

PERSONAL INFORMATION**Luca Merlo** l.merlo@unilink.it <https://www.unilink.it/en/university/teaching-staff/luca-merlo> [luca-merlo.github.io](https://github.com/luca-merlo) [quantileregressionlab.github.io](https://github.com/quantileregressionlab) [ORCID 0000-0001-5267-5390](#)**Nationality** Italian**CURRENT POSITION****2024 – present Associate Professor of Statistics***Department of Human Sciences, Link Campus University, Rome, Italy***2024 – 2035 National Scientific Habilitation for Associate Professor in Statistics**

National scientific habilitation as Associate Professor (Professore Associato) in Statistics, S.C. 13/D1 (13/STAT-01), from 24/06/2024 to 24/06/2035

INSTITUTIONAL ACTIVITIES**2025 – present Member of the University Quality Assurance Group***Link Campus University, Rome, Italy*

PQA, Presidio Qualità d'Ateneo

2025 – present University Statistics Coordinator*Link Campus University, Rome, Italy*

Rector's Delegate

2025 – present Member of the Quality Assurance Group of the course in Political Sciences*Department of Human Sciences, Link Campus University, Rome, Italy*

Quality Assurance group (Assicurazione della Qualità, Gruppo AQ) for the Bachelor degree course in Political Sciences (L-36)

PAST POSITIONS**2022 – 2024 Researcher (RTDA) in Statistics***Department of Human Sciences, European University of Rome, Rome, Italy***EDUCATION****June 2024 Visiting period***University of Florence, Florence, Italy*

Research visit under the supervision of Prof. Maria Francesca Marino

April – June 2023 Visiting research scholar*Harvard T.H. Chan School of Public Health - Harvard University, Boston, United States*

Research visit under the supervision of Prof. Francesca Dominici

July 2022 Visiting period

University of Pisa, Pisa, Italy

Research visit under the supervision of Prof. Nicola Salvati

2018 – 2022 PhD in Statistical Sciences

Sapienza University of Rome, Rome, Italy

Methodological Statistics curriculum

Final grade: Ottimo Cum Laude

Thesis title: On Quantile Regression Models for Multivariate Data

Supervisor: Prof. Lea Petrella

February – March 2020 Visiting period

University of Southampton, Southampton, United Kingdom

Research visit under the supervision of Prof. Nikos Tzavidis

2016 – 2018 Master's Degree in Finance and Insurance

Sapienza University of Rome, Rome, Italy

LM-16 Finance curriculum

Final grade: 110/110 Cum Laude

Thesis title: Selection of Value at Risk Models for Energy Commodities

Supervisor: Prof. Lea Petrella

Co-supervisor: Prof. Brunero Liseo

2013 – 2016 Bachelor's Degree in Economics

Sapienza University of Rome, Rome, Italy

L-33 Economics Sciences curriculum

Final grade: 110/110 Cum Laude

Thesis title: Introduction to L_p -quantiles

Supervisor: Prof. Lea Petrella

Co-supervisor: Prof. Valeria Bignozzi

September 2015 – January 2016 Erasmus term

Université Catholique de Louvain, Louvain-la-Neuve, Belgium

Six months period in the study program of the Faculty of Economics

GPA: 19/20

TEACHING ACTIVITIES

2025 – 2026 Statistics

Link Campus University, Rome, Italy

Bachelor's Degree in Economics and Business and Institution Management, 54 hours. Taught in English.

2025 – 2026 Statistica

Link Campus University, Rome, Italy

Bachelor's Degree in Economics and Business and Institution Management, 54 hours. Taught in Italian.

May 2025 Financial risk modeling and forecasting using quantile regression methods

Sapienza University of Rome, Rome, Italy

Course for PhD students of the MEMOTEF Department at the Faculty of Economics, 2 hours.

2024 – 2025 Data analysis & visualization

Link Campus University, Rome, Italy

Master's Degree in Technologies and Languages of Communications, 36 hours. Taught in English.

2024 – 2025 Understanding user behaviour

Link Campus University, Rome, Italy

Bachelor's Degree in Innovative Technologies for Digital Communication, 18 hours. Taught in English.

2024 – 2025 Statistics

European University of Rome, Rome, Italy

Bachelor's Degree in Economics and Business Management, 56 hours. Taught in English.

2024 – 2025 Machine learning and data analytics

European University of Rome, Rome, Italy

Master's Degree in Economics and Innovation Management, 42 hours. Taught in Italian.

May 2024 Financial risk modeling and forecasting using quantile regression

Sapienza University of Rome, Rome, Italy

Course for PhD students of the MEMOTEF Department at the Faculty of Economics, 4 hours.

2023 – 2024 Statistics

European University of Rome, Rome, Italy

Bachelor's Degree in Economics and Business Management, 56 hours. Taught in English.

2023 – 2024 Business Informatics

European University of Rome, Rome, Italy

Bachelor's Degree in Economics and Business Management, 12 hours. Taught in English.

2023 – 2024 Machine learning and data analytics

European University of Rome, Rome, Italy

Master's Degree in Economics and Innovation Management, 42 hours. Taught in Italian.

July 2023 Financial risk modeling and forecasting using quantile regression methods

Sapienza University of Rome, Rome, Italy

Course for PhD students of the MEMOTEF Department at the Faculty of Economics, 10 hours.

2022 – 2023 Machine learning and data analytics

European University of Rome, Rome, Italy

Master's Degree in Economics and Innovation Management, 42 hours. Taught in Italian.

2022 – 2023 Statistics for business

European University of Rome, Rome, Italy

Bachelor's Degree in Economics and Business Management, 12 hours. Taught in English.

2022 – 2023 Statistics for tourism

European University of Rome, Rome, Italy

Bachelor's Degree in Tourism and valorisation of the territory, 8 hours. Taught in Italian.

July 2022 Financial risk modeling and forecasting using quantile regression methods

Sapienza University of Rome, Rome, Italy

Course for PhD students of the MEMOTEF Department at the Faculty of Economics, 10 hours.

March – April 2022 Models for risk and forecasting

Sapienza University of Rome, Rome, Italy

Teaching seminars and support activities for the course "Models for risk and forecasting", Master's Degree in Finance and Insurance, of Prof. Vincenzo Candila. Taught in English.

April 2022 Time series and financial time series

Sapienza University of Rome, Rome, Italy

Teaching seminars on R programming for the course "Time series and financial time series", Master's Degree in Finance and Insurance, of Prof. Lea Petrella. Taught in English.

March – May 2019 Analisi delle serie storiche

Sapienza University of Rome, Rome, Italy

Short course (10 hours) on R programming for the course "Analisi delle serie storiche", Master's Degree in Finanza e Assicurazioni, of Prof. Lea Petrella. Taught in Italian.

January – September 2018 University tutor

Sapienza University of Rome, Rome, Italy

Tutoring and support activities to Bachelor's and Master's Degree students of the Faculty of Economics

WORK EXPERIENCE

February 2025 – July 2025 Contract lecturer

European University of Rome, Rome, Italy

Teaching professor for the course of Statistics. Bachelor's Degree in Economics and Business Management, 56 hours. Taught in English.

November – December 2021 Collaboration contract for research activities

Sapienza University of Rome, Rome, Italy

Winner of the comparative selection procedure (contratto di lavoro autonomo bando 06/2021 prot. n. 0000659, 07/09/2021) for the development and implementation of computational algorithms in quantile regression analysis under the supervision of Prof. Lea Petrella.

2017 – 2018 University tutor

Sapienza University of Rome, Rome, Italy

Tutoring, supplementary teaching, preparatory, and remedial activities for students enrolled in the degree programs of the Faculty of Economics, 150 hours.

January – December 2017 Student Library Assistant

Sapienza University of Rome, Rome, Italy
Library of the MEMOTEF Department "Ferdinando Milone".

GRANTS AND AWARDS

2023 Best PhD Thesis Award - SIS 2023

Università Politecnica delle Marche, Ancona, Italy

Honorable Mention for the 2023 Best PhD Thesis Award in Statistics for the dissertation "On quantile regression models for multivariate data".

2023 Best Young Contribution - SIS 2023

Università Politecnica delle Marche, Ancona, Italy

Best Young Contribution Award at the SIS 2023 conference for the work "Quantile-based graphical models for continuous and discrete variables" (joint with Petrella, L. and Geraci, M.).

2018 – 2021 PhD scholarship

Sapienza University of Rome, Rome, Italy

Three year PhD scholarship.

2015 – 2016 Erasmus scholarship

Université Catholique de Louvain, Louvain-la-Neuve, Belgium

Six months merit-based partial waiver to cover living expenses and travel costs.

2013 – 2016 Scholarship for undergraduate students

Sapienza University of Rome, Rome, Italy

Three years merit-based full tuition waiver.

RESEARCH INTERESTS

- Quantile regression, multivariate quantiles, M-quantiles
- Latent variable models, finite mixture models, graphical models
- Causal inference, matching methods
- EM algorithms
- Statistical models for risk measures, financial data and environmental issues
- Applications to longitudinal, time series and correlated data

FUNDED RESEARCH PROJECTS

Submitted FIS 3 – FONDO ITALIANO PER LA SCIENZA

Link Campus University, Rome, Italy

Principal investigator for the Starting Grant research project: "Quantile for CLImate imPACTs: building resilience to multi-hazards, climate risks and desertification".

2024 Progetti di Ricerca Grandi 2024

Sapienza University of Rome, Rome, Italy

Member of the research group for the project: "SURE: SUstainability and REsilience of national and local (agro)systems in front of global change, desertification and the climate crisis". Principal investigator: Prof. Valerio Leone Sciabolazza

2022 Progetti di Ricerca Medi 2022

Sapienza University of Rome, Rome, Italy

Member of the research group for the project: "Joint regression modelling of timing and intensity of events". Principal investigator: Prof. Marco Geraci

2021 Progetti di Ricerca Medi 2021*Sapienza University of Rome, Rome, Italy*

Member of the research group for the project: "Generalized Dynamic Graphical Models for the impact of the COVID-19 pandemic on financial markets". Principal investigator: Prof. Lea Petrella

2020 Progetti di Avvio alla Ricerca 2020*Sapienza University of Rome, Rome, Italy*

Principal investigator of the research project: "Multivariate Mixed Hidden Markov Model for joint estimation of multiple quantiles"

2019 Progetti di Avvio alla Ricerca 2019*Sapienza University of Rome, Rome, Italy*

Principal investigator of the research project: "Joint VaR and ES forecasting in a multiple quantile regression framework"

CONFERENCE PRESENTATIONS**2025 Estimation of undirected graphs for multivariate time series using hidden semi-Markov models**

SIS 2025 - Statistics for Innovation

University of Genoa, Genova, Italy

Contributed talk, 16-18 June (joint with Ferrante E., Foroni B. and Petrella, L.)

2024 Random effects in unconditional quantile regressions

SIS 2024 - 52nd Scientific Meeting of the Italian Statistical Society

University of Bari Aldo Moro, Bari, Italy

Contributed talk, 17-20 June (joint with Salvati, N., Fabrizi, E., Frumento, P. and Petrella, L.)

2023 Unified unconditional regression for multivariate quantiles, M-quantiles and expectiles

WorkshopQRome - New perspectives of quantile regression in applied sciences

Sapienza University of Rome, Rome, Italy

Invited talk, 22 September (joint with Petrella, L., Salvati, N. and Tzavidis, N.)

2023 Quantile-based graphical models for continuous and discrete variables

StaTalk 2023

Sapienza University of Rome, Rome, Italy

Invited talk, 15 September (joint with Petrella, L. and Geraci, M.)

2023 Quantile-based graphical models for continuous and discrete variables

SIS 2023 - Statistical Learning, Sustainability and Impact Evaluation

Università Politecnica delle Marche, Ancona, Italy

Contributed talk, 21-23 June (joint with Petrella, L. and Geraci, M.)

2023 Estimating causal quantile exposure response functions via matching

National Studies on Air Pollution and Health group meeting

Harvard T.H. Chan School of Public Health, Boston, USA

Invited talk, 5 April (joint with Dominici, F., Petrella, L., Salvati, N. and Wu, X.)

- 2022 **Quantile mixed hidden Markov models for multivariate longitudinal data: An application to children's SDQ scores**
CMStatistics 2022 - 15th International Conference of the ERCIM WG on Computational and Methodological Statistics
King's College London, London, England
Invited talk, 17-19 December (joint with Petrella, L. and Tzavidis, N.)
- 2022 **Quantile mixed hidden Markov models for multivariate longitudinal data**
ECDA2022 - European Conference on Data Analysis
University of Naples Federico II, Naples, Italy
Invited talk, 14-16 September (joint with Petrella, L. and Tzavidis, N.)
- 2022 **Modeling unconditional M-quantiles in a regression framework**
SIS2022 - 51st Scientific Meeting of the Italian Statistical Society
University of Campania Luigi Vanvitelli, Caserta, Italy
Contributed talk, 22-24 June (joint with Petrella, L. and Salvati, N.)
- 2021 **Forecasting VaR and ES using a joint quantile regression and its implications in portfolio allocation**
CFE 2021 - 15th International Conference on Computational and Financial Econometrics
King's College London, London, England
Invited talk, 18-20 December (joint with Petrella, L., and Raponi, V.)
- 2021 **Unconditional M-quantile regression**
CLADAG2021 - 13th Scientific Meeting Classification and Data Analysis Group
University of Florence, Florence, Italy
Invited talk, 9-11 September (joint with Petrella, L. and Tzavidis, N.)
- 2021 **Directional M-quantile regression for multivariate dependent outcomes**
SIS2021 - 50th Scientific meeting of the Italian Statistical Society
University of Pisa, Pisa, Italy
Invited talk, 21-25 June (joint with Petrella, L. and Tzavidis, N.)
- 2020 **Forecasting multiple VaR and ES using a dynamic joint quantile regression with an application to portfolio optimization**
eMAF2020 - Mathematical and Statistical Methods for Actuarial Sciences and Finance
Ca' Foscari University of Venice, Venice, Italy
Contributed talk, 18-25 September (joint with Petrella, L. and Raponi, V.)
- 2019 **A two-part finite mixture quantile regression model for semi-continuous longitudinal data**
IES2019 - Statistical Evaluation Systems At 360°: Techniques, Technologies And New Frontiers
European University of Rome, Rome, Italy
Contributed talk, 4-5 July (joint with Maruotti, A. and Petrella, L.)
- 2019 **A two-part finite mixture quantile regression model for semi-continuous longitudinal data**

SIS2019 - Smart Statistics for Smart Applications

Università Cattolica del Sacro Cuore, Milan, Italy

Invited talk, 18-21 June (joint with Maruotti, A. and Petrella, L.)

2019 Joint VaR and ES forecasting in a multiple quantile regression framework

SIS2019 - Smart Statistics for Smart Applications

Università Cattolica del Sacro Cuore, Milan, Italy

Poster session, 18-21 June (joint with Petrella, L., and Raponi, V.)

2018 Selection of Value at Risk Models for Energy Commodities

XIX Workshop On Quantitative Finance 2018

University Roma Tre, Rome, Italy

Poster session, 24-26 January (joint with Petrella, L., and Laporta, G. A.)

CONFERENCE ORGANIZATION

- December 2025 **Session organizer at the CMStatistics 2025**
CMStatistics 2025 - 19th International Joint Conference of the ERCIM WG on Computational and Methodological Statistics
Birkbeck, University of London, United Kingdom
- September 2025 **Organizer of the Invited Session "Data-driven classification and statistical modeling for tackling environmental challenges"**
CLADAG 2025
University of Naples Federico II, Naples, Italy
- August 2025 **Member of the Scientific Program Committee of the EcoSta 2025 conference**
EcoSta 2025 - 8th International Conference on Econometrics and Statistics
Waseda University, Tokyo, Japan
- August 2025 **Organizer of the Organized Session "Quantile methods and applications"**
EcoSta 2025 - 8th International Conference on Econometrics and Statistics
Waseda University, Tokyo, Japan
- June 2025 **Organizer of the Solicited Session "Innovative applications of latent Markov and semi-Markov models"**
SIS 2025 - Statistics for Innovation
University of Genoa, Genova, Italy
- December 2024 **Organizer of the Organized Session "Recent advances in quantile and M-quantile regression" at the CMStatistics 2024**
CMStatistics 2024 - 18th International Joint Conference of the ERCIM WG on Computational and Methodological Statistics
King's College London, London, United Kingdom

- December 2023 **Organizer of the Invited Session "Recent advances in quantile regression models" at the CMStatistics 2023**
CMStatistics 2023 - 16th International Conference of the ERCIM WG on Computational and Methodological Statistics
HTW Berlin, University of Applied Sciences, Berlin, Germany
- September 2023 **Member of the Local Organizing Committee of the 1st Workshop on quantile regression in Rome**
WorkshopQRome - New perspectives of quantile regression in applied sciences
Sapienza University of Rome, Rome, Italy

PUBLICATIONS

1. Foroni, B., Merlo, L., Petrella, L., and Salvati, N., (2025). *Hidden Markov quantile graphical models*. **Journal of Computational and Graphical Statistics**, (just-accepted), 1-20, doi: 10.1080/10618600.2025.2579526.
2. Profili, S., Sammarra, A., Innocenti, L., Merlo, L., and Peccei, R., (2025). *Ability and motivation profiles among chronically ill employees: using latent profile analysis to understand the impact of utilization HR practices on work engagement*. **The International Journal of Human Resource Management**, pp. 1-29, doi: 10.1080/09585192.2025.2559979.
3. Ricciardi, S., Giovanniello, D., Jaus, M.O., Merlo, L., Petrella, L., Treggiari, S., Mantovani, S. and Cardillo, G., (2025). *Short-term outcomes after minimally invasive surgery: does sex make a difference?* **Video-Assisted Thoracic Surgery**, 10:11, doi: 10.21037/vats-24-20.
4. Forte, S., Foroni, B., Merlo, L., and Petrella, L., (2025). *Spatial Quantile Random Forests for the Analysis of Upward Mobility in Texas*. In **Scientific Meeting of the Italian Statistical Society** (Proceedings), pp. 255-260, ISBN: 978-3-031-95994-3.
5. Saiz, M., Merlo, L., and Petrella, L., (2025). *Two-Part Expectile Regression Models for Longitudinal Data: An Application to Students' Academic Performance*. In **Scientific Meeting of the Italian Statistical Society** (Proceedings), pp. 292-298, ISBN: 978-3-031-96032-1.
6. Merlo, L., Ferrante, E., Foroni, B., and Petrella, L., (2025). *Estimation of Undirected Graphs for Multivariate Time Series Using Hidden Semi-Markov Models*. In **Scientific Meeting of the Italian Statistical Society** (Proceedings), pp. 36-41, ISBN: 978-3-031-96032-1.
7. Merlo, L., Geraci, M., and Petrella, L., (2025). *Mid-quantile mixed graphical models with an application to mass public shootings in the U.S.* **Journal of the Royal Statistical Society: Series A**, doi: 10.1093/rsssa/qnae155.
8. Salvati, N., Fabrizi, E., Frumento, P., Petrella, L., and Merlo, L., (2025). *Random effects in unconditional quantile regressions*. **Book of Short Papers SIS 2024**, Methodological and Applied Statistics and Demography IV (Proceedings), pp. 246-250, ISBN: 978-3-031-64447-4.
9. Foroni, B., Merlo, L., and Petrella, L., (2025). *Hidden Markov graphical models with generalized hyperbolic distributions: a financial analysis on commodities and green energy indexes*. **Book of Short Papers SIS 2024**, Methodological and Applied Statistics and Demography IV (Proceedings), pp. 22-27, ISBN: 978-3-031-64447-4.
10. Foroni, B., Merlo, L., and Petrella, L., (2024). *Quantile and expectile copula-based hidden Markov regression models for the analysis of the cryptocurrency market*. **Statistical Modelling**, doi: 10.1177/1471082X241279513.
11. Kingsbury Lee, S., Merlo, L., and Dominici, F., (2024). *Childhood PM_{2.5} exposure and upward mobility in the United States*. **Proceedings of the National Academy of Sciences**, 121(38), doi: 10.1073/pnas.2401882121.
12. Foti, G., Merlo, L., Finstad G. L., and Giorgi G., (2024). *COVID-19 symptoms and mental health outcomes among Italian healthcare workers: a latent class analysis*. **Healthcare**, 12(14), doi: 10.3390/healthcare12141403.
13. Bignozzi, V., Merlo, L., and Petrella, L., (2024). *Inter-order relations between equivalence for L_p-quantiles of the Student's t distribution*. **Insurance: Mathematics and Economics**, doi: 10.1016/j.insmatheco.2024.02.001.
14. Foroni, B., Merlo, L., and Petrella, L., (2024). *Expectile hidden Markov regression models for analyzing cryptocurrency returns*. **Statistics and Computing**, 34(2), pp. 66, doi: 10.1007/s11222-023-10377-2.

15. Merlo, L., Petrella, L., Tzavidis, N., and Salvati, N., (2023). *Unified unconditional regression for multivariate quantiles, M-quantiles and expectiles*. **Journal of the American Statistical Association**, pp.1-26, doi: 10.1080/01621459.2023.2250512.
16. Merlo, L., Geraci, M., and Petrella, L., (2023). *Quantile-based graphical models for continuous and discrete variables*. **Book of Short Papers SIS 2023** (Proceedings), pp. 1069-1074.
17. Foroni, B., Merlo, L., and Petrella, L., (2023). *Using expectile regression with latent variables for digital assets*. **Book of Short Papers SIS 2023** (Proceedings), pp. 1309-1314.
18. Merlo, Luca, (2022). *On quantile regression models for multivariate data*. **PhD Thesis**, link: <http://hdl.handle.net/11573/1613037>.
19. Merlo, L., Maruotti, A., Petrella, L., and Punzo, A., (2022). *Quantile hidden semi-Markov models for multivariate time series*. **Statistics and Computing**, 32(4), pp.1-22.
20. Merlo, L., Petrella, L., and Tzavidis, N., (2022). *Quantile mixed hidden Markov models for multivariate longitudinal data: an application to children's Strengths and Difficulties Questionnaire scores*. **Journal of the Royal Statistical Society, Series C (Applied Statistics)**, 71(2), pp. 417-448.
21. Merlo, L., Petrella, L., Tzavidis, N., and Salvati, N., (2022). *Marginal M-quantile regression for multivariate dependent data*. **Computational Statistics & Data Analysis**, 173, 107500, link: <https://www.sciencedirect.com/science/article/pii/S0167947322000809>.
22. Merlo, L., Maruotti, A., and Petrella, L., (2022). *Two-part quantile regression models for semi-continuous longitudinal data: A finite mixture approach*. **Statistical Modelling**, 22(6), pp. 485-508, doi: 10.1177/1471082X21993603.
23. Merlo, L., Petrella, L., and Salvati, N., (2022). *Modeling unconditional M-quantiles in a regression framework*. **Book of Short Papers SIS 2022** (Proceedings), pp. 1692-1695.
24. Foroni, B., Merlo, L., and Petrella, L., (2022). *Analyzing the Correlation Structure of Financial Markets Using a Quantile Graphical Model*. **Book of Short Papers SIS 2022** (Proceedings), pp. 852-857.
25. Foroni, B., Merlo, L., and Petrella, L., (2022). *Graphical Models for Commodities: A Quantile Approach*. **Mathematical and Statistical Methods for Actuarial Sciences and Finance - MAF 2022** (Proceedings), pp. 253-259.
26. Merlo, L., Petrella, L., and Raponi, V., (2021). *Forecasting VaR and ES using a joint quantile regression and its implications in portfolio allocation*. **Journal of Banking & Finance**, 133, 106248.
27. Sciacchitano, Salvatore, et al., (2021). *Nonthyroidal illness syndrome (NTIS) in severe COVID-19 patients: role of T3 on the Na/K pump gene expression and on hydroelectrolytic equilibrium*. **Journal of Translational Medicine**, 19(1), pp. 1-18.
28. Scarci, M., et al., (2021). *COVID-19 After Lung Resection in Northern Italy*. **Seminars in Thoracic and Cardiovascular Surgery**, pp. S1043-0679.
29. Merlo, L., Petrella, L., and Tzavidis, N., (2021). *Unconditional M-quantile regression*. **Book of Short Papers CLADAG 2021** (Proceedings), pp. 163-166.
30. Merlo, L., Petrella, L., and Tzavidis, N., (2021). *Directional M-quantile regression for multivariate dependent outcomes*. **Book of Short Papers SIS 2021** (Proceedings), pp. 164-169.
31. Merlo, L., Petrella, L., and Raponi, V., (2021). *Forecasting Multiple VaR and ES Using a Dynamic Joint Quantile Regression with an Application to Portfolio Optimization*. **Mathematical and Statistical Methods for Actuarial Sciences and Finance - eMAF2020** (Proceedings), pp. 349-354.
32. Merlo, L., Petrella, L., and Raponi, V., (2020). *Sectoral decomposition of CO₂ world emissions: a joint quantile regression approach*. **International Review of Environmental and Resource Economics**, 14(2-3), pp. 197-239.
33. Merlo, L., Petrella, L., and Tzavidis, N., (2020). *Multivariate Mixed Hidden Markov Model for joint estimation of multiple quantiles*. **Book of Short Papers SIS 2020** (Proceedings), pp. 144-149.
34. Petrella, L., Laporta, A.G. and Merlo, L., (2019). *Cross-country assessment of systemic risk in the European stock market: evidence from a CoVaR analysis*. **Social Indicators Research**, 146(1), pp.169-186.

35. Merlo, L., Petrella, L., and Raponi, V., (2019). *Joint VaR and ES forecasting in a multiple quantile regression framework*. **Book of Short Papers SIS 2019** (Proceedings), pp. 1177-1182.
36. Merlo, L., Maruotti, A., and Petrella, L., (2019). *A two-part finite mixture quantile regression model for semi-continuous longitudinal data*. **Book of Short Papers SIS 2019** (Proceedings), pp. 409-414.
37. Laporta, G. A., Merlo, L., and Petrella, L., (2018). *Selection of Value at Risk models for Energy Commodities*. **Energy Economics**, 74, pp. 628-643.

SUBMITTED PAPERS

1. Merlo, L., Dominici, F., Petrella, L., Salvati, N., and Wu X., (202X). *Estimating causal quantile exposure response functions via matching*. Submitted to **Statistics and Computing**, link: <https://arxiv.org/abs/2308.01628>.

THESIS SUPERVISION**2024 – 2025 Bachelor's thesis supervisor***Matteo Ranaglia*

Bachelor's Degree in Economics and Business Management (L-18), European University of Rome.

2024 – 2025 Master's thesis co-supervisor*Sabrina Forte*

Master's Degree in Finance and Insurance (LM-16), Sapienza University of Rome.

2024 – 2025 Master's thesis co-supervisor*Martina Del Vecchio*

Master's Degree in Finance and Insurance (LM-16), Sapienza University of Rome.

2024 – 2025 Master's thesis supervisor*Sabrina Troili*

Master's Degree in Management della Transizione Digitale (LM-43/LM-91), European University of Rome.

2023 – present PhD thesis co-supervisor*Maria Saiz (38° cycle)*

PhD program of the MEMOTEF Department at the Faculty of Economics, Sapienza University of Rome.

2023 – 2024 Master's thesis supervisor*Luca Letter*

Master's Degree in Management della Transizione Digitale (LM-43/LM-91), European University of Rome.

2024 Thesis co-supervisor*Emilio Ferrante*

School for Advanced Studies - class of Social Sciences, Sapienza University of Rome.

2023 PhD thesis co-supervisor*Beatrice Foroni (35° cycle)*

PhD program of the MEMOTEF Department at the Faculty of Economics, Sapienza University of Rome.

2023 Master's thesis co-supervisor*Emilio Ferrante*

Master's Degree in Actuarial and Financial Sciences (LM-83), Sapienza University of Rome.

OTHER ACTIVITIES

Referee for Journal of the Royal Statistical Society, Series C (Applied Statistics); Biometrical Journal; Journal of Classification; METRON; Statistical Methods & Applications; Computational Statistics & Data Analysis; Computational Statistics; Journal of Statistical Computation and Simulation; Annals of Operations Research

2020 – present Member of the Italian Statistical Society (SIS); Member of the young group of the Italian Statistical Society (y-SIS)

PERSONAL SKILLS

Mother tongue Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
	First Certificate in English, University of Cambridge, Grade C				
French	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Computer skills

- Operating Systems: Windows, Linux, macOS
- Typesetting: Microsoft Office Suite, L^AT_EX
- Scientific and Programming: R, C, C++, MATLAB, Stata, Excel