other:

- Supervisor of six Master's Thesis
- Three co-supervised Master and Bachelor Thesis.
- Research Fellow Representative for the Department of Economics, Management and Statistics, University of Milano-Bicocca.
- Team member of Covstat_it company (Mar 2020 – Jun 2020): *Sentiment analysis with Bayesian models based on Italian tweets covid related.*

ABOUT ME

- I love hiking and trying new experiences.
- European driving license: B.
- Authorized to use an AED (Automated External Defibrillator).
- Former international competitor in show jumping horse riding.

Alice Giannino