Giuseppe Buccheri

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Academic positions

Oct 2026 - now — **Full Professor** of Econometrics (ECON-05/A), Department of Economics, University of Verona.

Sept 2024 - Sept 2026 — **Associate Professor** of Econometrics (ECON-05/A), Department of Economics, University of Verona.

Sept 2021 - Aug 2024 — Tenure-track **Assistant Professor** (RTDB), Department of Economics, University of Verona.

Jan 2020 - Aug 2021 — **Assistant Professor** (RTDA), Department of Economics and Finance, University of Rome Tor Vergata.

Nov 2017 - Oct 2019 — **Postdoctoral research fellow**, Scuola Normale Superiore.

Education

2014-2018 — PhD in Financial Mathematics, Scuola Normale Superiore. Dissertation title: *"On time-varying parameter models and their application to high-frequency financial data"*.

2012-2013 — MSc in Quantitative Finance and Risk Management, Università Commerciale Luigi Bocconi.

2009-2011 — MSc in Theoretical Physics, Università di Catania.

2006-2011 — Diploma in Physics, Scuola Superiore di Catania.

2006-2009 — BSc in Physics, Università di Catania.

Research interests

Time-varying parameters, nonlinear filtering, high-frequency financial econometrics, market microstructure and liquidity modeling, dynamic network modeling, machine learning in time series.

Academic visits (>1 month)

Aug-Sep 2021 — Department of Economics and Business, Universitat Pompeu Fabra, Barcelona. Host: Christian Brownlees.

Sep-Dec 2017 — Department of Econometrics and Operations Research, Vrije Universiteit Amsterdam. Host: Siem Jan Koopman.

Coordination of research groups

Principal investigator of the project entitled *Realized Random Graphs: A New Paradigm for Dynamic Network Modeling* financed under the scheme *Grant Talent Researchers Cariverona 2026*. Total amount financed: 15.000 €.

Local coordinator of the PRIN2026 project entitled *Dynamic Econometric Foundations for Extremes, Networks, and Dependence* financed by the Italian Ministry MUR (n. 2026PCJ8LY). Total amount financed: 1.199.708 €. Amount financed to the local unit: 199.850 €.

Principal investigator of the PRIN2022 project entitled *Realized Random Graphs: A New Econometric Methodology for the Inference of Dynamic Networks* financed by the Italian Ministry MUR (n. 2022MRSYB7). Total amount financed: 217.235 €. Amount financed to the local unit: 125.067 €.

Local coordinator of the PRIN2022 PNRR project entitled *Climate Change, Uncertainty and Financial Risk: Robust Approaches based on Time-Varying Parameters* financed by the Italian Ministry MUR (n. P20229CJRS). Total amount financed: 269.315 €. Amount financed to the local unit: 63.163 €.

Local coordinator of the PRIN2020 project entitled *Dynamic models for a fast changing world: An observation-driven approach to time-varying parameters* financed within the program PRIN2020 of the Italian Ministry of Education and Research (n. 20205J2WZ4). Total amount financed: 582.558 €. Amount financed to the local unit: 137.132 €.

Member of the project entitled *A New Measure of Liquidity* financed by the Italian Ministry MIUR (n. RBSI14DDNN) under the scheme *Scientific Independence of young Researchers 2014*. Principal investigator: Prof. Davide Pirino (Università di Roma Tor Vergata).

Member of the project entitled *Dynamics and Information Research Institute - Quantum Information (Teoria dell'Informazione), Quantum Technologies* financed by the 2014 Agreement between Scuola Normale Superiore and UniCredit S.p.A. Scientific coordinator: Prof. Stefano Marmi (Scuola Normale Superiore).

Published articles

(2026) *From rotational to scalar invariance: Enhancing identifiability in score-driven factor models*. G. Buccheri, F. Corsi, E. Dzuverovic. **Journal of Business & Economic Statistics.** Forthcoming.

(2025) *Taking advantage of biased proxies for forecast evaluation*. G. Buccheri, R. Renò, G. Vocalelli. **Journal of Econometrics**.

(2025) *Identification of continuous-time linear filters when only discrete-time data is available*. G. Buccheri. **Econometric Reviews**.

(2024) *Realized random graphs, with an application to the interbank network*. G. Buccheri, P. Mazzarisi. **Journal of Financial Econometrics**.

(2023) *Estimating risk in illiquid markets: A model of market friction with stochastic volatility*. G. Buccheri, S. Grassi, G. Vocalelli. **Journal of Financial Econometrics**.

(2022) *High-dimensional Realized Covariance Estimation: a Parametric Approach*. G. Buccheri, G. A. Mboussa. **Quantitative Finance**.

(2021) *The Continuous-Time Limit of Score-Driven Volatility Models*. G. Buccheri, F. Corsi, F. Flandoli, G. Livieri. **Journal of Econometrics**.

(2020) *Managing liquidity with portfolio staleness*. G. Buccheri, D. Pirino and L. Trapin. **Decisions in Economics and Finance**.

(2020) *A DCC-Type Approach for Realized Covariance Modelling With Score-Driven Dynamics*. D. Vassallo, G. Buccheri and F. Corsi. **International Journal of Forecasting**.

(2020) *A Score-driven Conditional Correlation Model for Noisy and Asynchronous Data: an Application to High-frequency Covariance Dynamics*. G. Buccheri, G. Bormetti, F. Corsi and F. Lillo. **Journal of Business & Economic Statistics**.

(2020) *High-Frequency Lead-Lag Effects and Cross-Asset Linkages: a Multi-Asset Lagged Adjustment Model*. G. Buccheri, F. Corsi and S. Peluso. **Journal of Business & Economic Statistics**.

(2019) *HARK the SHARK: Realized volatility modelling with measurement errors and nonlinear dependencies*. G. Buccheri and F. Corsi. **Journal of Financial Econometrics**.

(2019) *A closed-form formula characterization of the Epps effect*. G. Buccheri, G. Livieri, D. Pirino and A. Pollastri. **Quantitative Finance**.

(2019) *Comment on: Price Discovery in High Resolution*. G. Buccheri, G. Bormetti, F. Corsi and F. Lillo. **Journal of Financial Econometrics**.

(2013) *Evolution of correlation structure of industrial indices of US equity markets*. G. Buccheri, S. Marmi and R.N. Mantegna. **Physical Review E**.

(2012) *Radiative electroweak corrections to Higgs production via Vector Boson Fusion using SCET: Numerical Results*. F. Siringo and G. Buccheri. **Physical Review D**.

Working papers

Semiparametric drift. G. Buccheri, G. Vocalelli.

Reservoir-driven parameters. G. Buccheri.

Testing Correct Specification with Jackknife Von Neumann Variance Estimation. G. Buccheri, F. Corsi.

Robust filtering and smoothing via perturbation methods. G. Buccheri, G. Bormetti, F. Corsi and F. Lillo.

Filtering and smoothing with score-driven models. G. Buccheri, G. Bormetti, F. Corsi and F. Lillo.

Conferences and seminars

2026
Invited speaker at the "Volatility and Liquidity Workshop", University of Pavia – Invited speaker at the conference "Score-driven and nonlinear state space models", Università Ca' Foscari, Venice – Symposium of the Society of Nonlinear Dynamics and Econometrics (SNDE), Católica-Lisbon School of Business and Economics – Quantitative Finance and Financial Econometrics, Aix-Marseille School of Economics – Discussant at the 3rd Verona Early Career Workshop in Economics & Financial Mathematics – "Financial Econometrics Meets Machine Learning" conference, University of Geneva.

2025
12th General AMaMeF Conference, University of Verona – Annual conference of the Society of Financial Econometrics (SoFiE), ESSEC Business School, Paris – Eleventh ICEE conference, University of Palermo – Symposium of the Society of Nonlinear Dynamics and Econometrics (SNDE), University of Texas at San Antonio.

2024
Annual meeting of the International Association of Applied Econometrics (IAAE), Thessaloniki – Invited seminar at ESSEC Business School, Paris – Invited seminar at Università Ca' Foscari, Venice – Symposium of the Society of Nonlinear Dynamics and Econometrics (SNDE), University of Padova.

2023
Invited speaker at the "Eco-Stat Asymptotic" workshop, University of Verona – Quantitative Finance and Financial Econometrics, Aix-Marseille School of Economics.

2022
European Winter Meeting of the Econometric Society, Berlin – Annual meeting of the International Association of Applied Econometrics (IAAE), King's College, London – Annual conference of the Society of Financial Econometrics (SoFiE), Cambridge University – Invited speaker at the "Data analytics for Business" workshop, University of Verona.

2021
Invited seminar at Department of Economics, University of Verona – Invited seminar at Department of Economics, Statistics and Finance, Università della Calabria.

2020
Computational and Financial Econometrics (CFE 2020), virtual conference – Mathematical and Statistical Methods for Actuarial Sciences and Finance (eMAF 2020), virtual conference – XXI Workshop on Quantitative Finance, University of Napoli Parthenope.

2019
Invited speaker at the "First Rome Workshop of Time Series and Financial Econometrics", Luiss University – 43rd AMASES meeting, University of Perugia – 12th annual conference of the Society of Financial Econometrics (SoFiE), Fudan University, Shanghai – Workshop on score-driven time series models, Cambridge-INET Institute – Invited job market seminar, University of Rome Tor Vergata.

2018
Computational and Financial Econometrics (CFE 2018), University of Pisa – Annual meeting of the International Association of Applied Econometrics (IAAE), Université du Québec, Montréal – Invited seminar at Politecnico di Milano, Department of Mathematics – XIX Workshop on Quantitative Finance, Università Roma Tre.

2017
Computational and Financial Econometrics (CFE 2017), Senate House, University of London – Brownbag seminar, Department of Econometrics, Vrije Universiteit Amsterdam – Annual meeting of the International Association of Applied Econometrics (IAAE), Hokkaido University, Sapporo – 10th annual conference of the Society of Financial Econometrics (SoFiE), NYU Stern School of Business, New York – XVIII Workshop on Quantitative Finance, Università Bicocca, Milan.

2016
Internal seminar at Scuola Normale Superiore, Pisa – "Market Microstructure, confronting many viewpoints", Institut Louis Bachelier, Paris (poster presentation).

2015
Invited seminar at UniCredit bank - R&D, Milan – Internal seminar at Intesa Sanpaolo bank - Direzione Risk Management, Milan.

Organization of conferences

Sept 2018 – "High-Frequency Financial Econometrics" workshop, Scuola Normale Superiore, Pisa

Referee activity

Journal of Financial and Quantitative Analysis, Review of Economics and Statistics, Journal of Econometrics, Journal of Business & Economic Statistics, Journal of Financial Econometrics, Econometric Reviews, International Journal of Forecasting, Annals of the Institute of Statistical Mathematics, Oxford Bulletin of Economics and Statistics, European Journal of Operational Research, Journal of Time Series Analysis, Quantitative Finance, Journal of Econometric Methods, Decisions in Economics and Finance, Journal of Commodity Markets, Statistical Methods & Applications, Empirical Economics, Journal of Approximation Theory, Communications in Nonlinear Science and Numerical Simulation, Statistica Neerlandica, Journal of Statistical Mechanics: Theory and Experiments, Physica A.

Teaching experience

2023-2024, 2024-2025, 2025-2026 – PhD course *Financial Time-Series*, Department of Economics, University of Verona.

2024-2025, 2025-2026 – MSc course *Econometria dei mercati finanziari*, Master in Finance and Banking, Department of Economics, University of Verona.

2021-2022, 2022-2023, 2023-2024, 2024-2025, 2025-2026 – MSc course *Data management for Business & Economics*, Master in Economics and Data Analysis, University of Verona.

2021-2022, 2022-2023, 2023-2024, 2024-2025, 2025-2026 – MSc course *Time series and forecasting*, Master in Economics and Data Analysis, University of Verona.

2020-2021 – PhD course *Conditional Score-Driven Models for Financial Time Series*, Department of Economics and Finance, University of Rome Tor Vergata.

2020-2021 – MSc course *Advanced topics in Finance and Insurance II*, Master of Finance and Banking, University of Rome Tor Vergata.

2020-2021 – BSc course *Mathematics I*, Bachelor in Business Administration and Economics, University of Rome Tor Vergata.

2020-2021 – TA in MSc course *Quantitative methods for Finance*, Department of Business and Management, Luiss University.

2019-2020 – TA in BSc course *Mathematics II*, Department of Economics and Finance, University of Rome Tor Vergata.

2016-2017 – TA in BSc course *Mathematics II*, Department of Economics and Finance, University of Rome Tor Vergata.

Supervision of Master, PhD students and research fellows

Dr. Giorgio Vocalelli, research fellow at the Department of Economics, University of Verona (2026).

Filippo Ruberto, research fellow at the Department of Economics, University of Verona (2026).

Cesare Cottonaro, PhD at the Department of Economics, University of Verona, co-supervised with Prof. Roberto Renò (2025-now).

Dr. Jiandong Wang, visiting PhD student at the Department of Economics, University of Verona, supported by China Scholarship Council (CSC) (2022-2024).

Elia Smaniotto, research fellow at the Department of Economics, University of Verona (2023-2024).

Dr. Marco Girardi, research fellow at the Department of Economics, University of Verona (2023-2024).

Supervised 20+ theses within the Master in Economics and Data Analysis at the University of Verona.

Supervised 5 research internships for Master students at the Department of Economics, University of Verona.

PhD committees

Dr. Ioanna-Yvonni Tsaknaki, Scuola Normale Superiore (2025)

Dr. Simone Serafini, University of Bologna (2025)

Dr. Francesco Campigli, Scuola Normale Superiore (2024)

Dr. Andrey Shternshis, Scuola Normale Superiore (2023)

Dr. Gael Mboussa Anga, Scuola Normale Superiore (2020)

Institutional and scientific responsibilities

2024-2025 – Member of the Scientific Committee of the Eleventh Italian Congress of Econometrics and Empirical Economics (ICEE), organized at the University of Palermo.

2024-now – Member of the Quality Assurance Group of the PhD in Economics and Finance at the University of Verona.

2024-now – Member of the Research Quality Assurance Group of the Department of Economics at the University of Verona.

2024-now – Member of the Quality Assurance Group of the Master in Economics and Data Analysis at the University of Verona.

2024-2025 – Member of the Evaluation Committee for Job Market Positions, Department of Economics, University of Verona.

2023-now – Member of the PhD Faculty Board (Collegio Dottorato) of the PhD in Economics and Finance at the University of Verona.

Public Engagement

Delivered the lecture "Gestioni patrimoniali e mercati efficienti: è possibile battere il mercato?" to high school students under the "Notte europea della ricerca" at the Department of Economics, University of Verona (a.y. 2025–2026).

Delivered the lecture "Educazione finanziaria e Finanza Personale" to high school students under the "Progetto competenze trasversali e orientamento" at the Department of Economics, University of Verona (a.y. 2025–2026).

Co-organized the event "Pomeriggio Attuariale" at the University of Verona in partnership with the *Consiglio Nazionale degli Attuari*. The event bridges academia and the insurance industry, addressing key topics such as risk assessment and the impact of AI (a.y. 2025–2026).

Co-organized the event "Educazione Finanziaria Facile", a financial literacy event bridging students and experts (a.y. 2023–2024).

Non-academic experience

Quantitative Engineer, swissQuant Group AG, Zurich (Mar-Oct 2014).

Quantitative Analyst intern, Intesa Sanpaolo, Milan (Jun-Dec 2013).

Courses and schools

Convex Optimization Short Course, held by Prof. S. Boyd at IMT Lucca (Apr 2016).

Advanced Risk and Portfolio Management Bootcamp, New York University (Jul 2015).

Scholarships and awards

Teaching award based on student evaluations for the *Data Management for Business & Economics* course in the academic year 2023-2024.

Teaching award based on student evaluations for the *Time Series and Forecasting* course in the academic years 2021-2022 and 2022-2023.

Erasmus+ "TALENT AT WORK" traineeship on "Score-driven models and applications to high-frequency financial data", 2017

SoFiE travel grant, 2017
Travel grant by the Society of Financial Econometrics

Alumni SSC prize, 2014
Best Diploma thesis at Scuola Superiore di Catania in the a.y. 2011-2012

Admitted at Collegio di Milano, 2012
One of the top 100 students of the Milan Universities to be accepted in the a.y. 2012-2013

Roberto Giordano prize, 2012
Best Master thesis in Theoretical Physics at University of Catania in the a.y. 2010-2011

Società Italiana di Fisica (SIF) national scholarship, 2006
Assigned to the top 50 Italian undergraduate students enrolled in a Physics program in 2006

Participation to the final stage of Italian Mathematical Olympiads, 2006

Verona, 09/11/2026