

Aldo Gardini

Curriculum Vitae

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Current Position

Dec. 2024 - **Tenure-Track Assistant Professor** at the Department of Statistical Sciences “P. Fortunati”, University of Bologna (Rimini Campus).

Education

2016–2020 **PhD in Statistical Sciences**, *Department of Statistical Sciences “P. Fortunati”*, University of Bologna (XXXII cycle). Scholarship winner. Title of the thesis: “*Bayesian inference for quantiles and conditional means in log-normal models*”. Supervisor: Prof. C. Trivisano. PhD title achieved the 2 of April 2020; overall judgment of the Thesis: Excellent.

2014–2016 **MSc in Statistical Sciences**, *School of Economics, Management and Statistics*, University of Bologna. Title of the thesis: “*Analisi dei valori estremi dell’inquinamento da materia particolata a Bologna*”. Supervisor: Prof. C. Trivisano. Co-supervisor: Dr F. Scotto. Grade: 110/110 cum Laude.

2014 **BSc with Honours in Statistics**, *Department of Mathematics & Statistics*, University of Glasgow (Double-degree programme). Title of the thesis: “*Lake response to environmental change*”. Supervisor: Dr. C. Miller. Honours of the First Class.

2011–2014 **BSc in Statistical Sciences**, *School of Economics, Management and Statistics*, University of Bologna. Grade: 110/110 cum Laude.

2006–2011 **High school leaving qualification in scientific studies**, “*A. Righi*” Lyceum, Bologna.

Past Research Activities

Dec. 2021 - **Junior Assistant Professor** at the Department of Statistical Sciences “P. Fortunati”,
Dec. 2024 University of Bologna (Rimini Campus).

Oct. 2021 - **Research Fellow** at the Department of Statistical Sciences “P. Fortunati”, University
Dec. 2021 of Bologna. Project title: “*Prior distributions for latent Gaussian models*”. Tutor:
Prof. C. Trivisano.

Oct. 2019- **Research Fellow** at the Department of Statistical Sciences “P. Fortunati”, University
Sept. 2021 of Bologna. Project title: “*The Mellin transform in statistics: quadratic forms
distribution and prior specification*”. Tutor: Prof. C. Trivisano.

Research interests

The main methodological research topic concerns the problem of specifying the prior distribution for scale parameters in Bayesian hierarchical models. In this stream, during the PhD, the problem of setting prior distributions for variance components in log-normal mixed models was addressed. This task is closely related to the existence of posterior moments of the conditional mean and other important quantities. On this topic, another study involves the elicitation of priors for scale parameters in latent Gaussian models with structured random effects.

Some computational challenges faced during the statistical research inspired side studies in the field of computational statistics and probability. These studies include new algorithms for computing the distribution of quadratic forms in Gaussian random variables and the investigation of popular MCMC methods for count data models.

Another line of research deals with the development of Bayesian hierarchical models for the estimation of poverty and inequality in the context of small area estimation. Both the unit-level and the area level frameworks are faced, tackling several methodological issues posed by the applied context (e.g. variable selection, presence of many zero proportions, existence of multiple latent processes, modifiable areal unit problem, and benchmarking).

The statistical tools deepened in the methodological research have been applied in:

- Analysis of sport data with the application of Bayesian hierarchical models for count data, focusing on the problem of variable selection.
- Extreme value models for flood frequency analysis (incorporation of non-linear relationships with covariates with automatic functional selection).
- Demographic models aimed at predicting fertility from panel data.

In addition, the developed statistical methodologies are often implemented into R packages, to foster their dissemination.

Lastly, several collaborations for the analysis of data in applied fields, such as food microbiology, sociology, veterinary medicine and medicine are ongoing.

Academic Teaching Activities

As Assistant Professor

- 2023-24 **Statistical Inference** in the *BSc Finance, Insurance and Business*, Department of Statistical Sciences "P. Fortunati", University of Bologna (5 CFU, 40 hours of lecture, SSD: SECS-S/01, Teaching language: Italian).
- 2023-24 **Business Analytics for Finance and Insurance** in the *BSc Finance, Insurance and Business*, Department of Statistical Sciences "P. Fortunati", University of Bologna (6 CFU, 45 hours of lecture, SSD: SECS-S/01, Teaching language: Italian).
- 2022-23 **Statistical Inference** in the *BSc Finance, Insurance and Business*, Department of Statistical Sciences "P. Fortunati", University of Bologna (5 CFU, 40 hours of lecture, SSD: SECS-S/01, Teaching language: Italian).
- 2022-23 **Business Analytics for Finance and Insurance** in the *BSc Finance, Insurance and Business*, Department of Statistical Sciences "P. Fortunati", University of Bologna (6 CFU, 45 hours of lecture, SSD: SECS-S/01, Teaching language: Italian).

2021-22 **Statistical Models for the Assessment** in the *BSc Finance, Insurance and Business*, Department of Statistical Sciences "P. Fortunati", University of Bologna (6 CFU, 30 hours of lecture, SSD: SECS-S/01, Teaching language: Italian).

2021-22 **Environmental Statistics** in the *BSc in Statistical Sciences*, Department of Statistical Sciences "P. Fortunati", University of Bologna (10 hours of lecture, SSD: SECS-S/01, Teaching language: English).

As Adjunct Professor

2021-22 **Statistical Inference** in the *BSc Finance, Insurance and Business*, Department of Statistical Sciences "P. Fortunati", University of Bologna (5 CFU, 40 hours of lecture, SSD: SECS-S/01, Teaching language: Italian).

2020-21 **Statistics** in the *Combined BSc and MSc in Veterinary Medicine*, Department of Veterinary Medical Sciences, University of Bologna (2 CFU, 33 hours of lecture, SSD: SECS-S/02, Teaching language: Italian)

Teaching Tutorship

2021-22 **Bayesian Inference**, MSc in Statistical Sciences, Department of Statistical Sciences "P. Fortunati", University of Bologna (15 hours, SSD: SECS-S/01, Teaching language: English, Teacher: Prof. D. Cocchi).

2020-22 **Inference**, BSc in Statistical Sciences, Department of Statistical Sciences "P. Fortunati", University of Bologna (10 hours, SSD: SECS-S/01, Teaching language: English, Teacher: Prof. S. Cagnone).

2019-21 **Bayesian Inference**, MSc in Statistical Sciences, Department of Statistical Sciences "P. Fortunati", University of Bologna (20 hours, SSD: SECS-S/01, Teaching language: English, Teacher: Prof. D. Cocchi).

2019-20 **Statistics and Advanced Statistics**, *BSc Finance, Insurance and Business* and *MSc Statistical, Financial and Actuarial Sciences*, Department of Statistical Sciences "P. Fortunati", University of Bologna (38 hours, SSD: SECS-S/01, Teaching language: Italian, Teacher: Prof. C. Trivisano).

2018-19 **Bayesian Inference**, MSc in Statistical Sciences, Department of Statistical Sciences "P. Fortunati", University of Bologna (10 hours, SSD: SECS-S/01, Teaching language: English, Teacher: Prof. D. Cocchi).

2018-19 **Survey Sampling**, MSc in Statistical Sciences, Department of Statistical Sciences "P. Fortunati", University of Bologna (10 hours, SSD: SECS-S/01, Teaching language: English, Teacher: Prof. D. Cocchi).

2018-19 **Statistics and Advanced Statistics**, *BSc Finance, Insurance and Business* and *MSc Statistical, Financial and Actuarial Sciences*, Department of Statistical Sciences "P. Fortunati", University of Bologna (40 hours, SSD: SECS-S/01, Teaching language: Italian, Teacher: Prof. C. Trivisano).

2017-18 **Bayesian Inference**, MSc in Statistical Sciences, School of Economics, Management and Statistics, University of Bologna (10 hours, SSD: SECS-S/01, Teaching language: Italian, Teacher: Prof. D. Cocchi).

2017-18 **Principles and Methods of Survey Sampling**, MSc in Statistics, Economics and Business, School of Economics, Management and Statistics, University of Bologna (10 hours, SSD: SECS-S/01, Teaching language: Italian, Teacher: Prof. D. Cocchi).

2017-18 **Elements of Statistics**, BSc in International Development and Cooperation, School of Political Sciences, University of Bologna (20 hours, SSD: SECS-S/01, Teaching language: Italian, Teacher: Prof. L. Anderlucci).

2016-18 **Mathematics II**, BSc in Statistical Sciences, School of Economics, Management and Statistics, University of Bologna (10 hours, SSD: MAT/02, Teaching language: English, Teacher: Prof. A. Brini).

Thesis supervision

Supervisor of 5 Master thesis (Master in Statistical Sciences and in Statistics, Economics and Business)

Supervisor of 9 Bachelor thesis (BSc in Finance, Insurance and Business)

Other Teaching Activities

2021 **Teacher** at the *Mountain Development 2021* summer school entitled "*I boschi demaniali dell'alto Appennino e il sequestro di C nel suolo, approfondimenti statistici e cartografici (GIS e R)*" and included in the project "*Alta Formazione e Innovazione per lo Sviluppo Sostenibile dell'Appennino - AL.FO.N.S.A.*" (16 hours).

2020 **Series of Seminars** with title *Introduction to R* for the students of the MSc Statistical, Financial and Actuarial Sciences (16 hours).

2020 **Teacher** at the *Mountain Development 2020* summer school entitled "*I Suoli dell'Appennino e Sequestro di Carbonio: casi di studio utilizzando R e GIS*" and included in the project "*Alta Formazione e Innovazione per lo Sviluppo Sostenibile dell'Appennino - AL.FO.N.S.A.*" (8 hours).

2019 **Teacher** at the "*Analysis of environmental data with R*" summer school organized by SIPE. (8 hours)

2019 **Teacher** at the "*Course of R*" vocational training organized by ARPAE Emilia-Romagna. (25 hours)

2018 **Teacher** at the "*Course of R*" vocational training organized by ARPAE Emilia-Romagna. (25 hours)

2015-2016 **Teaching Tutor** within "Scientific Degrees Plan (PLS)" (cycle of lectures in High Schools).

Participation to Projects and Research Groups

2021-2023 RTDA_GREEN project founded by MUR with title "Modelli statistici per lo studio della convergenza spaziale verso la transizione verde" (CUP J41B21012140007). Tutor: Prof. F. Greco, collaboration with Prometeia s.p.a.

2020 Member of the Bologna Research Unit for the PRIN 2015 project (CUP 20154X8K23). Research project: EPHASTAT - Environmental processes and human activities: capturing their interactions via statistical methods. Principal Investigator: Prof. D. Cocchi.

Talks in Conferences, Workshops and Seminars as Speaker

- 2024 **A. Gardini**. *Statistics in the AI era: Obsolete discipline or essential tool?* **Invited seminar** at the Summer School DIFA 2024 "Physics for a better world", Bologna, July 8-12.
- 2024 **A. Gardini**, F. Greco, C. Trivisano. *Investigating auxiliary mixture sampling for Poisson regression models*. SIS 2024, Contributed session. Bari, June 17-20, 2024.
- 2023 **A. Gardini**, E. Fabrizi, S. De Nicolò. *Dealing with multiple spatial scales in poverty mapping: a Bayesian benchmarked approach*. ITACOSM 2023. Rende (CS), June 7-9, 2023.
- 2023 **A. Gardini**, F. Greco, C. Trivisano. *Design and Structure Dependent Priors for Scale Parameters in Latent Gaussian Models*. **Invited seminar**, University of Bologna, Department of Statistical Sciences, March 9-th, 2023.
- 2022 **A. Gardini**. *Bayesian inference for mixed models with log-transformed response*. IMPS 2022 Symposium: Statistical methods for the analysis of complex data structures (**Invited**). Bologna, July 11-15, 2022.
- 2022 S. De Nicolò, **A. Gardini**. *The R Package tipsae: Tools for Mapping Proportions and Indicators on the Unit Interval*. SAE 2022: Small Area Estimation, Surveys and Data Science - Contributed session. College Park, Maryland, May 23-27, 2022.
- 2021 E. Fabrizi, **A. Gardini**, C. Trivisano. *Bayesian inference for quantiles of a log-normal variable in presence of censored observations*. Workshop "Extremes", organized by the *International Biometric Society, German Region* - Contributed session. Hannover, December 2-3, 2021.
- 2021 **A. Gardini**, F. Greco. *Metodi statistici per la valutazione della convergenza spaziale di indicatori SDGs*. 14^a Conferenza Nazionale di Statistica - **Invited session**. November 30 - December 1, 2021.
- 2021 E. Fabrizi, **A. Gardini**, C. Trivisano. *Unit level models on the log-scale: a new Bayesian proposal for poverty mapping*. SAE 2021 - **Invited session**. Naples, September 20-24, 2021.
- 2021 **A. Gardini**, E. Fabrizi, C. Trivisano. *Bayesian small area models with log-transformed response*. GRASPA 2021 - **Invited session**. Rome, 7-9 June 2021.
- 2019 **A. Gardini**, F. Greco, C. Trivisano. *An R-based widget for Bayesian disease mapping*. GRASPA 2019 - **Invited session**. Pescara, 15-16 July 2019.
- 2019 **A. Gardini**, C. Trivisano, E. Fabrizi. *Hierarchical Bayes estimation of unit-level small area log-normal models*. ITACOSM 2019 - Contributed session. Firenze, 5-7 June 2019.
- 2018 **A. Gardini**, C. Trivisano, E. Fabrizi. *Bayesian inference for log-normal quantiles*. EphaStat Project Intermediate Meeting. **Invited session**. Bari, 6-7 September 2018.

■ Talks in Conferences and Workshops as Co-author

- 2022 S. De Nicolò, **A. Gardini**. *The tipsae package: mapping indicators through space and time via small area estimation*. **Invited** talk at StanConnect 2022, Stan through Space and Time, online, October 2022.

- 2022 S. De Nicolò, **A. Gardini**, E. Fabrizi. *Extended Beta Models for Poverty Mapping: An Application Integrating Survey and Remote Sensing Data in Bangladesh* **Invited Session** at XLIII AISRe Conference 2022, Politecnico di Milano (Italy), September 2022.
- 2022 S. De Nicolò, **A. Gardini**. *Mapping Indicators on the Unit Interval: the tipsae Shiny App*. SIS 2022: 51st Scientific Meeting of the Italian Statistical Society - Contributed session. Caserta, June 22-24, 2022.
- 2022 E. Fabrizi, S. De Nicolò, **A. Gardini**. *Inflated beta models for poverty mapping. An application integrating survey and remote sensing data*. SAE 2022: Small Area Estimation, Surveys and Data Science - **Invited session**. College Park, Maryland, May 23-27, 2022.
- 2022 S. De Nicolò, E. Fabrizi, **A. Gardini**. *Bayesian methods for poverty mapping: an application integrating survey and remote sensing data*. 58th Conference of Statisticians, Econometricians, and Mathematicians from Southern Poland.
- 2019 M. Contel, **A. Gardini**, N. De Luigi, V. Quaglietti, A. Scorcu, S. Zucconi. *Investigating Drinking Profiles among Italian High School Students (14-19 y.o.): a Latent Class Analysis*. KBS 2019 - 45th Annual Alcohol Epidemiology Symposium of the Kettil Bruun Society. Utrecht, 3-7 June 2019.

Poster presentations

- 2023 **A. Gardini**. *Variables selection in a P-spline regression model for flood frequency analysis*. GRASPA 2023, Palermo, 10-11 July 2023.

Publications in Statistical Journals

- 2024 **A. Gardini**, F. Greco, C. Trivisano. Design and Structure Dependent Priors for Scale Parameters in Latent Gaussian Models. *Bayesian Analysis*, Advance publication, 1-27.
DOI: <https://doi.org/10.1214/24-BA1454>
- 2024 S. De Nicolò, E. Fabrizi, **A. Gardini**. Extended Beta models for poverty mapping. An application integrating survey and remote sensing data in Bangladesh. *The Annals of Applied Statistics*, 18(4), 3229 - 3252.
DOI: <https://doi.org/10.1214/24-AOAS1934>
- 2024 S. De Nicolò, **A. Gardini**. The R Package tipsae: Tools for Mapping Proportions and Indicators on the Unit Interval. *Journal of Statistical Software*, 108(1), 1-36.
DOI: <https://dx.doi.org/10.18637/jss.v108.i01>
- 2024 S. De Nicolò, Fabrizi E., **A. Gardini**. Mapping non-monetary poverty at multiple geographical scales. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 187(4), 1096-1119-
DOI: <https://dx.doi.org/10.1093/jrsss/qnae023>
- 2024 S. De Nicolò, **A. Gardini**. SAE models for indicators in the unit interval: The tipsae R package and its Shiny interface. Invited paper to *The Survey Statistician*, 89, 76-85. ISSN: 2521-991X. http://isi-iass.org/home/wp-content/uploads/Survey_Statistician_2024_January_N89_09.pdf

- 2023 **A. Gardini**. Functional and variables selection in extreme value models for regional flood frequency analysis. *Environmental and Ecological Statistics*, 30, 715-739.
DOI: <https://dx.doi.org/10.1007/s10651-023-00581-8>
- 2022 **A. Gardini**, E. Fabrizi, C. Trivisano. Poverty and inequality mapping based on a unit-level log-normal mixture model. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 185, 2073-2096.
DOI: <https://doi.org/10.1111/rssa.12872>
- 2022 **A. Gardini**, F. Greco, C. Trivisano. The Mellin transform to manage quadratic forms in normal random variables. *Journal of Computational and Graphical Statistics*, 31, 1416-1425.
DOI: <https://doi.org/10.1080/10618600.2022.2034639>
- 2021 **A. Gardini**, C. Trivisano, E. Fabrizi. Bayesian Analysis of ANOVA and Mixed Models on the Log-Transformed Response Variable. *Psychometrika*, 86, 619-641.
DOI: <https://doi.org/10.1007/s11336-021-09769-y>
- 2021 R. Ievoli, **A. Gardini**, L. Palazzo. The role of passing network indicators in modeling football outcomes: an application using Bayesian hierarchical models. *AStA Advances in Statistical Analysis*, 107, 153-175.
DOI: <https://doi.org/10.1007/s10182-021-00411-x>
- 2020 **A. Gardini**, C. Trivisano, E. Fabrizi. Bayesian inference for quantiles of the log-normal distribution. *Biometrical Journal*, 62(8), 1997-2012.
DOI: <https://doi.org/10.1002/bimj.201900386>

PhD Thesis

- 2020 **A. Gardini**. Bayesian inference for quantiles and conditional means in log-normal models. *PhD Dissertation Thesis*.
DOI: <https://doi.org/10.6092/unibo/amsdottorato/9349>

Applied Papers in Non-Statistical Journals

- 2025 Broseghini, E., Veronesi, G., Gardini, A., Venturi, F., Scotti, B., Vespi, L., Marchese, P.V., Melotti, B., Comito, F., Corti, B., Ferracin, M., Dika, E. *Defining high-risk patients: beyond the 8th AJCC melanoma staging system*. *Archives of Dermatological Research*, 317(1), 1-4.
DOI: <https://doi.org/10.1007/s00403-024-03627-4>
- 2022 Marliani, G.; Balboni, A.; Tiberi, C.; Malavasi, R.; **Gardini, A.**; Accorsi, P.A. Is the judgment bias test a good tool to assess the quality of horse management? *Journal of Veterinary Behavior*, 58, 62-69.
DOI: <https://dx.doi.org/10.1016/j.jveb.2022.11.002>
- 2022 Polastri, M; Carbonara, P; Prediletto, I; **Gardini, A**; Venturoli, F; Tagariello, F; Neri, L; Carpano, M; Pacilli, AMG; Nava, S. Effects of early rehabilitation on motor function, dyspnoea intensity, respiratory muscle performance and handgrip strength in patients with COVID-19: an observational study. *International Journal of Therapy and Rehabilitation*, 29(8), 1-13.
DOI: <https://doi.org/10.12968/ijtr.2021.0169>

- 2021 Bassi, I., Guerrieri, A., Carpano, M., **Gardini, A.**, Prediletto, I., Polastri, M., Randall Curtis, J., Nava, S. Feasibility and efficacy of a multidisciplinary palliative approach in patients with advanced interstitial lung disease. A pilot randomised controlled trial. *Pulmonology*, 29(4), S54-S62.
DOI: <https://doi.org/10.1016/j.pulmoe.2021.11.004>
- 2021 Veronesi, G., Guglielmo, A., **Gardini, A.**, Sacchelli, L., Loi, C., Patrizi, A., Bardazzi, F. Biological therapy in patients with psoriasis: What we know about the effects on renal function. *Dermatologic Therapy*, 35(1), e15202.
DOI: <https://doi.org/10.1111/dth.15202>
- 2020 M. Contel, **A. Gardini**, N. De Luigi, V. Quaglietti, A. Scorcu, S. Zucconi. Investigating Drinking Profiles among Italian High School Students (14-19 y.o.): a Latent Class Analysis. *Salute & Società*, XIX, 3, 133-148.
DOI: <https://doi.org/10.3280/SES2020-003009>
- 2020 Veronesi G., Ravaioli G.M., Lambertini M., Zannetti G., Diodato S., **Gardini A.**, Patrizi A., Fanti S., Dika E. Considerations on 18FDG PET/CT and sentinel lymph node biopsy in AJCC stages I and II of melanoma. *Giornale Italiano di Dermatologia e Venereologia*, 155(6):784-6.
DOI: <https://doi.org/10.23736/S0392-0488.18.06108-4>
- 2019 Montanari, C., Tabanelli, G., Zamagna, I., Barbieri, F., **Gardini, A.**, Ponzetto, M., Redaelli, E., Gardini, F. Modeling of yeast thermal resistance and optimization of the pasteurization treatment applied to soft drinks. *International journal of food microbiology*, 301, 1-8.
DOI: <https://doi.org/10.1016/j.ijfoodmicro.2019.04.006>
- 2017 Tabanelli, G., Montanari, C., **Gardini, A.**, Maffei, M., Prioli, C., Gardini, F. Environmental Factors Affecting Escherichia coli Concentrations in Striped Venus Clam (*Chamelea gallina* L.) Harvested in the North Adriatic Sea. *Journal of Food Protection*, 80(9), 1429-1435.
DOI: <https://doi.org/10.4315/0362-028X.JFP-17-058>
- 2016 C. Montanari, E. Bargossi, **A. Gardini**, R. Lanciotti, R. Magnani, F. Gardini, G. Tabanelli. Correlation between volatile profiles of Italian fermented sausages and their size and starter culture. *Food Chemistry* 192, pp. 736 - 744.
DOI: <https://doi.org/10.1016/j.foodchem.2015.07.062>
- 2016 G. Tabanelli, E. Bargossi, **A. Gardini**, R. Lanciotti, R. Magnani, F. Gardini, C. Montanari. Physico-chemical and microbiological characterisation of Italian fermented sausages in relation to their size. *Journal of the Science of Food and Agriculture*, 96(8), 2773-2781.
DOI: <https://doi.org/10.1002/jsfa.7442>

Contributions in Proceedings

- 2023 **A. Gardini**. Variables selection in a P-spline regression model for flood frequency analysis, in Adelfio, G., Abbruzzo, A., *Proceedings of the GRASPA 2023 Conference*, pp. 176-181. ISBN: 9791221033892.

- 2022 S. De Nicolò, **A. Gardini**. Mapping Indicators on the Unit Interval: the tipsae Shiny App, in Balzanella, A., Bini, M., Cavicchia, C., Verde, R. *Book of short papers - SIS 2022*, Pearson, pp. 881-886. ISBN: 9788891932310.
- 2021 **A. Gardini**, E. Fabrizi, C. Trivisano. Bayesian small area models with log-transformed response. *Proceedings of the GRASPA 2021 Conference (Rome, 07-09 June 2021)*, pp. 57 - 60. ISBN: 9791220084963
- 2020 **A. Gardini**, F. Greco, C. Trivisano. Priors on precision parameters of IGRMF models. *Book of Short Papers SIS 2020*, Pearson, 2020, pp. 459 - 464. ISBN: 9788891910776
- 2019 **A. Gardini**, F. Greco, C. Trivisano. An R-based widget for Bayesian disease mapping. *Proceedings of the GRASPA 2019 Conference (Pescara, 15-16 July 2019)*, p. 53. ISBN: 9788897413349

Submitted Papers

A. Gardini, S. De Nicolò, E. Fabrizi. A Mixture-of-Experts model to deal with the rural/urban dichotomy in small area estimation.

R. D'Alberto, S. De Nicolò, A. Gardini. Estimating poverty transitions from repeated cross-sections: A statistical perspective.

A. Gardini, F. Greco, C. Trivisano. A note on auxiliary mixture sampling for Bayesian Poisson models.

Conference organization

Member of the Local Organizing Committee of the ITACOSM2025-IASS Satellite Conference (Bologna, July 1-4).

Activities as a referee

Biometrical Journal, Hydrology, Journal of the Royal Statistical Society: Series A (2 papers), Environmetrics (3 papers), Environmental and Ecological Statistics, Statistical Methods and Applications (3 papers), Transactions in GIS, International Journal of Digital Earth, Statistica

Software

- 2022 S. De Nicolò, **A. Gardini**. tipsae: Tools for Handling Indices and Proportions in Small Area Estimation. *R package version 0.0.7*. <https://CRAN.R-project.org/package=tipsae>
- 2021 **A. Gardini**, F. Greco e C. Trivisano. QF: Density, Cumulative and Quantile Functions of Quadratic Forms. *R package version 0.0.6*. <https://CRAN.R-project.org/package=QF>
- 2020 **A. Gardini**, E. Fabrizi e C. Trivisano. BayesLN: Bayesian Inference for Log-Normal Data. *R package version 0.2.2*. <https://CRAN.R-project.org/package=BayesLN>

Institutional Activities

Member of the Statistics Clinic on the Department of Statistical Sciences of the University of Bologna.

Member of 5 selection committees of Research Fellows.

May 2024 - Elected Assistant Professor representative in the Department Council. Department of Statistical Sciences "P. Fortunati", University of Bologna.

Nov. 2020 - Elected research fellows representative in the Department Board. Department of Statistical Sciences "P. Fortunati", University of Bologna.

Apr. 2018 - Elected PhD Students representative in the PhD Board. Department of Statistical Sciences "P. Fortunati", University of Bologna.

Professional Assignments

Mar. 2020 **Collaboration** for the planning of a survey for the teaching tutors (Department of Statistical Sciences "P. Fortunati", University of Bologna).

2018-20 **External consultant** for *Nomisma S.p.A.* in data analysis activities.

2015 **Curricular internship** in *Arpa Emilia-Romagna* (250 hours).

2014-2016 **Degree programme tutor** for the BSc in Statistical Sciences, School of Economics, Management and Statistics, University of Bologna.

Other Informations

Award Merit Award, University of Bologna, a.y. 2012/2013.

Infomatic Office package, C++.

skills **Statistic softwares and languages:** R (package developer), BUGS, Stan.

Writing languages: \LaTeX and beamer.

Linguistic **English:** good knowledge (C1 level)
skills

Patent B

Bologna, 12 febbraio 2025