

**Contacts**

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Houghton Street, WC2A 2AE, London, United Kingdom

**Personal details**

Place of birth: Milano, Italy      Citizenship: Italian

**Present**

London School of Economics and Political Science (LSE), Department of Statistics, Aug 2017–today  
Associate Professor

**Past**

London School of Economics and Political Science (LSE), Department of Statistics, Sep 2010–Jul 2017  
Assistant Professor

Université libre de Bruxelles, European Center for Advanced Research in Economics and Statistics (ECARES), Dec 2008–Aug 2010  
Post-doctoral researcher

Max Planck Institut für Ökonomik, Evolutionary Economics Group, Jena, May 2008–Oct 2008  
Post-doctoral researcher

Sant'Anna School for Advanced Studies, Istituto di Economia, Pisa, Oct 2005–Feb 2008  
Research fellow ("Assegno di ricerca")

Università la Sapienza, Dipartimento di Scienze Economiche, Roma, Oct 2007–Mar 2008  
Research assistant

Free University of Bözen, School of Economics and Management, May 2004–Sep 2004  
Research assistant

**Education**

Ph.D. Economics (supervisor: Marco Lippi), Apr 2008  
Sant'Anna School for Advanced Studies, Istituto di Economia, Pisa

M.Sc. Modelling and Simulation of Complex Realities, Sep 2003  
International School for Advanced Studies (ISAS) and International Center for Theoretical Physics (ICTP), Trieste

M.Sc. ("Laurea") in Physics (Mathematical Physics and Astrophysics), May 2002  
Università degli studi di Milano

**Visiting**

Università Bocconi, Bocconi Institute for Data Science and Analytics (BIDSA), Milano, Sep 2017–Dec 2017

Università di Bologna, Dipartimento di Scienze Statistiche "Paolo Fortunati", Oct 2017

Princeton University, Department of Operational Research and Financial Engineering (ORFE), Oct 2013–Nov 2013

Universitat Pompeu Fabra, Departament d'Economia i Empresa, Barcelona, Sep 2013

Universiteit Maastricht, Department of Quantitative Economics, Feb 2010

Columbia University, Business School, New York, Oct 2006–Apr 2007

Universidad Carlos III, Departamento de Estadística, Madrid, Oct 2005–Dec 2005

**Shorter visits**

Isaac Newton Institute for Mathematical Sciences, Cambridge, Aug 2016

The Chinese University of Hong Kong, Department of Statistics, Jun 2016

Federal Reserve Board of Governors, Washington, DC, May 2016 and May 2017

University of Bristol, Department of Mathematics, Dec 2015

Southwestern University of Finance and Economics, Chengdu, May 2015

Joint Research Centre, European Commission, Ispra, Jul 2014

University of Pennsylvania, Department of Economics, Philadelphia, Oct 2013 and Mar 2015

Institut für Höhere Studien (IHS), Vienna, Mar 2013

National University of Singapore, Institute for Mathematical Sciences, Jun 2012

## Professional qualifications

Qualification to Associate Professorship in Econometrics (“Abilitazione”) by the Italian Ministry of Education, Dec 2013  
Postgraduate Certificate in Higher Education by the UK Higher Education Academy, Dec 2013

## Other affiliations and professional roles

International Statistical Institute (ISI), elected member; Université libre de Bruxelles, ECARES, associated fellow;  
Euro Area Business Cycle Network (EABCN), fellow

## External faculty

Sant’Anna School for Advanced Studies, Istituto di Economia, Pisa, 2016–today  
African Institute for Mathematical Sciences (AIMS), Senegal, 2016  
Sciences Po, Paris School of International Affairs, 2014–2015

## Publications in journals

- “Spatio-Temporal Patterns of the International Merger and Acquisition Network”  
with Marco Dueñas, Rossana Mastrandrea, Giorgio Fagiolo, *Scientific Reports*, 2017, forthcoming
- “Generalized Dynamic Factor Models and Volatilities: Estimation and Forecasting”  
with Marc Hallin, *Journal of Econometrics*, 2017, forthcoming
- “A Network Analysis of the Volatility of High-Dimensional Financial Series”  
with Marc Hallin, *Journal of the Royal Statistical Society - series C*, 2017, 66(3), 581–605
- “Identifying the Independent Sources of Consumption Variation”  
with Alessio Moneta, *Journal of Applied Econometrics*, 2016, 31(2), 420–449
- “Generalized Dynamic Factor Models and Volatilities: Recovering the Market Volatility Shocks”  
with Marc Hallin, *The Econometrics Journal*, 2016, 19(1), C33–C60
- “Disentangling Systematic and Idiosyncratic Dynamics in Panels of Volatility Measures”  
with Christian Brownlees, Giampiero Gallo, David Veredas, *Journal of Econometrics*, 2014, 182(2), 364–384
- “Do Euro Area Countries Respond Asymmetrically to the Common Monetary Policy?”  
with Antonio Conti, Matteo Luciani, *Oxford Bulletin of Economics and Statistics*, 2014, 76(5), 693–714
- “The Common Component of Firm Growth”  
with Lucia Alessi, Marco Capasso, *Structural Change and Economic Dynamics*, 2013, 26, 73–82
- “The Distribution of Consumption-Expenditure Budget Shares. Evidence from Italian Households”  
with Lucia Alessi, Marco Capasso, Giorgio Fagiolo, *Structural Change and Economic Dynamics*, 2012, 23, 69–91
- “Nonfundamentalness in Structural Econometric Models: A Review”  
with Lucia Alessi, Marco Capasso, *International Statistical Review*, 2011, 79(1), 16–47
- “Identifying the Community Structure of the International Trade Multi Network”  
with Giorgio Fagiolo, Giuseppe Mangioni, *Physica A*, 2011, 390(11), 2051–2066
- “Immigrant’s Legal Status, Permanence in the Destination Country and the Distribution of Consumption Expenditure”  
with Biagio Speciale, *Applied Economics Letters*, 2011, 18(14), 1341–1347
- “Improving Penalization when Determining the Number of Factors in Approximate Static Factor Models”  
with Lucia Alessi, Marco Capasso, *Statistics and Probability Letters*, 2010, 80(23-24), 1806–1813
- “The Multi-Network of International Trade: A Commodity-Specific Analysis”  
with Giorgio Fagiolo, Diego Garlaschelli, *Physical Review E*, 2010, 81(4), 046104
- “On the Distributional Properties of Household Consumption Expenditures: The Case of Italy”  
with Lucia Alessi, Marco Capasso, Giorgio Fagiolo, *Empirical Economics*, 2010, 38(3), 717–741
- “On Approximating the Distributions of Goodness-of-fit Test Statistics Based on the Empirical Distribution Function: The Case of Unknown Parameters”  
with Lucia Alessi, Marco Capasso, Giorgio Fagiolo, *Advances in Complex Systems*, 2009, 12(2), 157–167

### Publications in conference proceedings

"Dynamic Factor Models for Forecasting and Structural Identification"  
in Mathematisches Forschungsinstitut Oberwolfach Reports 05, 2010

"Community Structure in the Multi-network of International Trade"  
with Giorgio Fagiolo, Giuseppe Mangioni  
in Complex Networks. Communications in Computer and Information Science, 2011, Volume 116, 163–175

### Working papers (\*submitted)

"Common Factors, Trends, and Cycles in Large Datasets" \*,  
with Matteo Luciani

"Sequential Testing for Structural Stability in Approximate Factor Models" \*,  
with Lorenzo Trapani

"Identification of Global and National Shocks in International Financial Markets via General Dynamic Factor Models" \*,  
with Marc Hallin and Stefano Soccorsi

"On the Consequences of Power-Law Behavior in Partial Correlation Network Models" \*,  
with Christian Brownlees, Gabor Lugosi

"Simultaneous Multiple Change-Point and Factor Analysis for High-Dimensional Time Series" \*,  
with Haeran Cho, Piotr Fryzlewicz

"Non-Stationary Dynamic Factor Models for Large Datasets" \*,  
with Marco Lippi, Matteo Luciani, Board of Governors of the Federal Reserve System Working Paper, FEDS 2016-024

"Dynamic Factor Models, Cointegration, and Error Correction Mechanisms" \*,  
with Marco Lippi, Matteo Luciani

"NETS: Network Estimation for Time Series" \*,  
with Christian Brownlees

"On the Stability of Euro Area Money Demand and its Implications for Monetary Policy" \*,  
with Antonio Conti

"Estimation and Forecasting in Large Datasets with Conditionally Heteroskedastic Dynamic Common Factors",  
with Lucia Alessi, Marco Capasso, European Central Bank Working Paper, No. 1115

### Presentations at conferences and workshops (\*invited)

European Meeting of Statisticians (EMS), University of Helsinki\*, Jul 2017

III Vienna Workshop for High Dimensional Time Series in Macroeconomics and Finance, IHS, Vienna, Jun 2017

Big Data in Predictive Dynamic Econometric Modeling, University of Pennsylvania, Philadelphia\*, May 2017

Inference in Large Econometric Models, CIREQ, Montréal\*, May, 2017

X International Conference on Computational Financial Econometrics (CFE), Sevilla\*, Dec, 2016

V International Conference in Memory of Carlo Giannini, Università di Bergamo, Nov 2016

Network Science and its Applications, Isaac Newton Institute for Mathematical Sciences, Cambridge\*, Aug 2016

IV Institute of Mathematical Statistics Asia Pacific Rim Meeting (IMS-APRM), The Chinese University of Hong Kong\*, Jun 2016

New Trends and Developments in Econometrics, Banco de Portugal, Lisbon, Jun 2016

IX International ERCIM Conference on Computational and Methodological Statistics, London\*, Dec, 2015

Econometrics of Networks, INET, Cambridge University\*, Jun 2015

Statistical Finance, Southwestern University in Finance and Economics, Chengdu\*, May 2015

Modeling High-Dimensional Dynamic Networks in Economics and Finance, University of Pennsylvania, Philadelphia\*, Mar 2015

VI Conference on Complex Networks, New York, Mar 2015

VIII International Conference on Computational Financial Econometrics (CFE), Pisa\*, Dec 2014

Nonlinear time series analysis thresholding and beyond in celebration of Howell Tong's 70th birthday, LSE\*, Sep 2014

Dynamic Factor Models and Structural VAR Analysis in celebration of Marco Lippi's 70th birthday, EIEF, Roma\*, Sep 2014

X BMRC-DEMS Conference on Macro and Financial Econometrics, Brunel University, London, May 2014

IV Conference in Memory of Carlo Giannini, Università di Pavia, Mar 2014

New Developments in Econometrics and Time Series, ECARES, Université libre de Bruxelles\*, Sep 2013

Advances in Latent Variables, Methods, Models and Applications, Società Italiana di Statistica, Università di Brescia\*, Jun 2013

V Italian Congress of Econometrics and Empirical Economics (ICEEE), Università di Genova, Jan 2013

New Developments in Econometrics and Time Series, EIEF, Roma\*, Sep 2012

Financial Time Series, National University of Singapore\*, Jun 2012  
 Statistical Models for Financial Data, Technische Universität Graz\*, May 2012  
 III Conference in Memory of Carlo Giannini, Banca d'Italia, Roma, Apr 2012  
 Workshop on Factor Models, Universitat Autònoma de Barcelona\*, Dec 2011  
 V International Conference on Computational Financial Econometrics (CFE), London\*, Dec 2011  
 Econometric and Statistical Modelling of Multivariate Time Series, Université catholique de Louvain-la-Neuve\*, May 2011  
 Royal Economic Society Conference, Royal Holloway University, London, Apr 2011  
 IV Italian Congress of Econometrics and Empirical Economics (ICEEE), Università di Pisa, Jan 2011  
 IV International Conference on Computational Financial Econometrics (CFE), London\*, Dec 2010  
 XVI International Conference on Computing in Economics and Finance (CEF), City University, London, Jul 2010  
 Sir Clive Granger Memorial Conference, University of Nottingham, May 2010  
 Semiparametric Modelling of Multivariate Time Series, Mathematisches Forschungsinstitut Oberwolfach\*, Jan 2010  
 Interuniversity Attraction Pole (IAP) Meeting, Katholieke Universiteit Leuven\*, Jul 2009  
 IV Bruxelles-Waseda Seminar on Time Series and Financial Statistics, ENSAI, Rennes\*, Jun 2009  
 Workshop on Trade Networks, Sant'Anna School for Advanced Studies, Pisa\*, Jan 2009  
 International Conference on Factor Structures for Panel and Multivariate Time Series Data, Universiteit Maastricht, Sep 2008  
 XIV International Conference on Computing in Economics and Finance (CEF), Université de la Sorbonne, Paris, Jul 2008  
 Multivariate Volatility Models, Universidad do Algarve, Faro, Jun 2007  
 XXVI International Symposium on Forecasting, Santander, Jun 2006  
 Italian Congress on Time Series, Roma, Apr 2006

#### Invited seminars

Dipartimento di Economia, Università Ca' Foscari, Venezia, Nov 2017  
 Dipartimento di Scienze Statistiche, Università di Bologna, Oct 2017  
 Departamento de Estadística, Universidad Carlos III, Madrid, Apr 2017  
 Center for Economic and International Studies, CEIS, Università degli studi di Tor Vergata, Roma, Apr 2017  
 Cass Business School, City University of London, Mar 2017  
 Southampton Statistical Sciences Research Institute, S3RI, University of Southampton, Feb 2017  
 Economic Modelling and Forecasting Group, Warwick Business School, University of Warwick, Feb 2017  
 Now-Casting Economics Ltd., London, Jan 2017  
 School of Economics and Finance, Queen Mary University of London, Dec 2016  
 Faculté d'Économie et Management, Université de Genève, Dec 2016  
 Faculty of Mathematics and Statistics, Universität St.Gallen, May 2015  
 Department of Economics, University of Pennsylvania, Philadelphia, Mar 2015  
 Department of Mathematics, University of Bristol, Mar 2015  
 Department of Economics, Mathematics and Statistics, Birkbeck College, London, May 2014  
 Center for Applied Statistics and Economics, CASE, Humboldt-Universität zu Berlin, May 2014  
 Dipartimento di Economia, Università di Genova, Apr 2014  
 Dipartimento di Economia e Statistica, Università di Salerno, Apr 2014  
 Dipartimento di Economia, Università di Verona, Mar 2014  
 ORFE, Princeton University, Nov 2013  
 Departamento de Fundamentos del Análisis Económico, Universidad de Alicante, May 2013  
 Dipartimento di Economia, Università di Pisa, Apr 2013  
 IHS, Vienna, Mar 2013  
 Department of Medical Statistics, London School of Hygiene and Tropical Medicine, Mar 2013  
 Institut de Recherche en Statistique, Université libre de Bruxelles, Feb 2013  
 Istituto di Economia, Sant'Anna School for Advanced Studies, Pisa, Sep 2012  
 Departament d'Economia i Empresa, Universitat Pompeu Fabra, Barcelona, May 2012  
 Department of Economics, University of Manchester, Mar 2012  
 Departamento de Fundamentos del Análisis Económico, Universidad de Alicante, May 2011  
 Dipartimento di Economia, Università dell'Insubria, Varese, Mar 2011  
 Joint Statistics and Econometrics Seminar, LSE, Feb 2011  
 ECARES, Université libre de Bruxelles, Mar 2010  
 Department of Statistics, LSE, Mar 2010  
 Institut de Recherche en Statistique, Université libre de Bruxelles, Feb 2010  
 CORE, Université catholique Louvain-la-Neuve, Oct 2009  
 Department of Quantitative Economics, Universiteit Maastricht, May 2009  
 Institut de Recherche en Statistique, Université libre de Bruxelles, Dec 2008  
 Dipartimento di Matematica Federigo Enriques, Università degli Studi di Milano, Apr 2008  
 Chair of System Design, ETH, Zürich, Jan 2008  
 Evolutionary Economics Group, Max Planck Institut für Ökonomik, Jena, Jan 2008  
 ECARES, Université libre de Bruxelles, Nov 2007

## Teaching

### *PhD courses*

Time Series (25 hrs), 2016–2017, Doctoral program in Economics, Sant'Anna School for Advanced Studies, Pisa  
Factor Models in Time Series with Applications in Macroeconomics and Finance (15hrs), 2014–2016, Methods Summer Programme, LSE  
Factor Models in Time Series (10hrs), 2014–2015, Doctoral program in Mathematics and Statistics, London Taught Course Centre  
Dynamic Factor Models (10 hrs), 2013, Doctoral program in Economics, Universidad de Alicante  
Dynamic Factor Models with Matlab (4 hrs), 2016, Doctoral program in Statistics, The Chinese University of Hong Kong  
Dynamic Factor Models with Matlab (8 hrs), 2013, Doctoral program in Economics, IHS, Vienna

### *MSc courses*

Applied Econometrics (24hrs), 2014–2015, Master in International Economic Policy, Paris School of International Affairs, Sciences Po  
Generalised Linear Modelling and Survival Analysis (30 hrs), 2011–2014, Master in Statistics, LSE  
Modelling Volatility in Time Series (10hrs), 2012–2014, Doctoral Summer School of Econometrics, CIDE, Bertinoro  
Trade Networks (3 hrs), 2011, Doctoral program in Economics, Universidad de Alicante  
Advanced Calculus (20 hrs), 2008, Doctoral program in Economics, Sant'Anna School for Advanced Studies, Pisa

### *Undergraduate courses*

Time Series and Forecasting (30 hrs), 2015–today, LSE  
Probability Theory (30 hrs), 2010–today, LSE

## Referee

The Annals of Statistics, Journal of the American Statistical Association, Journal of the Royal Statistical Society (series B and C), Journal of Econometrics, The Review of Economics and Statistics, Statistica Sinica, Journal of Banking and Finance, Journal of Business and Economic Statistics, Journal of Applied Econometrics, Econometrics Journal, Journal of Financial Econometrics, Oxford Bulletin of Economics and Statistics, Studies in Nonlinear Dynamics & Econometrics, Scandinavian Journal of Statistics, Computational Statistics and Data Analysis, Journal of Statistical Planning and Inference, Journal of Forecasting, Econometric Reviews, International Journal of Forecasting, Economics Bulletin, Industrial and Corporate Change, Physica A, Journal of Korean Statistical Society, Statistical Papers, Econometrics and Statistics, North American Journal of Economics and Finance, Journal of Economic Interaction and Coordination

## Editor

Associate Editor, Journal of Korean Statistical Society, 2014–today

## Scholarships and awards

Carlo Giannini Prize for the best paper in Macroeconometrics and Financial Econometrics, 2011  
Bourse d'Excellence Wallonie Bruxelles International, 2008–2010  
Doctoral Scholarship by Italian Ministry of Education, 2003–2006  
Scholarship from International School for Advanced Studies (ISAS-SISSA), Trieste, 2002–2003

## Conferences scientific committee and/or organizer

Workshop on High Dimensional Time Series in Macroeconomics and Finance, IHS, scientific committee, Vienna, 2017  
International work-conference on Time Series, Universidad de Granada, scientific committee, 2017  
Invited session "Macroeconometrics and Time Series", CFE, Sevilla, 2016  
Invited session "High-Dimensional Models and Networks in Macroeconomics and Finance", CFE, London, 2015  
Workshop on Complex Systems and Times Series, LSE, organiser, 2015  
Workshop on High Dimensional Time Series in Macroeconomics and Finance, IHS, scientific committee, Vienna, 2015

## Departmental duties

Organizer of the Econometrics and Statistics Workshops, LSE, 2011–today  
Organizer of the Statistics Seminars, LSE, 2011–2012  
Responsible for MSc Admissions, LSE, 2016–today  
Responsible for BSc Admissions, LSE, 2010–today

## Referee for research centers

French Agence Nationale de la Recherche (ANR), Hong Kong Research Grants Council (RGC), Austrian Science Fund (FWF), Natural Sciences and Engineering Research Council of Canada (NSERC), National Center of Science and Technology Evaluation of Kazakhstan

## Languages

Italian (native), English, French, Spanish

## IT skills

Matlab, R, Mathematica, EViews, Stata, Gauss, SPSS, Linux, Mac, Windows, L<sup>A</sup>T<sub>E</sub>X, OpenOffice, Microsoft Office

## Students

- PhD supervision:* Ali Habibnia, LSE, 2012–2017, Non-linear forecasting of large panels of time series  
Ragvir Sabharwal, LSE, 2015–2018 (expected), Online change point detection  
Filippo Pellegrino, LSE, 2017–2020 (expected)  
Gianluca Giudice, LSE, 2018–2021 (expected)
- MSc supervision:* Angela Abbate, Università di Pisa, 2011 (then doctoral student at European University Institute)  
Mengyi Gong, LSE, 2012 (then doctoral student at Glasgow Univeristy)
- PhD committee:* Sujin Park, LSE, 2011 Yang Yan, LSE, 2014; Yoel Furman, Oxford, 2015; Lorenzo Ricci, ECARES, 2015;  
Baojun Dou, LSE, 2015; Anna-Louise Schroeder, LSE, 2016; Qilin Hu, LSE, 2016