Luca Scaffidi Domianello, Ph.D.

Department of Economics and Business, University of Catania
Corso Italia 55, 95129, Catania, Italy

luca.scaffidi@unict.it luca.scaffididomianello lscaffd

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

Positions

Assistant Professor (RTD-a) of Statistics (STAT-01/A) *Feb 2024 – Present*
University of Catania, Department of Economics and Business

Cultore della Materia (STAT-01/A) *Oct 2021 – Sep 2024*
University of Messina, Department of Economics

Post-doctoral Research Fellow of Economic Statistics (STAT-02/A) *July 2023 – Jan 2024*
University of Florence, Department of Statistics, Computer Science, Applications
Research Project: *"Statistical learning methods for the extraction of knowledge from high dimensional sensor data"*

Post-doctoral Research Fellow of Statistics (STAT-01/A) *Jun 2022 – May 2023*
University of Florence, Department of Statistics, Computer Science, Applications
Research Project: *"Monitoring indicators for innovation and efficiency in judicial offices"*

Education

Ph.D. in Economics, Management and Statistics *Oct 2018 – Feb 2022*
Curriculum Statistics (STAT-01/A)
University of Messina, Department of Economics
Dissertation: *Component volatility models: A MIDAS approach*
Supervisor: Prof. Edoardo Otranto. Final Mark: Excellent

Master of Science in Economics and Finance (LM-56) *Sept 2016 – Jul 2018*
Curriculum Quantitative Methods
University of Messina, Department of Economics
Dissertation: *Efficienza e rendimento azionario delle banche. Risultati di un'analisi empirica nell'area EU-15*
Supervisor: Prof. Antonio Fabio Forgione. Final mark: 110/110 cum laude

Bachelor's degree, Business Economics (L-18) *Sept 2013 – Jul 2016*
Curriculum Banking and Finance
University of Messina, Department of Economics
Dissertation: *I sistemi di garanzia dei depositi. Profili giuridici ed innovazioni apportate dall'Unione Bancaria Europea*
Supervisor: Prof.ssa Brunella Russo. Final mark: 110/110 cum laude

Teaching Activities

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 Catania

A.Y. 2023-2024

- Teaching Assistant of "Applied Statistics and Econometrics" (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

- 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*, (forthcoming).
- 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, (forthcoming).
- Martino L., Ingrassia S., Mangano S., Scaffidi Domianello L. (2025). A note on gradient-based parameter estimation for energy-based model. In: *Advances in Supervised and Unsupervised Statistical Data Analysis*, Studies in Classification, Data Analysis, and Knowledge Organization, Springer Cham, (forthcoming).
- 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

- Otranto E., Scaffidi Domianello L. (2025). Spillovers and Co-movements in Multivariate Volatility: A Vector Multiplicative Error Model.

Presentations

In Organized, Solicited Sessions

- *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, England, 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 (MBC^2 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

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 Forgione, 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

Organizing Committee Activities

Member of the Organizing Committee for:

- 7th International Workshop: "MBC^2 - 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

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".