

ALICE GIAMPINO

Postdoctoral Researcher

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

 alice.giampino@unimib.it  alicegiampino.github.io

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_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/4qkje_1
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-FireBayesian – 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 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)

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	<p>Languages:</p> <ul style="list-style-type: none"> - High level knowledge: R, C++, Python, SQL - Basic level knowledge: Javascript. <p>Software: SPSS, SAS (Base), SAS Viya (certified October 2019), STATA.</p> <p>Other skills: Latex, Git, HTML, Office package.</p>
LANGUAGES	Italian – Mother Tongue English – High level
OTHER INFORMATIONS	<p>• Funding:</p> <p>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.</p> <p>• Seminar:</p> <p><i>A Bayesian Model for Co-clustering Ordinal Data with Informative Missing Entries</i>, CNR IMATI (Italian National Research center), Milan, 5 Nov 2024</p> <p>• Research groups:</p> <ul style="list-style-type: none"> - 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) <p>• Membership:</p> <ul style="list-style-type: none"> - International Society for Bayesian Analysis - Società Italiana di Statistica <p>• Referee for: Biometrics; Computational Statistics and Data Analysis.</p> <p>• Other:</p> <ul style="list-style-type: none"> - 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): <i>Sentiment analysis with Bayesian models based on Italian tweets covid related.</i>
ABOUT ME	<ul style="list-style-type: none"> • 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.