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Personal Data

Born in 1979 in Florence (Italy). British and Italian Citizen.

Research Interests

Statistics and Econometrics, Empirical Finance, Statistical Computing, Quantitative Finance, Network Analysis, Systemic Risk.

Academic and Visiting Positions (longer than a month)

Visiting Scholar Department of Economics, European University Institute	2015 Florence, Italy
Fernand Braudel Scholar Department of Economics, European University Institute	2014 Florence, Italy
Assistant Professor Department of Economics and Business, Universitat Pompeu Fabra	2011– Barcelona, Spain
Post-Doc Research Fellow Department of Finance, Stern School of Business, NYU Supervisor: Robert Engle	2008-2011 New York, USA
Visiting Scholar Department of Finance, Stern School of Business, NYU Sponsor: Robert Engle	2007–2008 New York, USA
Research Fellow Department of Statistics, University of Florence	2007-2008 Florence, Italy
Visiting Scholar Department of Economics, UCSD Sponsor: Hal White	2006 San Diego, USA
Research Fellow Department of Statistics, University of Florence	2003 Florence, Italy

Affiliations

Affiliated Professor Barcelona Graduate School of Economics	2011– Barcelona, Spain
Affiliated Researcher Volatility Institute, Stern School of Business, NYU	2011– New York, USA

Education

- Doctorate in Applied Statistics 2007
Department of Statistics, University of Florence
Thesis: "Essays in Parameter Reduction Techniques for Nonlinear Time Series Models" Florence, Italy
- B.S. in Economics and Quantitative Methods 2003
Department of Statistics, University of Florence
Thesis: "The impact of overnight innovation on intra-daily volatility: a high frequency approach" *summa cum laude* Florence, Italy

Articles

1. "Credit Risk Interconnectedness: What Does the Market Really Know?" with Puriya Abbassi, Christina Hans and Natalia Podlich, *Journal of Financial Stability*, forthcoming [doi:10.1016/j.jfs.2017.01.002](https://doi.org/10.1016/j.jfs.2017.01.002)
2. "SRISK: A Conditional Capital Shortfall Measure of Systemic Risk" with Robert Engle, *The Review of Financial Studies*, 2017, 30(1), 48-79, [doi:10.1093/rfs/hhw060](https://doi.org/10.1093/rfs/hhw060)
3. "Empirical Risk Minimization for Heavy-Tailed Losses" with Emilien Joly and Gabor Lugosi, *Annals of Statistics*, 2015, 43(6), 2507-2536, [doi:10.1214/15-AOS1350](https://doi.org/10.1214/15-AOS1350)
4. "Disentangling Systematic and Idiosyncratic Dynamics in Panels of Volatility Measures" with Matteo Barigozzi, Giampiero M. Gallo and David Veredas; *Journal of Econometrics*, 2014, 182(2), 364-382, [doi:10.1016/j.jeconom.2014.05.017](https://doi.org/10.1016/j.jeconom.2014.05.017)
5. "A Bayesian Approach for Capturing Daily Heterogeneity in Intra-Daily Durations Time Series: the Mixed Autoregressive Conditional Duration Model" with Marina Vannucci; *Studies in Nonlinear Dynamics & Econometrics*, 2013, 17(1), 21-46, [doi:10.1515/snde-2012-0043](https://doi.org/10.1515/snde-2012-0043)
6. "A Practical Guide to Volatility Forecasting Through Calm and Storm" with Robert Engle and Bryan Kelly; *Journal of Risk*, 2011, 14(2), 1-20
7. "Intra-daily Volume Modeling and Prediction for Algorithmic Trading" with Fabrizio Cipollini and Giampiero M. Gallo; *Journal of Financial Econometrics*, 2011, 9(3) 489-518, [doi:10.1093/jjfinec/nbq024](https://doi.org/10.1093/jjfinec/nbq024)
8. "Shrinkage Estimation of Semi-Parametric Multiplicative Error Models" with Giampiero M. Gallo; *International Journal of Forecasting*, 2011, 27(1) 365-378, [doi:10.1016/j.ijforecast.2010.04.005](https://doi.org/10.1016/j.ijforecast.2010.04.005)
9. "Comparison of Volatility Measures: A Risk Management Perspective" with Giampiero M. Gallo; *Journal of Financial Econometrics* 2010, 8(1) 29-56, [doi:10.1093/jjfinec/nbp009](https://doi.org/10.1093/jjfinec/nbp009)
10. "On Variable Selection for Volatility Forecasting: The Role of Focused Selection Criteria" with Giampiero M. Gallo; *Journal of Financial Econometrics* 2008, 6(4) 513-539, [doi:10.1093/jjfinec/nbn012](https://doi.org/10.1093/jjfinec/nbn012)
11. "Financial econometric analysis at ultra-high frequency: Data handling concerns" with Giampiero M. Gallo; *Computational Statistics & Data Analysis* 2006, 51(4) 2232-2245, [doi:10.1016/j.csda.2006.09.030](https://doi.org/10.1016/j.csda.2006.09.030)

Book Chapters

1. "Measuring Systemic Risk" with Viral Acharya, Robert Engle, Farhang Farazmand and Matthew Richardson in "Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance" Viral A. Acharya, Thomas F. Cooley, Matthew P. Richardson and Ingo Walter, editors Wiley 2010
2. "Multiplicative Error Models" with Giampiero Gallo and Fabrizio Cipollini in "Handbook in Financial Engineering and Econometrics: Volatility Models and Their Applications" L. Bauwens, C. Hafner and S. Laurent, editors Wiley 2012

Conference Proceedings

1. “Financial Risk Management Via Multi Model Inference Grid Applications” with Simone Contini, Riccardo Di Meo and Valerio Sullo; Proceedings of the “Grid Technology for Financial Modelling and Simulation” conference, 3-4 February 2006, Palermo, Italy

Working Papers

1. “Hierarchical GARCH”
Revise and Resubmit Journal of Empirical Finance
2. “Realized Networks”
with Eulalia Nualart and Yucheng Sun
Revise and Resubmit Journal of Applied Econometrics
3. “Impulse Response Estimation By Smooth Local Projections”
with Regis Barnichon
Revise and Resubmit Review of Economics and Statistics
4. “NETS: Network Estimation for Time Series”
with Matteo Barigozzi
Revise and Resubmit Journal of Applied Econometrics
5. “Community Detection in Partial Correlation Network Models”
with Gudmundur Stefan Gudmundsson and Gabor Lugosi
6. “Detecting Granular Time Series in Large Panels”
with Geert Mesters
7. “On the Consequences of Power-Law Behavior in Partial Correlation Network Models”
with Matteo Barigozzi and Gabor Lugosi
8. “A Truncated Two-Scales Realized Volatility Estimator”
with Eulalia Nualart and Yucheng Sun

Seminar and Conference Presentations (since 2011)

2017

Seminar at the Department of Economics, University of Southampton (Southampton, February 8, 2016); Seminar at CREST (Paris, February 23rd, 2017); “Vienna-Copenhagen Conference on Financial Econometrics” (Vienna, March 9-11, 2017); “Workshop in Time Series Econometrics” (invited talk) (Zaragoza, March 30-31, 2017); Seminar at the Department of Economics, Université Laval (Quebec City, April 7, 2017); Seminar at the Department of Economics University of Mannheim (Mannheim, April 25, 2017); Seminar at the Department of Economics Université Paris-Dauphine (Paris, May 4, 2017); Conference “Financial Econometrics” (invited talk) (Toulouse, May 12-13); Conference “Big Data in Dynamic Predictive Econometric Modeling” (Philadelphia, May 18-19, 2017); Seminar at the Department of Economics University of Orleans (Orleans, May 25, 2017); “Workshop on High-Dimensional Time-Series in Economics and Finance” (Vienna, 8-9 June, 2017); “Financial Econometrics” (invited talk) (Chengdu, 16 June, 2017)

2016

Seminar at the Department of Economics, Adam Smith Business School (Glasgow, February 10, 2016); Seminar at the Bank of International Settlements (Basel, March 4, 2016); Seminar at the Scuola Normale Superiore (Pisa, March 11, 2016); Seminar at Bilkent University (Ankara, April 15, 2016); Seminar at University of Zurich (Zurich, April 29, 2016); “Barcelona GSE Summer Forum on Time Series Analysis in Macro and Finance workshop” (Barcelona, June 20–21, 2016); CORE–ECORE/LSM Seminar at the Université catholique de Louvain (Louvain, November 25, 2016); “19th Applied Time Series Econometrics

Workshop” at the Federal Reserve Bank of St. Louis (invited talk) (St. Louis, September 30, 2016); “CFE 2016” at the University of Seville (Seville, December 9–11, 2016);

2015

Seminar at the CRM (Barcelona, January 15, 2015); “7th Hedge Fund Research Conference” (Paris, 22–23, January, 2015); Seminar at Banca D’Italia (Rome, April 9, 2015); “Econometric Workshop” at European University Institute (invited talk)(Florence, 30, April, 2015); “Workshop on Tail Event Driven Risk Modelling” at Cambridge University (invited talk) (Cambridge, 5–6, May, 2015); “High Dimensional Time Series in Macroeconomics and Finance” conference at IHS (Vienna, May 21–22, 2015); “New Frontiers in Systemic Risk Measures and Extreme Risk Management” conference at CUNY (invited talk) (New York, June 4, 2015) “Barcelona GSE Summer Forum on High Frequency Financial Econometrics” (Barcelona, June 11–12, 2015); “The Society for Financial Econometrics Eighth Conference” (Aarhus, June 23–25, 2015); Seminar at the Department of Finance, Accounting and Statistics of the University of Vienna (Vienna, November 13, 2015); 2015 International Dauphine-ESSEC-SMU Conference on Systemic Risk (invited talk) (Singapore, December 11–12, 2015); “9th International Workshop on Computational and Financial Econometrics” (London, December 12–14, 2015)

2014

“ECB workshop on using big data for forecasting and statistics” at the ECB (Frankfurt, April 7–8, 2014); Seminar at the Department of Economics of EUI (Florence, April 11, 2014); Seminar at the Department of Economics of University of St. Gallen (St. Gallen, April 28, 2014); Seminar at the Department of Economics of Ca Foscari University (Venice, May 12, 2014); Seminar at the Department of Economics of La Sapienza University (Rome, May 20, 2014) “Barcelona GSE Summer Forum on Time Series Analysis in Macro and Finance workshop” (Barcelona, June 19–20, 2014); Seminar at the Department of Econometrics of Erasmus School of Economics (Rotterdam, September 18, 2014); “Monitoring Systemic Risk: Data, Models and Metrics” workshop at the Isaac Newton Institute (invited talk) (Cambridge, September 22–26, 2014); “Financial Risk & Network Theory” workshop at the Judge Business School (Cambridge, September 13, 2014); Joint CFS, ECB and Deutsche Bundesbank Seminar at the ECB (Frankfurt, November 5, 2014); “Systemic Risk and Contagion” conference at the University of Bologna (Bologna, November 6-7, 2014); Seminar at the Tinbergen Institute (Amsterdam, November 28, 2014); Seminar at the Banque De France (Paris, December 9, 2014); “Greek Stochastics ζ ” (invited talk) (Athens, Greece, December 20-22)

2013

“ICEEE 2013” conference at the University of Genova (Genova, January 16–18, 2013); Seminar at the Bundesbank (Frankfurt, February 12, 2013); Seminar at the Department of Statistics of the London School of Economics (London, March 1, 2013); “3rd Humboldt–Copenhagen Conference on Financial Econometrics” at Humboldt University (Berlin, March 16–18, 2013); Seminar at IAE/UAB (Barcelona, April 17, 2013); “High Dimensional Time Series in Macroeconomics and Finance” conference at IHS (Vienna, May 2–4, 2013); “Financial Econometrics Conference” at the Toulouse School of Economics (Toulouse, May 17–18, 2013); “Barcelona GSE Summer Forum on Time Series Analysis in Macro and Finance workshop” (Barcelona, June 10–11, 2013); “EUI Measuring and Modeling Financial Risk with High Frequency Data workshop” (invited talk) (Florence, June 27–29, 2013); “2013 NBER-NSF Time Series Conference” at the Federal Reserve Board (Washington, September 26–27, 2013); Seminar at the Department of Economics of Koç University (Istanbul, October, 2, 2013); Seminar at IHS (Vienna, November, 28, 2013)

2012

“4th Hedge Fund Conference” conference at the Paris Bourse (Paris, January 26–27, 2012); Seminar at CREATES (Aarhus, February 23, 2012); Seminar at the Economics and Finance Department of Queen Mary University (London, March 19, 2012); Seminar at CREIP at Universitat Rovira i Virgili (Reus, March 27, 2012); Seminar at the Department of Economics of University College of London (London, May 8, 2012); Seminar at CEMFI seminar (Madrid, June 4, 2012); Seminar at the Department of Economics of University of Konstanz (Konstanz, July 11, 2012); “Recent Developments in Econometrics” conference at Universitat Rovira i Virgili (invited talk) (Reus, October 26, 2012); UPF Finance Lunch Seminar (Barcelona, November 9, 2012); “New Tools for Financial Regulation” conference at Banque de France (Paris, November 15–16, 2012); CORE–ECORE/LSM Seminar at the Université catholique de Louvain (Louvain, December 17, 2012)

2011

“Second Humboldt–Copenhagen Conference” at University of Copenhagen (Copenhagen, May 13–14, 2011); “SITE Summer 2011 Workshop: Measuring and Modeling Risk with High Frequency Data” (invited talk) (Stanford, June 21–20, 2011); “The Society for Financial Econometrics Fourth Conference” at the University of Chicago (Chicago, June 15–17, 2011); Quantitative Seminar at Barclays Capital New York (New York, March 29, 2011)

Referee Activity

American Economic Journal: Economic Policy, American Economic Review, Annals of Statistics, Computational Statistics & Data Analysis, Journal of Applied Econometrics, Journal of Banking and Finance, Journal of Business Economics and Statistics, Journal of Econometrics, Journal of Economic Dynamics and Control, Journal of Empirical Finance, Journal of Empirical Legal Studies, Journal of Financial and Quantitative Analysis, Journal of Financial Econometrics, Journal of Financial Intermediation, Journal of Financial Stability, Journal of Machine Learning Research, Journal of the American Statistical Association, Journal of the Royal Statistical Society (Series A), Macroeconomic Dynamics, Management Science, Quantitative Finance, Review of Asset Pricing Studies, Review of Economics and Statistics, Review of Economic Studies, Review of Financial Studies.

Editorial Activity

Associate Editor for the Journal of Risk and Financial Management (2014–), Annals of Financial Economics (2014–), Econometrics (2014–), Journal of Network Theory in Finance (2014–).

Teaching Experience

Advanced Courses

“Econometric Analysis of Networks”, CIdE Summer School in Econometrics 2014

“Econometric Analysis of Networks”, Master in Quantitative Finance, University of Bologna

Executive

“Systemic Risk Measurement”, Barcelona Graduate School of Economics course on Systemic Risk and Prudential Policy, 2012–.

Graduate

“Computing Lab” (in English), Barcelona Graduate School of Economics, 2014–.

“Financial Econometrics” (in English), Barcelona Graduate School of Economics, 2011–.

“Trading and Financial Markets” (in English), Barcelona Graduate School of Economics, 2012–2014.

“Volatility Modeling”, CIdE Summer School in Econometrics (in Italian until 2009 then English), 2007–2010, 2012.

Undergraduate

“Forecasting Techniques” (in English), Universitat Pompeu Fabra, 2014–.

“Probability & Statistics” (in English), Universitat Pompeu Fabra, 2011–2014.

“Applied Statistics with R”, University of Florence, 2007.

Conferences & Workshops Organization

Barcelona GSE Summer Forum on Time Series Analysis in Macro and Finance, Barcelona, Spain, June 10–11, 2014

Barcelona GSE Summer Forum on Time Series Analysis in Macro and Finance, Barcelona, Spain, June 10–11, 2013

Barcelona Workshop on Networks in Finance, Barcelona, Universitat Pompeu Fabra, Barcelona, Spain, May 3, 2012

Conference Scientific Committees

Fourth International Association of Applied Econometrics Conference, Sapporo, Japan, June 26-30, 2017

Third International Association of Applied Econometrics Conference, Milan, Italy, June 22-25, 2016

Eighth Annual SoFiE Conference, CREATES at Aarhus University, Aarhus, Denmark, June 24-26, 2015

High Dimensional Time Series in Macroeconomics and Finance, Vienna, IHS, May 21-22, 2015

Systemic Risk and Financial Regulation, Banque de France, Paris, July 3-4, 2014

Seventh Annual SoFiE Conference, Rotman School of Management and the Global Risk Institute, Toronto, Canada, June 11-13, 2014

Sixth Annual SoFiE Conference, Sim Kee Boon Institute for Financial Econometrics, Singapore, June 12-14, 2013

Marie Curie Risk ITN - Risk Management and Risk Reporting, University of Konstanz, Konstanz, Germany April 11-12, 2013

Fifth Annual SoFiE Conference, Saïd Business School, Oxford, UK, June 20-22, 2012

Ph.D. Student Job Market Placement

Yucheng Sun, 2014 (Co-supervised with Eulalia Nualart)

International School of Economics and Management at Capital University of Economics and Business (China)

Scientific Software Projects

Vlab (2008-2011): One of my assignments as Post-Doc of the Finance Department at Stern was the development of the Volatility Laboratory software. The Volatility Laboratory (Vlab) provides real time measurement, modeling and forecasting of financial volatility and correlations for a wide spectrum of assets. The project blends together both classic models as well as some of the latest advances proposed in the financial econometrics literature. The aim of the laboratory is to provide real time evidence on market dynamics for both researchers and practitioners. The vlab allows one to access statistics and graphs about volatility and correlations through a Web content management system. Starting from April 2010 the vlab also provides a variety of risk measures for top US financial firms and rankings of the most systemically risky firms. The aim of this project is to provide regulators and market participants tools for understanding and monitoring systemic risk in real time. The latest version of the vlab can be viewed at the URL <http://vlab.stern.nyu.edu>.

Grants

BBVA Grant for Research on Big Data
(2016-2017, EUR 100,000, PI: Barbara Rossi)

Spanish Ministry of Science Research Group Grants
(2012-2015, MTM2012-37195, EUR 34,000, PI: Gabor Lugosi; 2015-2017, MTM2015-67304-P, EUR 43,000,
PI: Gabor Lugosi and Omiros Papaspiliopoulos)

Awards, Fellowship and Scholarships

Beatriu de Pinós Fellowship, 2013

EUI Fernand Braudel Senior Fellowship, 2013

Engle Prize in Financial Econometrics, 2013
for the paper “Comparison of volatility measures: a risk management perspective”

Second placement for best Italian Applied Statistics PhD dissertation, 2007-2008.

University of Florence Scholarship for the Doctorate program in Applied Statistics, 2004

“Villa Favard” Award for most original thesis of the Florence School of Economics, 2003

References

Prof. Eric Ghysels
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Prof. Nikolaus Hautsch
Department of Statistics
and Operations Research
Faculty of Business, Economics
and Statistics
University of Vienna
Oskar-Morgenstern-Platz 1
A-1090 Vienna, Austria
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