

Luca Scaffidi Domianello, Ph.D.

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Born in Patti (ME), Italy, on 25 May 1994

Positions

Assistant Professor (RTD-a) of Statistics (STAT-01/A) University of Catania, Department of Economics and Business	<i>Feb 2024 – Present</i>
Cultore della Materia (STAT-01/A) University of Messina, Department of Economics	<i>Oct 2021 – Sep 2024</i>
Post-doctoral Research Fellow of Economic Statistics (STAT-02/A) University of Florence, Department of Statistics, Computer Science, Applications Research Project: <i>“Statistical learning methods for the extraction of knowledge from high dimensional sensor data”</i>	<i>July 2023 – Jan 2024</i>
Post-doctoral Research Fellow of Statistics (STAT-01/A) University of Florence, Department of Statistics, Computer Science, Applications Research Project: <i>“Monitoring indicators for innovation and efficiency in judicial offices”</i>	<i>Jun 2022 – May 2023</i>

Education

Ph.D. in Economics, Management and Statistics Curriculum Statistics (STAT-01/A) University of Messina, Department of Economics Dissertation: <i>Component volatility models: A MIDAS approach</i> Supervisor: Prof. Edoardo Otranto. Final Mark: Excellent	<i>Oct 2018 – Feb 2022</i>
Master of Science in Economics and Finance (LM-56) Curriculum Quantitative Methods University of Messina, Department of Economics Dissertation: <i>Efficienza e rendimento azionario delle banche. Risultati di un’analisi empirica nell’area EU-15</i> Supervisor: Prof. Antonio Fabio Forgione. Final mark: 110/110 cum laude	<i>Sept 2016 – Jul 2018</i>
Bachelor’s degree, Business Economics (L-18) Curriculum Banking and Finance University of Messina, Department of Economics Dissertation: <i>I sistemi di garanzia dei depositi. Profili giuridici ed innovazioni apportate dall’Unione Bancaria Europea</i> Supervisor: Prof.ssa Brunella Russo. Final mark: 110/110 cum laude	<i>Sept 2013 – Jul 2016</i>

Teaching Activities

A.Y. 2025-2026

- Professor of “Financial Volatility Models” (18 hours) for the Ph.D. in Economics, Management and DEcision Making, Department of Economics and Business, University of Catania
- Professor of “Time Series Analysis for economic and financial data” (42 hours, 7 CFU) for the Department of Economics and Business, University of Catania

A.Y. 2024-2025

- Professor of “Analysis of multidimensional and time series data” (63 hours, 9 CFU) for the Department of Economics and Business, University of Catania

A.Y. 2023-2024

- Teaching Assistant of “Applied Statistics and Econometric” (10 hours), partition of students B, for the Department of Business and Management, LUISS Guido Carli
- Teaching Assistant of “Applied Statistics and Econometrics” (10 hours), partition of students E, for the Department of Business and Management, LUISS Guido Carli

A.Y. 2020-2021

- Tutoring activity of Statistics and Econometrics, for the Department of Economics, University of Messina
- Tutoring activity of Statistics and Econometrics, for the Department of Economics, University of Messina

A.Y. 2019-2020

- Tutoring activity of Statistics and Econometrics, for the Department of Economics, University of Messina

A.Y. 2018-2019

- Tutoring activity of Statistics and Econometrics, for the Department of Economics, University of Messina

A.Y. 2017-2018

- Tutoring activity of Public Economics, for the Department of Law, University of Messina

Research Interests

Financial Econometrics, Conditional Volatility Models, MIDAS regressions, Hidden-Markov Models, Mixture Models, Multivariate Volatility models, Financial Clustering, Spatial Interaction models, Non-normalized models

Publications

Peer-reviewed Articles

- Di Nuzzo C., Ingrassia S., [Scaffidi Domianello L.](#) (2025). Fitting mixtures of von Mises distributions via noise contrastive estimation. *Statistics & Probability Letters*, **230**.
- Forgione A.F., Migliardo C., Otranto E., [Scaffidi Domianello L.](#) (2025). The Impact of WTI Futures on Shanghai Crude Futures: Identifying Spillover Effects on Crude Oil Prices using the Multiplicative Error Model. *Journal of Economics Studies*, 1-19.
- Otranto E., [Scaffidi Domianello L.](#) (2025). On using fuzzy clustering for detecting the number of states in Markov switching models. *Annals of Operation Research*, **349**, 1855–1890.
- [Scaffidi Domianello L.](#), Gallo G.M., Otranto E. (2024). Smooth and Abrupt Dynamics in Financial Volatility: The MS-MEM-MIDAS. *Oxford Bulletin of Economics and Statistics* **86**(1), 21-43.
- Lacava D., [Scaffidi Domianello L.](#) (2021). The Incidence of Spillover Effects during the Unconventional Monetary Policies Era. *Journal of Risk and Financial Management* **14**(6), 242.

Book Chapters

- [Scaffidi Domianello L.](#), Clustering of Italian Higher Education Institutions Based on a Destination-Specific Approach (2025). In: Giordano G., La Rocca M., Niglio M., Restaino M., Vichi M. (Eds.), *Statistical Models and Learning Methods for Complex Data*, Studies in Classification, Data Analysis, and Knowledge Organization, Springer Cham
- Martino L., Ingrassia S., Mangano S., [Scaffidi Domianello L.](#) (2025). A note on gradient-based parameter estimation for energy-based model. In: *Supervised and Unsupervised Statistical Data Analysis*, Studies in Classification, Data Analysis, and Knowledge Organization, Springer Cham
- [Scaffidi Domianello L.](#), Otranto, E. (2023). Long and Short-Run Dynamics in Realized Covariance Matrices: A Robust MIDAS Approach. In: Kitsos C.P., Oliveira T.A., Pierri F., Restaino M. (Eds.), *Statistical Modelling and Risk Analysis. ICRA 2022*. Springer Proceedings in Mathematics & Statistics, vol 430, 169–186. Springer, Cham.

Short papers in Conferences or Workshops with ISBN

- Otranto E., [Scaffidi Domianello L.](#) (2025). Common Features in Volatilities: a New Multiplicative Error Model. In: Castellano R., De Luca G., Bruno E. (Eds.), *Book of Short Papers - 3rd Italian Conference on*

Economic Statistics (ICES 2025), Sustainability, Statistical Measurement for Economic Analysis, Innovation and Digitalization, 225-228. Enzo Albano Editore. ISBN 979-12-80655-52-3.

- Scaffidi Domianello L., Di Nuzzo C., Ingrassia S. (2025). On Parameter Estimation of Distributions for Toroidal Data via Contrastive Learning: A Simulation Study. In: Di Bella E., Gioia V., Lagazio C., Zaccarin S. (Eds.), *Statistics for Innovation IV, SIS 2025*, Italian Statistical Society Series on Advances in Statistics, 319-324. Springer, Cham. ISBN: 978-3-031-96032-1.
- Otranto E., Scaffidi Domianello L. (2024). A Fuzzy Clustering Approach to Detect the Number of States in Markov Switching Models. In: Pollice A., Mariani P. (Eds.), *Methodological and Applied Statistics and Demography IV. SIS 2024*, Italian Statistical Society Series on Advances in Statistics, 349-354. Springer, Cham. ISBN: 978-3-031-64446-7.
- D'Urso P., Mattera R., Otranto E., Scaffidi Domianello L. (2024). In: Fabrizi E., Giambona F. A., Marini C., Marletta A., Rocca A. (Eds.), *Book of Short Papers 2nd Italian Conference on Economic Statistics (ICES 2024) Statistical Analysis of Complex Economic Data: Recent Developments and Applications*, 84-87. Bonecchi. ISBN: 978-88-476-2950-9.
- Scaffidi Domianello L. (2023). Student mobility in higher education: a destination-specific local analysis. In: Coretto P., Giordano G., La Rocca M., Parrella M. L., Rampichini C. (Eds.), *Book of Abstract and Short Papers, 14th Scientific Meeting of the Classification and Data Analysis Group*, 631-634. Pearson. ISBN: 978-88-9193-563-2.
- Gallo, G.M., Otranto E., Scaffidi Domianello L. (2022). Smooth and abrupt dynamics in financial volatility: the MS-MEM-MIDAS. In: Balzanella A., Bini M., Cavicchia C., Verde R. (Eds.) *SIS 2022, Book of Short Papers*, 492-500. Pearson. ISBN: 978-88-9193-231-0.

Ph.D. Thesis

- Scaffidi Domianello L. (2022). *Component Volatility Models: A MIDAS Approach*. Ph.D. Thesis. Department of Economics, University of Messina.

Submitted Articles

- Martino L., Scaffidi Domianello L., Mangano S. (2026). Importance Sampling and Contrastive Learning Schemes for Parameter Estimation in Non-Normalized Models. Submitted to *Computational Statistics (Under Review)*. *viXra:2601.0065*
- Otranto E., Scaffidi Domianello L. (2025). Spillovers and Co-movements in Multivariate Volatility: A Vector Multiplicative Error Model. Submitted to *Advances in Statistical Analysis (Under Review)*. *arXiv:2601.16837*

Presentations

In Organized, Solicited Sessions

- *Common features in volatilities: A new multiplicative error model*, “19th International Joint Conference on Computational and Financial Econometrics and Computational and Methodological Statistics (CFE-CMStatistics 2024)”, Organized Session *Advances in time series for economics and finance*, Birkbeck, University of London, UK, December 13-15, 2025
- *Contrastive learning: A statistical approach*, “18th International Joint Conference on Computational and Financial Econometrics and Computational and Methodological Statistics (CFE-CMStatistics 2024)”, Organized Session *Advances in statistical learning and clustering*, King's College London, UK, December 14-16, 2024
- *Clustering of Italian higher education institutions based on a destination-specific approach*, “HiTEc meeting and the Complex Data in Econometrics and Statistics Workshop (HiTEc & CoDES 2024)”, Organized Session *Statistical Model and methods for education evaluation*, CUT Tassos Papadopoulos Building, Cyprus University of Technology, Limassol, Cyprus, March 23-24, 2024
- *Smooth and Abrupt Dynamics in Financial Volatility: the MS-MEM-MIDAS*, 51st Scientific Meeting of the Italian Statistical Society (SIS 2022), Solicited Session “Statistics for finance: new models, new data”, Università degli Studi della Campania “Luigi Vanvitelli”, Caserta, Italy, June 22-24, 2022

- *Long and Short run dynamics in Realized Covariance Matrices: a Robust MIDAS Approach*, “9th International Conference on Risk Analysis (ICRA9), Organized Session” *High-frequency data in economics and finance*, University of Perugia, Perugia, Italy, May 25-27, 2022

In Contributed Sessions

- *Common features in volatilities: a new Multiplicative Error Model*, “3rd Italian Conference on Economic Statistics (ICES 2025)”, Contributed Session *Advances in Time Series Forecasting for Socio- Economic Dynamics*, Parthenope University of Naples, Naples, Italy, February 13-14, 2025
- *On assessing the properties of noise contrastive estimation: a simulation approach*, “7th Workshop on Models and Learning in Clustering and Classification (MBC² 2024)”, Lightning talk session, University of Catania, Catania, August 28-30, 2024
- *On the relationship between Markov switching models and fuzzy clustering: a nonparametric method to detect the number of states*, “52nd Scientific Meeting of the Italian Statistical Society (SIS 2024)”, Contributed Session *Advances in clustering and classification*, University of Bari Aldo Moro, Bari, June 17-20, 2024
- *Student mobility in higher education: a destination-specific local analysis*, “14th Scientific Meeting Classification and Data Analysis Group (CLADAG 2023)”, University of Salerno, Salerno, September 11–13, 2023

In Workshops

- *Spillovers and Co-movements in Multivariate Volatility: A Vector Multiplicative Error Model*, “Monitoring Risks in Financial Market”, University of Macerata, Macerata, February 5, 2026
- *Spillovers and Co-movements in Multivariate Volatility: A Vector Multiplicative Error Model*, “End of the PRIN 2022 Project: What’s Next? Insights, Ideas, and Future Collaboration”, University of Messina, Messina, January 12, 2026
- *Spillovers and Co-movements in Multivariate Volatility: A Vector Multiplicative Error Model*, “Methodological and Computational Challenges in Large-Scale Time Series Models for Economics and Finance”, Villa Mondragone, Rome, September 11-12, 2025

External Service Contributions

Guest Editorships

Special Issue: *Price Volatility in Financial and Commodity Markets*, Journal of Risk and Financial Management, (2023). Guest Editors: Edoardo Otranto, Antonio Fabio Forgiione, Carmelo Algeri, Luca Scaffidi Domianello

Refereeing Activity

Referee for the following journals: International Journal of Forecasting, Advances in Data Analysis and Classification, Statistical Methods & Applications, Metron, Statistical Analysis and Data Mining, Journal of Classification

Organization of Sessions

Title of the Session: *Advances in time series for economics and finance*, “19th International Joint Conference on Computational and Financial Econometrics and Computational and Methodological Statistics (CFE-CMStatistics 2025)”, Birkbeck, University of London, UK, December 13-15, 2025

Organizing Committee Activities

Member of the Organizing Committee for:

- 8th International Workshop: “MBC² - Workshop on Model-Based Clustering and Classification”, University of Catania, Catania, August 26-28, 2026
- 7th International Workshop: “MBC² - Workshop on Model-Based Clustering and Classification”, University of Catania, Catania, August 28–30, 2024
- 2nd Italian Conference on Economic Statistics: “Statistical Analysis of Complex Economic Data: recent developments and applications”, University of Florence, Florence, February 7-8, 2024

Funded Research Projects

- Member of the research project "PIAno di inCEntivi per la RIcerca di Ateneo 2024/2026" (University of Catania): *Classification, clustering and prediction: models for graph-supported data, with applications in economics and social sciences (LikeFree-BA-GRAPH)*

Postgraduate Courses

- *Statistical Methods for Unsupervised and Supervised Learning with Dimensionality Reduction*, organized by CLAssification and Data Analysis Group of the Italian Statistical Society (CLADAG). Main topics: Dimensionality reduction for quantitative and categorical data, Fuzzy unsupervised classification, model-based unsupervised classification. University of Rome, La Sapienza, Rome, Italy, 2024
- *Methods in Time Series Econometrics*, organized by SIde (Italian Econometric Association). Main topics: Markov Switching VAR, DSGE, Impulse Response functions. Bertinoro (FC), Italy, 2023
- *Short course on Financial time series and tail risk forecasting with Python*, organized by University of Salerno. Main topics: GARCH models, realized volatility measures, parametric and semi-parametric Value at Risk (VaR), and Expected Shortfall (ES). Salerno, 2023
- *The Econometrics of Mixed Frequency (Big) Data*, organized by Society for Financial Econometrics (SoFiE). Main topics: Mixed Data Sampling Regressions, Nowcasting, Vector Autoregressive Models with Mixed Frequency Data, Quantile Regressions, Empirical Risk Minimization. Volatility Institute, NYU Shanghai, 2020
- *Financial Time Series*, organized by SIde (Italian Econometric Association). Main topics: ARMA models, GARCH models, Multivariate GARCH models, Ex-post estimation of volatility, Risk measures, Backtesting. Bertinoro (FC), Italy, 2019

Membership of Academic Societies

- Società Italiana di Statistica (SIS), since 2022
- Società Italiana di Econometria (SIde), 2019-2024
- Society for Financial Econometrics (SoFiE), 2020-2021

Computer Skills

R, LaTeX, Gretl, Stata, Python, Matlab, Microsoft 365.

Languages

Italian (mother tongue), English (B2)

Processing Personal Data

I hereby authorize the use of my personal data in accordance to the GDPR 679/16 -"European regulation on the protection of personal data".