Beatrice Foroni

Curriculum Vitae *Last update 20/12/2022*

Personal Information

Born in, on	Rome, 08/06/1993
Domicile	via G. Sommeiller 25, Rome
Mobile phone	(+39)3351674338
E-mail	beatrice.foroni@uniroma1.it
	bea.frn@gmail.com

Education and titles

Nov. 2019 – actual **PhD in Models for Economics and Finance**, *University of Rome Sapienza*, Supervisor Prof. Lea Petrella.

Research interests

GARCH models

Graphical Models

Copula-based models for financial time series

Quantile Regression

Expectile Regression

Hidden Markov Models

Oct. 2017 – Jul. 2019 **Master degree in Finance and Insurance**, *University of Rome Sapienza*.

2012–2017 **Bachelor degree in Mathematics**, *University of Rome Sapienza*.

Master Thesis

title	*Copula Graphical Lasso Network for Commodities*
final mark	Summa cum Laude
date	12/07/2019
supervisor	Prof.ssa L. Petrella
co-advisor	Prof. P. De Angelis
description	Use of the Nonparanormal Gaussian LASSO - Graphical Model to study the interdependence structure of fifteen commodity future's among agricultural, energy and metal sectors.

Bachelor Thesis

title *Moto Browniano: dalla fisica alla probabilità*

date 20/03/2017

supervisor Prof. Sergio Caprara

Academic experiences

Sept. 2021 - Aug. 2022 **Integrating tutoring and teaching activity for disciplinar sector SECS-S/01, for a total of 40 monthly hours for 12 months**, LUISS Guido Carli University - Faculty of Political Science, Rome.

Mar. 2021 - Sept. 2021 **Integrating tutoring and teaching activity for disciplinar sector SECS-S/01, for a total of 40 hours**, University Sapienza - Faculty of Economics, Rome.
Winner of the comparative procedure 1223/2020 for the performance of additional teaching activities and tutoring for courses falling within the disciplinary scientific sector SECS-S/01 *Statistics*.

Mar. 2020 - Mar. 2021 **Integrating tutoring and teaching activity for disciplinar sector SECS-S/06, for a total of 40 hours**, University Sapienza - Faculty of Economics, Rome.
Winner of the comparative procedure 80/2020 for the performance of additional teaching activities and tutoring for courses falling within the disciplinary scientific sector SECS-S/06 *Mathematical methods of economics and actuarial and financial sciences*.

Conferences, schools and seminars

Conference presentations

September 2022 **Time varying quantile graphical model: a financial perspective**, European Conference on Data Analysis - ECDA2022, Federico II University.
Naples

May 2022 **Analyzing the Correlation Structure of Financial Markets Using a Quantile Graphical Model**, 51st Scientific Meeting of the Italian Statistical Society - SIS 2022, University of Campania "Luigi Vanvitelli".
Caserta

May 2022 **Time-varying graphical models for financial markets: a quantile approach**, 9th International Conference on Risk Analysis - ICRA 2022, University of Perugia.
Perugia

April 2022 **Graphical models for commodities: a quantile approach**, 10th International Hybrid Conference on Mathematical and Statistical Methods for Actuarial Sciences and Finance - MAF 2022, University of Salerno.
Salerno

March-April 2022 **Graphical models for commodities: a quantile approach**, XXIII Workshop on Quantitative Finance - QFW2022, University of Tor Vergata.
Rome

May 2021 **Sparse graphical model for joint estimation of conditional quantiles**, Network Models for Financial Contagion and Systemic Risk, University of Pavia.
Pavia

Summer Schools

June - July 2021 **Network Econometrics**, Postgraduate Course of Econometrics - 2021, University Ca' Foscari.
Venice

July - August 2018 **Strumenti e Tecniche MATLAB per il Calcolo Parallelo, l'Apprendimento Automatico e l'Analisi Massiva dei Dati**, Scuola di Calcolo Scientifico con MATLAB - 2018, University of Palermo.
Palermo

July 2018 **Programmazione e Calcolo Scientifico con MATLAB**, Scuola di Calcolo Scientifico con MATLAB - 2018, University of Palermo.
Palermo

Publications

1. Foroni, B., Morelli, G., Petrella, L. (2022). *The network of commodity risk.* **Energy Systems**, 1-47. Online publication: https://doi.org/10.1007/s12667-022-00530-7
2. Foroni B., Merlo L., Petrella L. (2022). *Graphical Models for Commodities: A Quantile Approach*, **Mathematical and Statistical Methods for Actuarial Sciences and Finance** (Proceedings of the 10th International Hybrid Conference on Mathematical and Statistical Methods for Actuarial Sciences and Finance - MAF 2022), pp. 957-962.
3. Foroni B., Merlo L., Petrella L. (2022). *Analyzing the Correlation Structure of Financial Markets Using a Quantile Graphical Model*, **Book of Short Papers SIS 2022** (Proceedings of the 51st Scientific Meeting of the Italian Statistical Society - SIS 2022), pp. 852-857.
4. Foroni B., Mazza S., Morelli G., Petrella L. (2020). *GLASSO Estimation of Commodity Risks*, **Book of Short Papers SIS 2020** (Proceedings of the 50st Scientific Meeting of the Italian Statistical Society - SIS 2020 (Postponed)), pp. 253-259

Submitted Papers

1. Foroni, B., Merlo, L., Petrella, L. (2022). *Expectile hidden Markov regression models for analyzing cryptocurrency returns.* Submitted to **Statistics and Computing**
2. Foroni, B., Merlo, L., and Petrella, L., (2022). *Quantile Graphical Lasso: an application to cryptocurrencies, commodities and stock indexes.* Submitted to **Annals of Applied Statistics**

Memberships

SIS, Societa' Italiana di Statistica

SIdE, Societa' Italiana di Econometria

Experience

Vocational

2017 **Unpaid traineeship**, *A.I.A.P.C.*, Roma.
Collection of statistical data for the analysis of football matches.

Languages

Italian	mother tongue
English	Fluent spoken and written English
French	Basic spoken and written French

IT skills

OS	MacOS, Windows, Unix
Program Languages	R, Python, C++, LaTeX
Software package	Matlab
Application softwares	Office, Adobe Suite

Additional Informations

DELF B2 Diplôme d'études en langue française, niveau B2