

Dr. Silvia Montagna

CONTACT INFORMATION	Department of Economics Marco Biagi Università degli Studi di Modena e Reggio Emilia Viale Berengario, 51 41121 Modena Italy <i>E-mail:</i> silvia.montagna@unimore.it
APPOINTMENTS	Assistant Professor (RTD-B in SECS-S/01 Legge n. 240/10) Department of Economics Marco Biagi University of Modena & Reggio Emilia (Italy), September 2023 – present Assistant Professor (RTD-B in SECS-S/01 Legge n. 240/10) ESOMAS Department, University of Torino (Italy), October 2022 – August 2023 Assistant Professor (RTD-A in SECS-S/01 Legge n. 240/10) ESOMAS Department, University of Torino (Italy), December 2017 – September 2022 Lecturer School of Mathematics, Statistics & Actuarial Science University of Kent (UK), January 2017 – December 2017 Post-doctoral Research Fellow Department of Statistics, University of Warwick (UK), January 2014 – December 2016
EDUCATION	Duke University, Durham, North Carolina USA (August 2009 - December 2013) Ph.D. in Statistical Science, <i>Adviser:</i> Prof. Surya T. Tokdar University of Torino Torino, Italy (September 2007 - July 2009) Master of Arts (Laurea Magistrale <i>summa cum Laude</i>) in Economics University of Pavia, Pavia, Italy (September 2004 - July 2007) Bachelor of Arts in Economics
PUBLICATIONS	Berloco, C., Argiento, R., and Montagna, S. (2023). Forecasting short-term defaults of firms in a commercial network via Bayesian spatial and spatio-temporal methods. <i>International Journal of Forecasting</i>, Vol. 39, 1065–1077. Dolmeta, P., Argiento, R., and Montagna, S. (2023). Bayesian GARCH modeling of functional sports data. <i>Statistical Methods & Applications</i>, Vol. 32, 401–423. Montagna, S., Orani, V., and Argiento, R. (2021). Bayesian isotonic logistic regression via constrained splines: an application to estimating the serve advantage in professional tennis. <i>Statistical Methods & Applications</i>, Vol. 30, 573–604. Samartsidis, P., Montagna, S., Laird, A. R., Fox, P. T., Johnson, T. D., and Nichols, T. E. (2020). Estimating the prevalence of missing experiments in a neuroimaging meta-analysis. <i>Research Synthesis Methods</i>, Vol. 11, 866–883. Samartsidis, P., Seaman, S. R., Montagna, S., Charlett, A., Hickman, M., and De Angelis, D. (2020). A Bayesian multivariate factor analysis model for evaluating an intervention by using observational time series data on multiple outcomes. <i>Journal of the Royal Statistical Society, Series A</i>, Vol. 183, 1437–1459. Montagna, S. and Hopker, J. (2018). A Bayesian approach for the use of athlete performance data within anti-doping. <i>Frontiers in Physiology</i>, Vol. 9, Article 884. Montagna, S., Wager, T., Barrett, L. F., Johnson, T. D., and Nichols, T. E. (2018). Spatial Bayesian latent factor regression modeling of coordinate-based meta-analysis data.

Biometrics, Vol. **74**, 342–353.

Samartsidis, P., **Montagna, S.**, Johnson, T. D., and Nichols, T. E. (2017). The coordinate-based meta-analysis of neuroimaging data. *Statistical Science*, Vol. **32**, 580–599.

Montagna, S. and Tokdar, S. T. (2016). Computer emulation with nonstationary Gaussian processes. *SIAM/ASA Journal on Uncertainty Quantification*, Vol. **4**, 26–47.

Montagna, S., Tokdar, S. T., Neelon, B., and Dunson, D. B. (2012). Bayesian latent factor regression for functional and longitudinal data. *Biometrics*, Vol. **68**, 1064–1073.

CONFERENCE
PROCEEDINGS

Khorrani Chokami, A., and **Montagna, S.** (2024). Joint Complete Records occurrence over Farlie-Gumbel-Morgenstern sequences. To appear in *Book of Short Papers SIS 2024*.

Montagna, S., Khorrani Chokami, A., and Tokdar, S. T. (2024). Detecting Circadian Gene Expressions via Bayesian Analysis: an Application to the *Arabidopsis Thaliana* Dataset. To appear in *Book of Short Papers SIS 2024*.

Argiento, R., Colombi, A., Modotti, L., and **Montagna, S.** (2023). Clustering athlete performances in track and field sports. In A. Bucci, A. Cartone, A. Evangelista, A. Marletta (Eds.), *Book of Short Papers IES 2023*, 23–28, Pearson. ISBN: 9791280333698.

Dalla Pria, M. and **Montagna, S.** (2023). The hierarchical Beta-Bernoulli process as out-of-scope query detector. In F. M. Chelli, M. Ciommi, S. Ingrassia, F. Mariani, M. C. Recchioni (Eds.), *Book of Short Papers SIS 2023*, 560–565, Pearson. ISBN: 9788891935618AAVV.

Dolmeta, P., Argiento, R., and **Montagna, S.** (2022). Bayesian functional mixed effects model for sports data. In A. Balzanella, M. Bini, C. Cavicchia, R. Verde (Eds.), *Book of Short Papers SIS 2022*, 1473–1478, Pearson. ISBN: 9788891932310.

Berloco, C., Argiento, R., and **Montagna, S.** (2021). Predictive power of Bayesian CAR models on scale free networks: an application for credit risk. In G. C. Porzio, C. Rampichini, C. Bocci (Eds.), *CLADAG 2021 Book of Abstracts and Short Papers*, Vol. **128**, 264–267, Firenze University Press, ISBN: 978-88-5518-340-6, ISSN: 2704-601X, FIRENZE, 9-11/09/2021.

Marotta, F., Provero, P., and **Montagna, S.** (2021). Prediction of gene expression from transcription factors affinities: an application of Bayesian non-linear modelling. In G. C. Porzio, C. Rampichini, C. Bocci (Eds.), *CLADAG 2021 Book of Abstracts and Short Papers*, Vol. **128**, 376–379, Firenze University Press, ISBN: 978-88-5518-340-6, ISSN: 2704-601X, FIRENZE, 9-11/09/2021.

BOOKS &
CHAPTERS

Cavicchioli, M., Demaria, F., Franco Villoria, M., Frederic, P., Martini, M. C., **Montagna, S.**, and Morlini, I. (2024) *Statistica: dalla datificazione dei processi alla previsione*. ISBN: 978-88-89427-05-7.

PHD THESIS

Montagna, S. (2013). On Bayesian Analyses of Functional Regression, Correlated Functional Data and Non-homogeneous Computer Models. *Dissertation, Duke University*. Retrieved from <https://hdl.handle.net/10161/8258>.

INVITED TALKS

International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC 2021). Virtual Meeting, 8 – 10 October 2021

2021 World Meeting of the International Society for Bayesian Analysis. Virtual meeting, 23 June – 2 July 2021

13-th International Conference of the ERCIM Working Group on Computational and Methodological Statistics. Virtual meeting, 19 – 21 December 2020

12-th International Conference of the ERCIM Working Group on Computational and Me-

thodological Statistics. University of London, London, UK, 14 – 16 December 2019

4-th East Asia Meeting on Bayesian Statistics, Kobe University, Kobe, Japan, 13–14 July 2019

11-th International Conference of the ERCIM Working Group on Computational and Methodological Statistics. University of Pisa, Pisa, Italy, 14 – 16 December 2018

9-th International Conference of the ERCIM Working Group on Computational and Methodological Statistics. University of Seville, Seville, Spain, 9 – 11 December 2016

7-th International Conference of the ERCIM Working Group on Computational and Methodological Statistics. Università di Pisa, Pisa, 6 – 8 December 2014

CONTRIBUTED
TALKS

The 52nd Scientific Meeting of the Italian Statistical Society. Università degli Studi “Aldo Moro” di Bari, Bari, 17 – 20 June 2024

15-th International Conference of the ERCIM Working Group on Computational and Methodological Statistics. King’s College, London, UK, 17 – 19 December 2022

Spatial Statistics: Emerging Patterns. University of Avignon, Avignon, France, 9 – 12 June 2015

SEMINARS

Journal Club, The International Biometric Society, Online meeting, 14 June 2018

Statistics Seminars, The University of Edinburgh, Edinburgh, UK, 20 October 2017

Statistics Seminars, Università Bocconi, Milano, 14 April 2016

Decision Research at Warwick (DR@W) Forum, University of Warwick, Coventry, UK, 18 February 2016

Young Researchers Meeting, University of Warwick, Coventry, UK, December 2014

Statistics Seminars, Nestlé Institute of Health Sciences, Lausanne, Switzerland, January 2014

Statistics Seminars, Collegio Carlo Alberto, Moncalieri (TO), 20 December 2012

POSTERS

International Society for Bayesian Analysis (ISBA) 2018 World Meeting, Edinburgh, UK, 24 – 29 June 2018

International Society for Bayesian Analysis (ISBA) 2016 World Meeting, Santa Margherita di Pula (CA), 13 – 17 June 2016

Organisation for Human Brain Mapping 2015 Annual Meeting, Hawaii Convention Centre, Honolulu, Hawaii, 14 – 18 June 2015

International Society for Bayesian Analysis (ISBA) 2012 World Meeting, Kyoto, Japan, 25 – 29 June 2012

Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC USA, 18 April 2012

FUNDING

Member of the National project PRIN 2022 PNRR “*Measuring biodiversity via Bayesian nonparametrics: estimation, clustering and uncertainty quantification*”

MUR code: P2022H5WZ9, National PI: Prof. I. Pruenster

November 2023 - present

Member of the National project PRIN 2022 “*Discrete random structures for Bayesian learning and prediction*”

MUR code: 2022CLTYP4, National PI: Prof. A. Lijoi

September 2023 - present

PI, Flexible Bayesian Methods for Clustering Functional Data, *University of Torino*, July 2022 – August 2023 (€16.291)

PI, Bayesian Analysis of Non-exchangeable Data, *University of Torino*, July 2019 – November 2021 (€13.500)

PI, Bayesian Analysis of Dependent Functional Data, *University of Torino*, July 2018 –

July 2021 (€6.500)

Member of the University of Torino local group (local coordinator Prof. M. Ruggiero, national PI Prof. I. Pruenster) of national project PRIN 2015 “*Modern Bayesian nonparametric methods*”

March 2018 - January 2020

PUBLIC
ENGAGEMENT
PROJECTS

Statistica per tutti 3.0: dalla datificazione dei processi ai processi di previsione (partecipante): Ottobre 2023 – Febbraio 2024, progetto PE di Ateneo UNIMORE

RESEARCH
ACTIVITIES

Research contract, *Bayesian Analysis of Dependent Functional Data*

Collegio Carlo Alberto, Torino

January 2020 – December 2024

TEACHING
EXPERIENCE

University of Modena & Reggio Emilia, Modena, Italy (in Italian)

Instructor of Statistica (BSc in Economics and International Management)

Instructor of Analisi dei Dati (MSc in Data Analysis for Economics and Management)

University of Torino, Torino, Italy (in English)

Instructor of Statistical Machine Learning (MSc in Stochastics & Data Science)

Instructor of Bayesian Statistics (MSc in Stochastics & Data Science)

University of Kent, Canterbury, Kent UK

Instructor of Stochastic Methods for Ecology and Medicine (MSc), Spring 2017

Duke University, Durham, North Carolina USA

Instructor of Probability and Statistical Inference (UG), Summer 2013 (Term I)

SUPERVISIONS

Claudia Berloco, PhD in Modelling & Data Science (XXXIII ciclo)

University of Torino (Nov 2018 - Apr 2021)

5+ theses, BSc (CLEMI, CLEAM, and CLEF)

University of Modena & Reggio Emilia (Dec 2023 - present)

10+ theses, MSc in Stochastics & Data Science

University of Torino (Jul 2018 - Jul 2023)

AWARDS AND
SCHOLARSHIPS

Research Award 2022, Esomas Department, University of Torino

Badge **IRIDI START**: Insegnamento di qualità in presenza e a distanza, valutazione e inclusione – Partecipante

University of Torino, October 2022

Research Award 2020, Esomas Department, University of Torino

Teaching Award 2020, Esomas Department, University of Torino

De Castro Statistics Initiative member, Collegio Carlo Alberto, Torino

From January 2018

Early Career Researchers Travel Grant

ISBA 2016 World Meeting, Sardinia, Italy, June 2016

Early Career Researchers Travel Grant

ISBA 2012 World Meeting, Kyoto, Japan, June 2012

SAMSI Graduate Student Fellowship

SAMSI, Research Triangle Park, NC USA, August 2011 - June 2012

PROFESSIONAL
SERVICE

Local organising committee member, *24th European Young Statistician Meeting*, Università di Torino, 21-25 July 2025

Scientific committee member, *14th Scientific Meeting CLADAG 2023*, Università di Salerno, 11-13 September 2023

Organizer, Invited session titled “Advances in Bayesian Factor Analysis”, *14th Scientific Meeting CLADAG 2023*, Salerno, September 2023

Co-organizer, Invited session titled “Functional and Object-oriented Data Analysis”, *14th*

Scientific Meeting CLADAG 2023, Salerno, September 2023

Organizer, Invited session titled “Advances in Dynamic Modelling and Computation”, *4th East Asia Meeting on Bayesian Statistics (EAC-ISBA 2019)*, Kobe (Japan), July 2019

Co-organizer, Invited session titled “Nonparametric Bayesian analysis of copula models”, *CMStatistics 2017* (10th International Conference of the ERCIM Working Group on Computational and Methodological Statistics), University of London, London, UK, December 2017

Co-organizer, Topic-contributed session titled “Junior Research in Bayesian Modeling for High-dimensional Data”, Joint Statistical Meeting 2017, Baltimore (USA), July-August 2017

Co-organizer, j-ISBA Invited session titled “Bayes: Legacy”, ISBA World Meeting 2016, Santa Margherita di Pula (Italy), June 2016

Secretary of the *j*-ISBA Section of ISBA, January 2016 - December 2017

Program Chair of the *j*-ISBA Section of ISBA, January 2014 - December 2015

Member of International Society for Bayesian Analysis

EDITORIAL
ACTIVITY

Associate Editor, *Bayesian Analysis*, January 2022 – present

Reviewed articles for: *Bayesian Analysis*, *BAYSM2018*, *Biometrics*, *Journal of Computational and Graphical Statistics*, *Journal of the Royal Statistical Association*, *Journal of the American Statistical Association*, *NeuroImage*, *Plos One*, *Statistics & Its Interface*, *Statistics & Probability Letters*, *Statistics in Biosciences*, *Technometrics*

SCIENTIFIC
AFFILIATIONS

International Society for Bayesian Analysis (ISBA), Società Italiana di Statistica (SIS)

Modena, 23 May 2024