

July 10, 2016

Monica Billio

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CURRICULUM VITAE

PERSONAL

PROFESSIONAL EXPERIENCE

- May 2014 - : Head Department of Economics, University Ca' Foscari of Venice.
- October 2011 – September 2014: Head Campus Treviso, University Ca' Foscari of Venice.
- November 2006 - : Professor of Econometrics, Department of Economics, University Ca' Foscari of Venice.
- January 1996 - : Consultant at GRETA Associati.
- November 2000 – October 2006: Associate Professor of Econometrics, Department of Economics, University Ca' Foscari of Venice.
- January 1996 – October 2000: Assistant Professor of Econometrics, Department of Economics, University Ca' Foscari of Venice.
- October 1994 - December 1995: Researcher at CREST (INSEE Paris): Thesis preparation.
- December 1994 - December 1995 : Junior Consultant at the Caisse Autonome de Refinancement (Groupe Caisse des Dépôts et des Consignations), Paris.
- April 1993 - September 1993: Research assistant at GRETA Associati, Venice.

ACADEMIC DUTIES

- 2014 - Head of the Department of Economics, University Ca' Foscari of Venice.
- 2006 - International Master in Economics and Finance, Department of Economics, University Ca' Foscari of Venice: Member of the Teaching Committee.
- 2003 - PhD in Quantitative Economics, University Ca' Foscari of Venice: Member of the Teaching Committee.
- 2011 - 2014 Head of the School of Economics, Languages and Entrepreneurship (Treviso branch of the University Ca' Foscari of Venice)
- 2008 - 2014 Deputy Head of Department of Economics, University Ca' Foscari of Venice.
- 2007 - 2014 Coordinator of the Teaching Committee, Degree in Economics and Finance, University Ca' Foscari of Venice.
- 2005 - 2014 Department of Economics, University Ca' Foscari of Venice: Member of the Executive Committee.

AFFILIATIONS AND PROFESSIONAL SERVICES

Member of the Board of Directors Banco delle Tre Venezie (2015-2018)
Panel member AXA Postdoctoral fellowships, 2015-:.
Panel member Bank of Italy "Mortara" fellowships, 2014-:.
Associate Editor *Econometrics and Statistics*, 2015-:.
Associate Editor *Annals Computational Statistics and Data Analysis*, 2011-2015.
Member of the Steering Committee, *SIde* Italian Econometric Society (2013-2016).
Member of the Board of Directors, *EFMA* European Financial Management Association (2014-2017).
Member of the Scientific Committee, *AIFIRM* Italian Association Financial Industry Risk Managers (2013-2016).
Member Scientific Committee, *Computational and Financial Econometrics Network*, 2013-:.
Member of the following societies: *Econometric Society* (from 1995), *Italian Econometric Society (SIde)*, from 2009).
Municipal Councilor for Culture *Comune di Trevignano* (1988-1993)

EDUCATION

October 1994 – January 1999

Ph.D. in Applied Mathematics, University Paris IX Dauphine, France; Summa cum laude.

Subject: Simulation based methods for inference in non linear state-space models

Supervisor: Alain Monfort

Committee: Proff. C. Gouriéroux, E. Renault, S. Richardson, G. Calzolari, H. van Dijk.

1993-1994 DEA M.A.S.E. (Mathématiques Appliquées aux Sciences Economiques), University Paris IX Dauphine, France.

1987-1993 Laurea in Economics, University Ca' Foscari of Venice, Italy. Summa cum laude.

GRANTS, HONORS AND AWARDS

Advanced Research Award, University Ca' Foscari of Venice, 2015.

University of Orléans, France: Visiting Scholar Program, 2012.

University Paris 1 Sorbonne, France: Visiting Scholar Program, 2011.

University Paris IX Dauphine, France: Visiting Scholar Program, 2010.

Banque of France: Visiting Scholar Program, 2008-2009.

Ecole Normale Supérieure de Cachan, Paris: Visiting Scholar Program, 2007.

Ente Luigi Einaudi, Rome, Italy: Scholarship, 1994-1995 and 1995-1996.

University Paris IX Dauphine, France: Research Grant, 1994-1996.

University of Venice, Italy: Scholarship, 1993-1994.

Nice Etoile and Bologna Lyons Clubs: Fellowship, 1991.

PUBLICATIONS

Peer-Reviewed Journals

1. Ahelegbey, D.F., M. Billio and R. Casarin (2016), Sparse Graphical Vector Autoregression: A Bayesian Approach, forthcoming *Annals of Economics and Statistics*.

2. Billio M., R. Casarin, M. Costola and A. Pasqualini (2016), An entropy-based early warning indicator for systemic risk, forthcoming *Journal of International Financial Markets, Institutions and Money*.
3. Billio M., R. Casarin, F. Ravazzolo and H.K. van Dijk (2016), Interconnections between Eurozone and US booms and busts using a Bayesian Panel Markov-Switching VAR model, forthcoming *Journal of Applied Econometrics*.
4. Billio M., R. Casarin and A. Osuntuyi (2016), Efficient Gibbs Sampling for Markov Switching GARCH Models, *Computational Statistics and Data Analysis*, 100, 37-57.
5. Billio M., L. Frattarolo and L. Pelizzon (2016), Hedge Fund Tail Risk: An investigation in stressed markets, *Journal of Alternative Investments*, 18/4, 109-124.
6. Billio M. and Cavicchioli M. (2016), Validating Markov Switching VAR Through Spectral Representations, *Studies in Computational Intelligence*, 622, 3-15.
7. Ahelegbey, D.F., M. Billio and R. Casarin (2016), Bayesian Graphical Models for Structural Vector Autoregressive Processes, *Journal of Applied Econometrics*, 31, 357-386.
8. Billio M., M. Caporin and M. Costola (2015), Backward/forward optimal combination of performance measures for equity screening, *North American Journal of Economics and Finance*, 34, 63-83.
9. Billio M. and S. Di Sanzo (2015), Granger-causality in Markov switching models, *Journal of Applied Statistics*, 42/5, 956-996.
10. Addo P.M., M. Billio and D. Guégan (2014), Turning point chronology for the Euro-Zone: A Distance Plot Approach, *Journal of Business Cycle Measurement and Analysis*, 1, 1-14.
11. Addo P.M., M. Billio and D. Guégan (2014), The Univariate MT-STAR Model and a new linearity and unit root test procedure, *Computational Statistics and Data Analysis*, 76, 4-19.
12. Billio M. and M. Cavicchioli (2014), Business Cycle and Markov Switching Models with Distributed Lags: a Comparison between US and Euro Area, *Rivista Italiana degli Economisti* Vol. XIX, N.2, 253-276.
13. Billio M., L. Frattarolo and L. Pelizzon (2014), A time varying performance evaluation of hedge fund strategies through aggregation, *Bankers, Markets & Investors*, 129, 38-56.
14. Merton R.C., M. Billio, M. Getmansky, D. Gray, A.W. Lo and L. Pelizzon (2013), On a New Approach for Analyzing and Managing Macrofinancial Risks, *Financial Analysts Journal*, 69/2, 22-33.
15. Billio M., R. Casarin, F. Ravazzolo and H.K. van Dijk (2013), Time-varying Combinations of Predictive Densities using Nonlinear Filtering, *Journal of Econometrics*, 177/2, 213-232.
16. Addo P.M., M. Billio and D. Guégan (2013), Nonlinear Dynamics and Recurrence Plots for Detecting Financial Crisis, *North American Journal of Economics and Finance*, 26, 416-435.
17. Billio M., L. Ferrara, D. Guégan and G.L. Mazzi (2013), Evaluation of Regime-Switching Models for Real-Time Business Cycle Analysis of the Euro Area, *Journal of Forecasting*, 32/7, 577-586.

18. Billio M., R. Casarin, F. Ravazzolo and H.K. van Dijk (2012), Combination Schemes for Turning Point Predictions, *Quarterly Review of Economics and Finance*, 52, 402-412.
19. Billio M., M. Getmansky, A.W. Lo and L. Pelizzon (2012), Econometric Measures of Connectedness and Systemic Risk in the Finance and Insurance Sectors, *Journal of Financial Economics*, 104, 535-559.
20. Billio M., M. Getmansky and L. Pelizzon (2012), Dynamic Risk Exposure in Hedge Funds, *Computational Statistics and Data Analysis*, 56, 3517-3532.
21. Billio M., L. Calès and D. Guégan (2012), A Cross-Sectional Score for the Relative Performance of an Allocation, *International Review of Applied Financial Issues and Economics*, 3/4, 700-710
22. Billio M., L. Calès and D. Guégan (2011), Portfolio Symmetry and Momentum, *European Journal of Operational Research*, 214/3, 759-767.
23. Billio M. and R. Casarin (2011), Beta Autoregressive Transition Markov-switching Models for Business Cycle Analysis, *Studies in Nonlinear Dynamics & Econometrics*, Vol. 15/4.
24. Billio M. and R. Casarin (2010), Identifying Business Cycle Turning Points with Sequential Monte Carlo Methods: an on-line and real time application to the Euro area, *Journal of Forecasting*, 1-2, 145-167.
25. Billio M. and M. Caporin (2010), Market Linkages, Variance Spillover and Correlation Stability: Empirical Evidences of Financial Contagion, *Computational Statistics and Data Analysis*, 54/11, 2443-2458.
26. Billio M., M. Getmansky and L. Pelizzon (2009), Non-Parametric Analysis of Hedge Fund Returns: New Insights from High Frequency Data, *Journal of Alternative Investments*, 12/1, 21-38.
27. Billio M. and M. Caporin (2009), A generalised Dynamic Conditional Correlation model for portfolio risk evaluation, *Mathematics and Computers in Simulation*, 79/8, 2566-2578.
28. Anas J., M. Billio, L. Ferrara and G.L. Mazzi (2008), A System for Dating and Detecting Turning Points in the Euro Area, *The Manchester School*, 76/5, 549 - 577.
29. Billio M., M. Caporin and G. Cazzavillan (2008), Dating Euro15 monthly business cycle jointly using GDP and IPI, *Journal of Business Cycle Measurement and Analysis*, 3/3, 333-366.
30. Casarin R. and M. Billio (2007), Stochastic Optimisation for Allocation Problem with Shortfall Risk Constraints, *Applied Stochastic Models in Business and Industry*, 23/3, 247-271.
31. Billio M., M. Caporin and M. Gobbo (2006), Flexible Dynamic Conditional Correlation Multivariate GARCH for Asset Allocation, *Applied Financial Economics Letters*, 2, 123-130.
32. Billio M. and M. Caporin (2005), Multivariate Markov switching dynamic conditional correlation GARCH representations for contagion analysis, *Statistical Methods and Applications*, 14/2, 145-161.
33. Billio M. and L. Pelizzon (2003), Volatility and shocks spillover before and after EMU in Europe stock markets, *Journal of Multinational Financial Management*, 13, 323-340.

34. Billio M. and A. Monfort (2003) Kernel-Based Indirect Inference, *Journal of Financial Econometrics*, 1, 3, 297-326.
35. Billio M. and L. Pelizzon (2003), Contagion and Interdependence in Stock Markets: Have they been misdiagnosed?, *Journal of Economics and Business* 55, 5/6, 405-426.
36. Billio M., D. Sartore and C. Toffano (2000), Combining forecasts: some results on exchange and interest rates, *The European Journal of Finance*, 6/2, 1-20.
37. Billio M. and L. Pelizzon (2000), Value-at-Risk: a multivariate switching regime approach, *Journal of Empirical Finance*, 7, 531-554. Reprinted in *Financial Mathematics and Economics*, Vol. 1/2, 2002.
38. Billio M., A. Monfort and C.P. Robert (1999), Bayesian estimation of switching ARMA models, *Journal of Econometrics*, 93/2, 229-255.
39. Billio M. and A. Monfort (1998), Switching state space models: likelihood, filtering and smoothing, *Journal of Statistical Planning and Inference*, 68/1, 65-103.

Book contributions

40. Billio M., M. Getmansky and L. Pelizzon (2016), Financial Crises and the Evaporation of Diversification Benefits of Hedge Funds, Chap. 24 in K. Baker and G. Filbeck (Eds.), *Hedge Funds: Structure, Strategies, and Performance*, Oxford University Press, New York.
41. Addo P.M., M. Billio and D. Guégan (2014), Nonlinear Dynamics and Wavelets for Business Cycle Analysis, in M. Gallegati and W. Semmler (Eds.), *Wavelets Applications in Economics and Finance*, Dynamic Modeling and Econometrics in Economics and Finance, Volume 20, 73-100, Springer Series.
42. Billio M., M. Caporin, L. Pelizzon and D. Sartore (2012), CDS Industrial Sector Indices, credit and liquidity risk. In *Credit Portfolio Securitizations and Derivatives*, D. Rösch and H. Scheule (Eds.), John Wiley & Sons, 104-123.
43. Billio M., K.Y. Mamo, L. Pelizzon (2012), Crises and Fund of Hedge Funds Tail Risk. In *Reconsidering Funds of Hedge Funds: the Financial Crisis and Best Practices in UCITS, Tail Risk, Performance, and Due Diligence*, G. Gregoriou (Ed.), Elsevier, 110-140.
44. Billio M. and M. Caporin (2011), Contagion Dating through Market Interdependence Analysis and Correlation Stability, in *Financial Contagion: The Viral Threat to the Wealth of Nations*, Robert W. Kolb (Ed.), Wiley, Chap. 4.
45. Billio M., M. Getmansky and L. Pelizzon (2008), Calculating VaR for Hedge Funds, in *The VAR Implementation Handbook*, G. Gregoriou (Ed.), McGraw Hill, pagg. 3-24.
46. Anas J., M. Billio, L. Ferrara and M. Lo Duca (2007), Business cycle analysis with multivariate Markov switching models, in *Growth and Cycle in the Eurozone* (eds G.L. Mazzi and G. Savio), 249-260, Palgrave Macmillan.
47. Anas J., M. Billio, L. Ferrara and M. Lo Duca (2007), A turning point chronology for the Euro-zone classical and growth cycle, in *Growth and Cycle in the Eurozone* (eds G.L. Mazzi and G. Savio), 261-274, Palgrave Macmillan.
48. Billio M., R. Casarin and D. Sartore (2007), Bayesian inference in dynamic models with latent factors, in *Growth and Cycle in the Eurozone* (eds G.L. Mazzi and G. Savio), 25-44, Palgrave Macmillan.

49. Billio M. and D. Sartore (2003), Stochastic Volatility Model: A Survey with Applications to Option Pricing and Value at Risk, chap. 8 in *Quantitative Methods for Trading and Investment*, ed. C. Dunis, J. Laws and P. Naïm, John Wiley, 239-291.

50. Billio M., R. Casarin, C. Méhu and D. Sartore (1999), Investment Styles in the European Equity Market, chap. 4 in *Advances in Quantitative Asset Management*, ed. C. Dunis, Kluwer Academic Publishers, 61-88.

51. Billio M. and M. Patron (1999), L'utilizzo di *trading rules* in modelli a cambiamenti di regime, in *Gli strumenti derivati*, ed. D. Sartore, Ipsa.

52. Billio M. and S. Tommasi (1999), L'analisi tecnica ed i modelli a logica sfocata, in *Gli strumenti derivati*, ed. D. Sartore, Ipsa.

53. Billio M. and D. Sartore (1999), La combinazione di previsioni, in *Gli strumenti derivati*, ed. D. Sartore, Ipsa.

Others publications

54. Ahelegbey, D.F., M. Billio and R. Casarin (2015), Sparse BGVAR models for Systemic Risk Analysis, in *Statistics and Demography: the Legacy of Corrado Gini*, C. Crocetta Editor, CLEUP, ISBN: 9788867874521.

55. Billio M., R. Casarin, M. Costola and A. Pasqualini (2015), Entropy and systemic risk measures, in *Statistics and Demography: the Legacy of Corrado Gini*, C. Crocetta Editor, CLEUP, ISBN: 9788867874521.

56. Billio M. and L. Pelizzon (2014), Misure econometriche di connettività e rischio sistemico nel settore finanziario e assicurativo, *Bancaria*, 8, 81-91.

57. Billio M., R. Casarin and A. Osuntuyi (2013), A Markov Switching GARCH models for Bayesian Hedging on Energy Futures Markets, in *Advances in Latent Variables*, Eds. Brentari, E. and Carpita, M., Vita e Pensiero, Milano ISBN 9788834325568.

58. Billio M., M. Getmansky, D. Gray, A.W. Lo, R.C. Merton and L. Pelizzon (2012), Sovereign, bank and insurance credit spreads: Connectedness and system networks, in *G20 Conference on Financial Systemic Risk*, vol. 27.

59. Addo P.M., M. Billio, D. Guégan (2012), Understanding exchange rate dynamics. In *Proceedings of the 20th International Conference on Computational Statistics*, 1-14, A. Colubi, K. Fokianos, & E. J. Kontoghiorghes (Eds.), Curran Associates, Inc. ISBN: 978-162748-321-6.

60. Billio M. and L. Pelizzon (2012), Efficienza, interconnessione e rischio sistemico, *Statistica e Società*, 1/3, 42-44.

61. Billio M., R. Casarin, F. Ravazzolo and H.K. van Dijk (2011), Bayesian Combinations of Stock Price Predictions with an Application to the Amsterdam Exchange Index, *Medium for Econometric Applications*, *Econometrisch Dispuut Rotterdam*, 18/3, 2-9.

62. Billio M. e L. Pelizzon (2008), Hedge fund rapidi nel coprire le esposizioni durante i ribassi, *Mondo Hedge*, VII/68, 15-18.

63. Billio M. (2002), Simulation Based Methods for Financial Time Series, Atti della XLI Riunione Scientifica della Società Italiana di Statistica, 5-7 giugno 2002, CLEUP, Padova.

64. Billio M., M. Corazza and M. Gobbo (2002), Option Pricing via Regime Switching Models and MultiLayer Perceptrons: a Comparative Approach, *Rendiconti per gli Studi Economici Quantitativi*, 39-59.

65. Tiozzo C. L., M. Billio and D. Sartore (1999), Modelli neurali artificiali geneticamente evoluti per trading system su strumenti derivati, *Amministrazione e Finanza*, 21.

66. Billio M., A. Monfort and C.P. Robert (1998), A MCMC approach to maximum likelihood estimation, *Prague Stochastics '98*, Vol 1, pagg. 49-54, ed. M. Huskova, P. Lachout and J.A. Visek, Union of Czech Mathematicians and Physicists.

67. Billio M. and L. Pelizzon (1997), Pricing options with switching volatility, *Money, Finance, Banking and Insurance*, ed. C. Hipp, Verlang and Nota di Lavoro n. 97.07 DSE Università Ca' Foscari, Venice.

68. Billio M., L. Cappellina and D. Sartore (1997), Cicli e cambiamenti di regime negli indici azionari italiani, *Quaderni di Statistica e Matematica Applicata alle Scienze economico- sociali*, Università di Trento, Vol XVII, 1-2-3.

OVERALL CITATIONS

In Scopus: 36 papers with 478 total citations and h-index equal to 10 (without self-citations).

In Google Scholar: 150 publications with 2496 total citations so far (the vast majority of which are not self-citations). h-index is 23 (21 from 2011) and i10-index is 40 (29 from 2011).

RePEc: top 8% of 45.000 economists (top 3% among women in economics, top 6% in Europe, top 4% in Italy).

MAIN RECENT TALKS AS INVITED SPEAKER

2016: Social Impact through Network Science, Venice.

2015: 7th Conference on the Econometrics of Hedge Funds, Paris; Université Louvain La Neuve; Université Aix Marseille; VU University Amsterdam; NBER Summer Institute: Market Institutions and Financial Market Risk.

2014: Europlace Finance Institute, Paris; Bank of England; European Systemic Risk Board, ECB; CSRA meeting, Boston.

2013: Invited session CFE 2013, London; Université Aix Marseille; Université d'Orléans; French National Supervisory Authority, Paris.

2012: Instabilities in financial markets Conference, Scuola Normale of Pisa; CEPS Roundtable on Macro prudential policy, Brussels; G20 Conference on Financial Systemic Risk; Measuring Systemic Risk Conference, Princeton University; 5th Risk Forum, Paris; Université d'Orléans.

2011: CONSOB; ECARES - Université Libre de Bruxelles; Université Paris 1 Pantheon Sorbonne; OECD Round table on *Systemic Risk in the Insurance Sector*; Wilfrid Laurier University, *The economics and econometrics of recurring financial market crises*; Scuola Normale of Pisa; Third Conference on the Econometrics of Hedge Funds, Paris.

2010: Université Paris IX Dauphine; Second Conference on the Econometrics of Hedge Funds, Paris.

2009: 1st French Econometrics Conference, Toulouse; Bank of France; First Conference on the Econometrics of Hedge Funds, Paris; Tinbergen conference on *Crashes and Systemic Crises in Financial Markets*, Rotterdam.

2008: Workshop on *Emerging Methods in Bayesian Econometrics*, Rotterdam; First Workshop of the ERCIM Working Group on Computing & Statistics, Neuchâtel Switzerland.

PH.D. SUPERVISION

Matteo Iacopini, "Network models and Copula", University Ca' Foscari of Venice, joint supervision with Roberto Casarin and Dominique Guégan, expected December 2017.

Luca Rossini, "Bayesian nonparametric sparse seemingly unrelated regression model", University Ca' Foscari of Venice, joint supervision with Roberto Casarin, expected December 2016.

Anna Petronevich, "Dynamic Non Linear Factor Models", Université Paris 1 Panthéon-Sorbonne, joint supervision with Catherine Doz, expected December 2016.

Mayank Gupta, "Efficiency in Emerging Markets", University of Verona, joint supervision with Massimiliano Caporin, expected December 2016.

Hasinavonizaka Fanirisoa Zazaravaka RAHANTAMIALISOA, "Risk Measures", Université Paris 1 Panthéon-Sorbonne, joint supervision with Christophe Chorro, expected December 2016.

Patrick Zoi, "Estimation and Derivative Pricing with Stochastic Volatility", University Ca' Foscari of Venice, joint supervision with Loriana Pelizzon, expected December 2016.

Komla Mawolom AGUDZE, "Panel Markov Switching VAR", University Ca' Foscari of Venice, joint supervision with Roberto Casarin, expected July 2016.

Daniel Felix Ahelegbey, "Bayesian networks and financial applications", University Ca' Foscari of Venice, joint supervision with Roberto Casarin, July 2015.

Lorenzo Frattarolo, "Equity Returns Dependence Structure and Systemic Events in Financial Systems", Université Paris 1 Panthéon-Sorbonne and University Ca' Foscari of Venice, joint supervision with Dominique Guégan, December 2014.

Peter Martey Addo, "Multivariate SETAR models", Université Paris 1 Panthéon-Sorbonne, joint supervision with Dominique Guégan, May 2014.

Maddalena Cavicchioli, "Essays on Markov Switching Models with Applications in Economics and Finance", University Ca' Foscari of Venice, supervision, March 2014.

Ayokunle Anthony OSUNTUYI, "Essays on Bayesian inference with financial applications", joint supervision with Roberto Casarin, University Ca' Foscari of Venice, March 2014.

Ludovic Calès "Rank-based models for the study of momentum & other cross-sectional effects in financial markets", Université Paris 1 Panthéon-Sorbonne, joint supervision with Dominique Guégan, March 2011.

Sara Maniero "Transmission and Contagion in Real and Financial Markets", supervision, University Ca' Foscari of Venice, October 2009.

Roberto Casarin "Simulation Methods for Non-linear and Non-Gaussian Models in Finance", joint supervision with Christian P. Robert, University Ca' Foscari of Venice, March 2004.

Fulvio Pegoraro "Discrete Time Pricing Models with Latent Variables", joint supervision with Alain Monfort, University Ca' Foscari of Venice, March 2004.

Massimiliano Caporin "Long Memory Conditional Heteroskedasticity and Second Order Causality", joint supervision with Domenico Sartore, University Ca' Foscari of Venice, January 2003.

FINANCED RESEARCH PROJECTS

- Project on "Impacts of the Quantitative Easing on the Insurance Industry" with Dominique Guégan and Loriana Pelizzon, Europlace Finance Institute grant, 2015-2016.
- European Commission FP7-SSH-2012-2, "SYRTO Systemic risk tomography: signals, measurement, transmission channels, and policy interventions", 2013-2016; Local coordinator and Project Scientific Co-Coordinator.
- MIUR Project "Multivariate statistical models for risk assessment", 2013-2016; Local coordinator.
- Project on "Sovereign, Bank and Insurance Credit Spread: Connectedness and System Networks" with Andrew Lo, Mila Getmansky, Loriana Pelizzon, Robert Merton and Dale Gray, Europlace Finance Institute grant and Inquire Europe grant, 2012-2013.
- EUROSTAT, Euro-indicators, "Monthly production of coincident indicators for acceleration cycle, growth cycle and business cycle", 2010-2013; Coordination joint with Laurent Ferrara (Banque de France, Paris).
- EUROSTAT, Euro-indicators, "Regular update and improvement of a euro area chronology for acceleration cycle, growth cycle and business cycle", 2010-2013; Coordination joint with Jacques Anas (COE-Rexecode, Paris).
- NBER project on Market Institutions and Financial Market Risk, Coordinator M. Carey and R. Stulz, with Andrew Lo, Mila Getmansky and Loriana Pelizzon, 2009-2011.
- Project on "Funding Liquidity, Crises and Systemic Risk" with Andrew Lo, Mila Getmansky and Loriana Pelizzon, Inquire Europe grant, 2009-2010.
- CAREFIN Università Bocconi grant for project "Funding liquidity crisis and Hedge Fund Risks" with Andrew Lo, Mila Getmansky and Loriana Pelizzon, 2009-2010.
- CREDIT – European Network on Credit Risk Management. Members: Center for Economic Research, Tilburg University, Tilburg; European Centre for Advanced Research in Economics and Statistics, Bruxelles; GRETA, Venice; Groupe de Recherche en Economie et Statistique, Paris; Copenhagen Business School, Copenhagen; London Business School, London; Universidad Carlos III, Madrid; Swiss Federal Institute of Technology, Zurich, 2001-: Participant.
- EUROSTAT, Euro-indicators, "Relationship between economic and statistical approaches in the field of business cycle analysis", 2008; Joint Coordination with Tommaso Proietti (Università di Roma Tor Vergata) and James Mitchel (NIESR, London).
- EIB-CREDIT Network: Research in the credit thematic development at European level, 2008-: Participant.
- MIUR project "Financial variables and business cycle: interdependence and real effects of financial fluctuations", 2006-2008; Coordinator.
- EUROSTAT, Euro-indicators, "Monitoring and evaluation of existing turning points chronologies of the Euro-zone", 2006-2009; Joint Coordination with Jacques Anas (COE, Paris).
- EUROSTAT, Euro-indicators, "Methodological improvements for the construction of coincident turning point indicators for the Euro-zone", 2006-2009; Joint Coordination with Jacques Anas (COE, Paris).
- MIUR project "Econometric modelling for financial and economic integration in the Enlarged European Union", 2004-2006; Participant.
- EUROSTAT Unit A6 "Turning point chronology for the Euro-zone", 2003; Joint Coordination with Jacques Anas (COE, Paris).
- EUROSTAT Unit A6 "Turning points detection: Multivariate Markov Switching Models", 2003; Joint Coordination with Jacques Anas (COE, Paris).

MIUR project “Econometric Models for the Analysis of Financial Markets: The Integration Process in the Area of the Euro”, 2002-2004; Participant.

EUROSTAT Unit A6 “Construction of realistic proxies for some indicators unavailable at the Eurozone level: New Orders, Building permits, Turnover Index of Services and Volume Index of Services, Export Price Index and Import Price Index, Labour Price, Labour Productivity and Unit Labour Cost Index, Household Disposable Income”, 2001-2002; Coordinator.

CONFERENCE ORGANIZATION

Programme Chair, *Seventh Italian Congress of Econometrics and Empirical Economics (ICEEE)*, January 2017, Messina, Italy (http://virgo.unive.it/side/?page_id=1745)

Member Scientific Programme Committee, *10th International Conference on Computational and Financial Econometrics (CFE'16)*, December 2016, Seville, Spain (<http://www.cfenetwork.org/CFE2016/>)

Co-Programme Chair, European Seminar on Bayesian Econometrics (ESOBE 2016), October 2016, Venice (<http://virgo.unive.it/esobe2016/>)

Local organiser, *CREDIT 2016 New Credit Solutions for the Real Economy and their Implications for Investors, Financial Stability and Policy Design*, October 2016, Venice (<http://www.greta.it/credit/credit2016/credit2016.htm>)

Member Scientific Committee, *69th Econometric Society European Meeting (ESEM)*, August 2016, Geneva, (<http://www.eea-esem-congresses.org/>)

Member Programme Committee, 25th Annual Meeting of European Financial Management Association (EFMA), June-July 2016, University of Basel, Switzerland.

Local organiser, *CREDIT 2015 Societal Fault Lines and Credit Risk: The Impact of Current Economic, Institutional and Political Developments on Credit and Risk*, September 2015, Venice (<http://www.greta.it/credit/credit2015/credit2015.htm>)

Member Programme Committee, *24th Annual Meeting of European Financial Management Association (EFMA)*, June 2015, Nyenrode Business University, Netherlands

Member Scientific Programme Committee, SYRTO Code Conference, June 2015, Amsterdam

Member Scientific Programme Committee, 2nd International Conference on Sovereign Bond Markets, *Determinants of Sovereign Bonds Yields and the Effectiveness of Central Bank Intervention*, March 2015, Frankfurt (<http://www.greta.it/sovereign/sovereign2/sovereign2.htm>)

Member Programme Committee, *Sixth Italian Congress of Econometrics and Empirical Economics (ICEEE)*, January 2015, Salerno, Italy (http://virgo.unive.it/side/?page_id=1284)

Member International Organizing Committee, *8th International Conference on Computational and Financial Econometrics (CFE'14)*, December 2014, Pisa (<http://www.cfenetwork.org/CFE2014/>)

Member Scientific Program Committee and Local organiser, *CREDIT 2014 The New Financial Regulatory System: Challenges and Consequences for the Financial Sector*, September 2014, Venice (<http://www.greta.it/credit/credit2014/credit2014.htm>)

Member Programme Committee, *68th Econometric Society European Meeting (ESEM)*, August 2014, Toulouse, (<http://www.eea-esem-congresses.org/>)

Member Scientific Programme Committee, *1st International Conference on Sovereign Bond Markets, Liquidity, Credit Risk and the Effectiveness of Central Bank Intervention*, June 2014, Tokyo (<http://www.greta.it/sovereign/sovereign1/sovereign1.htm>)

Member Programme Committee, *23rd Annual Meeting of European Financial Management Association (EFMA)*, June 2014, Rome, (<http://www.efmaefm.org/0EFMAMEETINGS/EFMA%20ANNUAL%20MEETINGS/2014-Rome/2014meetings.html>)

Member Scientific Programme Committee, *7th International Conference on Computational and Financial Econometrics (CFE'13)*, December 2013, London (<http://www.cfe-csda.org/cfe13/>)

Member Scientific Program Committee and Local organiser, *CREDIT 2013 Risk, Regulation and Opportunities in an Increasingly Interconnected World*, September 2013, Venice (<http://www.greta.it/credit/credit2013/credit2013.htm>)

Member Programme Committee, *22nd Annual Meeting of European Financial Management Association (EFMA)*, June 2013, Reading, UK (<http://www.efmaefm.org/0EFMAMEETINGS/EFMA%20ANNUAL%20MEETINGS/2013-Reading/2013meetings.shtml>)

Member Scientific Programme Committee, *6th International Conference on Computational and Financial Econometrics (CFE'12)*, December 2012, Oviedo Spain (<http://www.cfe-csda.org/cfe12/>)

Local organiser, *CREDIT 2012 Sovereign Risk and its Consequences for Financial Markets, Institutions and Regulation*, September 2012, Venice (<http://www.greta.it/credit/credit2012/credit2012.htm>)

Co-Chair *5th International Conference on Computational and Financial Econometrics (CFE'11)*, December 2011, London (<http://www.cfe-csda.org/cfe11/>)

Member Scientific Program Committee and Local organiser, *CREDIT 2011 Stability of the Financial System and Risk Control in Banking, Insurance and Markets*, September 2011, Venice (<http://www.greta.it/credit/credit2011/credit2011.htm>)

Member Scientific Programme Committee, *4th International Conference on Computational and Financial Econometrics (CFE'10)*, December 2010, London (<http://www.cfe-csda.org/cfe10/>)

Member Scientific Program Committee and Local organiser, *CREDIT 2010 Credit Risk, Systemic Risk, and Large Portfolios*, September 2010, Venice (<http://www.greta.it/credit/credit2010/credit2010.htm>)

Member International Programme Committee, *3rd International Conference on Computational and Financial Econometrics (CFE'09)*, October 2009, Cyprus (<http://www.dcs.bbk.ac.uk/cfe09>)

Member Scientific Programme Committee and Local organiser, *CREDIT 2009 Financial Crises, Credit Risk, and the Macroeconomy*, September 2009, Venice (<http://www.greta.it/credit/credit2009/credit2009.htm>)

Local organiser, *CREDIT 2008 Liquidity and Credit Risk*, September 2008, Venice (<http://www.greta.it/credit/credit2008/credit2008.htm>)

Member Scientific Programme Committee, First Workshop of the ERCIM Working Group on Computing & Statistics, 19-21 June 2008, Neuchâtel, Switzerland (<http://www.dcs.bbk.ac.uk/ercim08/index.html>)

Local organiser, *CREDIT 2007 Credit Ratings*, September 2007, Venice (<http://www.greta.it/credit/credit2007/credit2007.htm>)

Member Organising Committee, VIII Workshop on Quantitative Finance, January 2007, Venice (<http://caronte.dma.unive.it/QuantitativeFinance2007/>)

Member Scientific Committee (Programme Chair Luc Bauwens), 17th EC 2 Meeting: The Econometrics of Monetary Policy and Financial Decision-Making, December 2006, Rotterdam (<http://www.ei50.org/ec2/>)

Local organiser, *CREDIT 2006 Risks in Small Business Lending*, September 2006, Venice (<http://www.greta.it/credit/credit2006/credit2006.htm>)

Local organiser, *CREDIT 2005 Counterparty Credit Risk*, September 2005, Venice (<http://www.greta.it/credit/credit2005/credit2005.htm>)

Member Scientific Committee (with Tim Bollerslev and Domenico Sartore), Journal of Applied Econometrics conference *Changing Structures in International and Financial Markets and the Effects on Financial Decision-Making*, June 2005, Venice (www.greta.it/jae/jae.htm)

Member Programme Committee (Econometrics), *45a Riunione Scientifica Annuale della Società Italiana degli Economisti*, October 2004, Bologna

Local organiser, *CREDIT 2004 Validation of Credit Risk Models*, September 2004, Venice (<http://www.greta.it/credit/credit2004/credit2004.htm>)

Local organiser, *CREDIT 2003 Dependence Modelling for Credit Portfolios*, September 2003, Venice (<http://www.greta.it/credit/credit2003/credit2003.htm>)

Local organiser, *CREDIT 2002 Assessing the Risk of Corporate Default*, September 2002, Venice (<http://www.greta.it/credit/credit2002/credit.htm>)

Local organiser, *Econometric Society Winter Meeting*, January 2001, Venice