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 Changepoint 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$_1$6

- 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

o A. Giampino, R. Ascari, S. Migliorati, "*Sub-topic detection with extended flexible latent Dirichlet allocation*", (2026+)

o A. Giampino, R. Ascari, S. Migliorati, "*A flexible latent Dirichlet model for modelling taxa communities*", (2026+)

o A. Giampino, S. Migliorati, M. Guindani, "*Temporal communities behaviour*", (2026+)

o A. Giampino, S. Migliorati, J. Vandekerckhove, M. Guindani, "*A Bayesian Finite Mixture Model for Cognitive Data*", (2026+)

o J. Zonca, A. Giampino, C. Reverberi, P. Cherubini, "*The advice gap: adaptive yet suboptimal advice integration*" (2026+), PsyArXiv https://doi.org/10.31234/osf.io/4qkje$_v$1
Submitted to: Communications Psychology

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**
	o Post selection inference fMRI Data https://github.com/AliceGiampino/fMRI-Analysis
	o Forest Fire Bayesian Analysis https://github.com/AliceGiampino/Forest-Fire$_{Bayesian-Analysis}$
	Master degree projects
	o Outlier detection (R) https://alicegiampino.github.io/SL/
	o Ames House Price prediction (R) https://alicegiampino.github.io/DMcompetitions/AmesHousePrice.html
	o Fraud detection (Knime, R) https://github.com/AliceGiampino/ML

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 Engeneering*, 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 Engeneering*, 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)

Next - ISBA (June 2026, Nagoya, Japan)

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"*

- o BNP Travel award (June 2025)
- o ISBA Best poster award (June 2024)
- 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 INFORMATIONS

- **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.