## **Domenico GIANNONE**

Department of Economics University of Washington Savery Hall Room 305 Seattle, WA 98105

dgiannon@uw.edu

# **Education**

UNIVERSITE' LIBRE DE BRUXELLES - ECARES Ph. D. in Economics and Statistics. 2004

UNIVERSITE' LIBRE DE BRUXELLES - ECARES M.A. in Economics and Statistics, 2001

UNIVERSITÀ DEGLI STUDI "LA SAPIENZA", Rome B.A. in Statistics and Economics, 1998

## **Professional Appointments**

AMAZON.COM	Sr. Principal Economist	2019 - present
UNIVERSITY OF WASHINGTON	Affiliate Professor	2021 - present
FEDERAL RESERVE BANK OF NEW YORK	Assistant Vice President	2014 - 2019
UNIVERSITA' LUISS GUIDO CARLI	Professor	2013 - 2014
NOW-CASTING ECONOMICS LTD.	Co-founder and Director	2011 - 2014
UNIVERSITE' LIBRE DE BRUXELLES	Professor	2019 - 2014
EUROPEAN CENTRAL BANK	Economist	2007 - 2009
UNIVERSITE' LIBRE DE BRUXELLES	Assistant Professor	2004 - 2007

## **Publications in Journals**

- "Nowcasting with Large Bayesian Vector Autoregressions," 2022, (with J. Cimadomo, M. Lenza, F. Monti, and A. Sokol), **Journal of Econometrics**, vol 231(2), pages 500-519.
- "Common Factors of Commodity Prices," 2022 (with S. Delle Chiaie and L. Ferrara), **Journal of Applied Econometrics**, vol. 37(3), pages 461-476.
- "Economic Predictions with Big Data: The Illusion of Sparsity," 2021, (with M. Lenza and G. Primiceri), **Econometrica**, vol. 89(5), pages 2409-2437.
- "Forecasting Macroeconomic Risk," 2021, (with P. Adams, T. Adrian and N. Boyarchenko), **International Journal of Forecasting**, vol. 37(3), pages 1173-1191.
- "Multimodality in Macro-Financial Dynamics," 2021, (with T. Adrian and N. Boyarchenko), **International Economic Review**, vol. 62(2), pages 861-886.
- "Priors for the Long Run," 2019 (with M. Lenza and G. Primiceri), **Journal of the American Statistical Association**, vol. 114, pages 565-580.
- "Money, Credit, Monetary Policy and the Business Cycle in the Euro Area," 2019 (with M. Lenza and L. Reichlin), **International Journal of Central Banking**, vol. 15, pages 137-173.

- "Vulnerable Growth," 2019, (with T. Adrian and N. Boyarchenko), **American Economic Review**, vol. 109(4), pages 1263-1289.
- "Global Trends in Interest rates," 2019 (with M. Del Negro, M. Giannoni and A. Tambalotti), **Journal of International Economics**, vol. 118, pages 248-262.
- "Macroeconomic Nowcasting and Forecasting with Big Data," 2018, (with B. Bok, D. Caratelli, A. Tambalotti and A. Sbordone), **Annual Review of Economics**, vol. 10(1), pages 615-643.
- "The Low Frequency Effects of Macroeconomic News on Government Bond Yields," 2017, (with C. Altavilla and M. Modugno), **Journal of Monetary Economics**, vol. 92(C), pages 31-46.
- "Safety, Liquidity, and the Natural Rate of Interest," 2017, (with M. Del Negro, M. Giannoni, and A. Tambalotti), **Brooking Papers on Economic Activity**, vol. 48(1), pages 235-316.
- "The Effectiveness of Non-Standard Monetary Policy Measures: Evidence from Survey Data," 2017, (with C. Altavilla), **Journal of Applied Econometrics**, vol. 32(5), pages 952-964.
- "The national segmentation of euro area bank balance sheets during the financial crisis," 2017, (with A. Colangelo, M. Lenza, H. Pill and L. Reichlin), **Empirical Economics**, vol. 53(1), pages 247-265.
- "Exploiting the Monthly Data Flow in Structural Forecasting," 2016, (with F. Monti and L. Reichlin), **Journal of Monetary Economics**, vol. 84(C), pages 201-215.
- "The Financial and Macroeconomic Effects of the OMT Announcements," 2016, (with C. Altavilla and M. Lenza), **International Journal of Central Banking**, vol. 12(3), pages 29-57.
- "Unspanned Macroeconomic Factors in the Yields Curve," 2016, (with L. Coroneo and M. Modugno), **Journal of Business and Economic Statistics**, vol. 34(3), pages 472-485.
- "Optimal Combination of Survey Forecasts," 2015, (with C. Conflitti and C. De Mol). *International Journal of Forecasting*, vol. 31(4), pages 1096-1103.
- "Prior Selection for Vector Autoregressions," 2015 (with M. Lenza and G. Primiceri), *Review of Economics and Statistics*, vol. 97(2), pages 436-451.
- "Conditional forecasts and scenario analysis with vector autoregressive models for large cross-sections" 2015, (with M. Banbura and M. Lenza). *International Journal of Forecasting*, vol. 31(3), pages 739-756.
- "Short-Term Inflation Projections: a Bayesian Vector Autoregressive Approach," 2014 (with M. Lenza, D. Momferatou and L. Onorante), **International Journal of Forecasting**, vol. 30(3), pages 635-644.
- "Macroeconomic Forecasting and Structural Change," 2013 (with A. D'Agostino and L. Gambetti), *Journal of Applied Econometrics*, vol. 28 (1), pages 81-101.
- "An area-wide real-time database for the euro area," 2012 (with J. Henry, M. Lalik and M. Modugno), *Review of Economics and Statistics*, vol. 94 (4), pages 1000-1013.
- "A Quasi Maximum Likelihood Approach for Large Approximate Dynamic Factor Models," 2012 (with C. Doz and L. Reichlin), *Review of Economics and Statistics*, vol. 94 (4), pages 1014-1024.
- "The ECB and the Interbank Market," 2012 (with M. Lenza, H. Pill and L. Reichlin), **Economic Journal**, vol. 122 (564), pages F467-F486.
- "Comparing alternative predictors based on large-panel dynamic factor models," 2012 (with A. D'Agostino), *Oxford Bulletin of Economics and Statistics*, vol. 74(2), pages 306-326.
- "A two-step estimator for large approximate dynamic factor models based on Kalman filtering," 2011 (with C. Doz and L. Reichlin), *Journal of Econometrics*, vol. 164(1), pages 188-205.
- "Economic Freedom and the Global Recession," 2011 (with M. Lenza and L. Reichlin), *IMF Economic Review*, vol. 59(1), pages 111-135.
- "Short-term forecasts of euro area GDP growth," 2011, (joint with E. Angelini, G. Camba-Mendez, L. Reichlin and G. Runstler), *Econometrics Journal*, vol. 14(1), pages C25-C44.

- "Large Bayesian VARs," 2010, (with M. Banbura and L. Reichlin). *Journal of Applied Econometrics*, vol. 25(1), pages 71-92.
- "Sparse and Stable Markowitz Portfolios," 2009, (with J. Brodie, C. De Mol, I. Daubechies and I. Loris). *Proceedings of the National Academy of Sciences*, vol. 106, No. 30, Pages 12267-12272.
- "Opening the black box: structural factor models versus structural VARs," 2009 (joint with M. Forni, M., M. Lippi, M. and L. Reichlin). *Econometric Theory*, vol. 25, No. 05, Pages 1319-1347.
- "Nowcasting Euro Area Economic Activity in Real Time: The Role of Confidence Indicators," 2009, (with L. Reichlin and S. Simonelli). *National Institute Economic Review*; vol. 210, Pages 90-97.
- "Nowcasting: The Real Time Informational Content of Macroeconomic Data Releases", 2008. *Journal of Monetary Economics*, Vol. 55, No. 4, Pages 665-676.
- "Forecasting using a large number of predictors: is Bayesian shrinkage a valid alternative to principal components?," 2008, (with C. De Mol and L. Reichlin). *Journal of Econometrics*, vol. 146, No. 2, Pages 318-328.
- "Explaining the great moderation: it is not the shocks", 2008, (with M. Lenza and L. Reichlin), *Journal of the European Economic Association*, P&P, vol. 6, No. 2-3: 621-633.
- "A new core inflation indicator for New Zealand", 2007, (with T. Matheson), *International Journal of Central Banking*, vol. 3, No. 4, December 2007, pages 145-180.
- "VARs, Factor Models and the Empirical Validation of Equilibrium Business Cycle Models," 2006, (with L. Reichlin and L. Sala), *Journal of Econometrics*, vol. 132, Issue 1, pages 257-279.
- "Does information help recovering structural shocks from past observations?" 2006, (with L. Reichlin), *Journal of the European Economic Association*, P&P, vol. 4, No. 2-3, pages 455-465.

### **Chapters in Edited Volumes**

- "Big Data in Economics: Evolution or Revolution?", 2016, (with C. De Mol, E. Gautier, S. Mullainathan, L. Reichlin, E. van Dijk, and J. M. Wooldridge), **Economics without Borders Economic Research for European Policy Challenges**, eds. R. Blundel, E. Cantillon et al., Cambridge University Press.
- "Nowcasting Business Cycles: a Bayesian Approach to Heterogenous Dynamic Factor Models", 2016, (with A. D'Agostino, M. Lenza and M. Modugno), *Advances in Econometrics*, vol. 35, Dynamic Factor Models, eds. S.J. Koopman and E. Hillebrand, Emerald, pages 569-594.
- "Nowcasting and the Real-Time Dataflow," 2013, (with M. Banbura, M. Modugno and L. Reichlin), *The Oxford Handbook on Economic Forecasting*, vol. 2, part A, eds. G. Elliot and A. Timmerman, Elsevier, pages 195-237.
- "Non-standard monetary policy measures and monetary developments," 2011 (with M. Lenza, H. Pill and L. Reichlin), in *Lessons for Monetary Policy from the Financial Crisis*, eds. J. Chadha and S. Holly, Cambridge University Press, pages 195-221.
- "Nowcasting," 2011, (with M. Banbura and L. Reichlin), *The Oxford Handbook on Economic Forecasting*, eds. M. P. Clements and D. F. Hendry, Oxford University Press, pages 193-224.
- "Business Cycles in the euro area," 2010, (with M. Lenza and L. Reichlin), *Europe and the Euro*, eds. A. Alesina and F. Giavazzi, University of Chicago Press, pages 141-167.
- "The Feldstein Horioka Fact," 2010, (with M. Lenza), in the **NBER International Seminar on Macroeconomics**, eds. L. Reichlin and K. West, University of Chicago Press, pages 103-117.
- "Incorporating Conjunctural Analysis in Structural Models," 2010, (with F. Monti and L. Reichlin), in *The Science and Practice of Monetary Policy Today*, ed. Volker Wieland, Springer, pages 41-58.
- "Monetary Policy in Real Time," 2005, (with L. Reichlin and L. Sala), In the **NBER Macroeconomics Annual**, eds. M. Gertler and K. Rogoff, MIT Press, pages 161-200.

"Euro area and US recessions: 1970-2003," 2004 (with L. Reichlin), in *The Euro Area Business Cycle: Stylized Facts and Measurement Issues*, ed. L. Reichlin, C.E.P.R., pages 83-93.

#### **Working Papers**

- "Scarce, Abundant, or Ample? A Time-Varying Model of the Reserve Demand Curve," 2022, (with G. Afonso, G. La Spada, and J. Williams). Staff Reports 1019, Federal Reserve Bank of New York.
- "800,000 Years of Climate Risk," 2022, (with T. Adrian, N. Boyarchenko, A. Prasad, D. Seneviratne, and Y. Xiao). Staff Reports 976, Federal Reserve Bank of New York.
- "A Large Bayesian VAR of the United States Economy," 2021, (with R. Crump, S. Eusepi, E. Qian, A. Sbordone). Staff Reports 976, Federal Reserve Bank of New York. Under revision for the **International Journal of Central Banking**.
- "Bank Capital and Real GDP Growth," 2021, (with N. Boyarchenko, and A. Kovner). Staff Reports 950, Federal Reserve Bank of New York.
- "Back to the Present: Learning about the Euro Area through a Now-casting," 2021, (with D. Cascaldi-Garcia, T. Ferreira, and M. Modugno). International Finance Discussion Papers 1313, Board of Governors of the Federal Reserve System.
- "Flighty Liquidity," 2018, (with N. Boyarchenko and O. Shachar). Staff Reports 870, Federal Reserve Bank of New York.
- "(Un)Predictability and Macroeconomic Stability," 2007, (with A. D'Agostino and P. Surico), CEPR Discussion Papers 6594.
- "Trends and cycles in the Euro area: how much heterogeneity and should we worry about it?," 2006, (with L. Reichlin), Working Paper Series 595, European Central Bank.
- "Tracking Greenspan: Systematic and Non-systematic Monetary Policy Revisited," 2002 (with L. Reichlin and L. Sala), CEPR Discussion Papers 3550, C.E.P.R. Discussion Papers.

## Work in progress

- "ReThinking about Instrumental Variables," with M. Lenza and G. Primiceri.
- "Shrink or Compress? The Asymptotic Equivalence of Factor Analysis and Shrinkage Estimators with Big Data." with C De Mol and L. Reichlin.
- "From Q to P and P to Q," with T. Adrian, N. Boyarchenko, and F. Matthys.
- "Changing Risk-Return Profiles," with R. Crump and S. Hundtofte, in preparation for **A Festschrift for Marc Hallin**, eds. M. Barigozzi and D. Paindaveine.
- "Tail-risk forecasting in Macroeconomics," with T. Adrian and N. Boyarchenko, in preparation for the **Handbook of Macroeconomic Forecasting**, eds., A. Galvao and M. Clemens, Edward Elgar Publishing Ltd.
- "Nowcasting in Macroeconomics," with S. Miranda-Agrippino and M. Modugno, in preparation for the **Handbook of Macroeconomic Forecasting**, eds., A. Galvao and M. Clemens, Edward Elgar Publishing Ltd.
- "Fiscal Nowcasting," (with J. Cimadomo, M. Lenza, F. Monti, and A. Sokol).

# **Published Discussions and Comments**

- Comments on "In-Sample Inference and Forecasting in Miss-Specified Factor Model", 2016, **Journal of Business and Economic Statistics**, vol. 34(3), pages 342-344.
- Comments on "Financial crises: lessons from history for today", 2014, Economic Policy, vol. 29.

- Comments on "Bank Lending and Monetary Transmission in the Euro Area", 2013, **Economic Policy**, vol. 28.
- Comments on "Forecasting economic and financial variables with global VARs", 2009, (with L. Reichlin) *International Journal of Forecasting*, vol. 25(4), pages 684-686.
- Comments on "Can Parameter Instability Explain the Meese-Rogoff Puzzle?", 2010, in the **NBER International Seminar on Macroeconomics**, eds. L. Reichlin and K. West, University of Chicago Press, pages 180-190.
- Comments on "The ECB and the bond market", 2010, (with M. Lenza and L. Reichlin), in *The Euro*, eds. Marco Buti, Servaas Deroose and Vitor Gaspar, Cambridge University Press.
- "Business cycles in the euro area" (with M. Lenza). *Research Bulletin* No. 5, DG Research, European Central Bank, March 2009.
- Panel discussion on "Convergence or Divergence in Europe?" 2006, (with A. Brender, J. Pisani-Ferry and R. Faini), In **Convergence or Divergence in Europe?**, eds. O. De Bandt, H. Hermann, G. Parigi, Springer, pages 47-60.

# **Social Media**

- "What do Financial Conditions Tell Us about Risk to GDP growth," (with P. Adams, T. Adrian and N. Boyarchenko, N. Liang, and E. Qian), Federal Reserve Bank of New York **Liberty Street Economics**, May 21, 2020.
- "Reading the Tea Leaves of the U.S. Business Cycle—Part Two," (with R. Crump and D. Lucca), Federal Reserve Bank of New York **Liberty Street Economics**, February 12, 2020.
- "Reading the Tea Leaves of the U.S. Business Cycle—Part One," (with R. Crump and D. Lucca), Federal Reserve Bank of New York **Liberty Street Economics**, February 10, 2020.
- "Historical Reconstruction of the New York Fed Staff Nowcast" (with P. Adams, E. Qian, and A. Sbordone), Federal Reserve Bank of New York **Liberty Street Economics**, July 12, 2019.
- "Global Trends in Interest Rates" (with M. Del Negro, M. Giannoni, A. Tambalotti, B. Bok, and E. Qian) Federal Reserve Bank of New York **Liberty Street Economics**, February 27, 2019.
- "Monitoring Economic Conditions during a Government Shutdown" (with P. Adams, E. Qian, and A. Sbordone), Federal Reserve Bank of New York **Liberty Street Economics**, February 05, 2019.
- "Changing Risk-Return Profiles" (with R. Crump and Se. Hundtofte), Federal Reserve Bank of New York **Liberty Street Economics**, October 04, 2018.
- "Opening the Toolbox: The Nowcasting Code on GitHub" (with P. Adams, B. Bok, D. Caratelli, E. Qian, A. Sbordone, C. Schneier, and A. Tambalotti), Federal Reserve Bank of New York **Liberty Street Economics**, August 10, 2018.
- "Economic Predictions with Big Data: The Illusion of Sparsity" (with M. Lenza and G. Primiceri), Federal Reserve Bank of New York **Liberty Street Economics**, May 21, 2018.
- "Vulnerable Growth" (with T. Adrian and N. Boyarchenko), Federal Reserve Bank of New York **Liberty Street Economics**, April 09, 2018.
- "A DSGE Perspective on Safety, Liquidity, and Low Interest Rates" (with M. Del Negro, M. Giannoni, A. Gupta, P. Li, and A. Tambalotti), Federal Reserve Bank of New York **Liberty Street Economics**, February 07, 2018.
- "A Time-Series Perspective on Safety, Liquidity, and Low Interest Rates" (with B. Bok, M. Del Negro, and A. Tambalotti), Federal Reserve Bank of New York **Liberty Street Economics**, February 06,

2018.

- "A New Perspective on Low Interest Rates" (with M. Del Negro, M. Giannoni, and A. Tambalotti) Federal Reserve Bank of New York **Liberty Street Economics**, February 05, 2018.
- "Hey, Economist! How Do You Forecast the Present?" (with A. Sbordone and A. Tambalotti), Federal Reserve Bank of New York **Liberty Street Economics**, June 16, 2017.
- Just Released: Introducing the FRBNY Nowcast (with G. Aarons, D. Caratelli, M. Cocci, A. M. Sbordone, and A. Tambalotti), Federal Reserve Bank of New York **Liberty Street Economics**, April 12, 2016.
- The decoupling of US and European economies: Evidence from Nowcasting (with J. McMahon, L. Reichlin and S. Simonelli), **Vox**, March 29, 2013.
- Have the US and European economies parted company? (with J. McMahon, L. Reichlin and S. Simonelli), **Vox**, May 2, 2012.
- "Is the UK still in recession?" (with L. Reichlin and S. Simonelli), Vox, November 23, 2009.
- "The euro hasn't changed European business cycles" (with M. Lenza and L. Reichlin), **Vox**, January 15, 2009.

## **Teaching**

University of Washington, Macroeconometrics (PhD), Fall 2021, Fall 2022.

Columbia University, Time Series Econometrics (PhD), Fall 2018 (with Marco Del Negro).

Harvard University, **Time Series Econometrics** (PhD), Spring 2018.

LUISS University of Rome: Time Series Econometrics (graduate/master), 2013-2014.

Universite' libre de Bruxelles: Introduction to Econometrics (undergraduate), Time Series Econometrics (graduate/Master), Macroeconometrics (PhD).

Universite' libre de Bruxelles, Director of the Master in Economics, 2011-2013.

Universita' di Napoli "Federico II," Naples, **Introduction to Econometrics** (undergraduate), 2013-2014 London Business School, **Macroeconometrics** (PhD), 2009-2013.

The Graduate Institute, Geneva, Macroeconometrics (PhD), 2008-12.

### **Students**

Jacopo Cimadomo, 2008, European Central Bank.

David de Antonio Liedo, 2010, Belgian National Bank.

Michele Modugno, 2011, Board of Governor of the Federal Reserve System.

Francesca Monti, 2011, Université Catholique de Louvain.

Joelle Lieberman, 2012, European Investment Bank.

### **Short courses**

Norges Bank, Inference in Macro Models: Forecasting with Big Data, BVARs, and SVARs (with Giorgio Primiceri), Oslo, May 2022.

University of Washington, Forecasting with Big Data, Virtual, April 2021.

European Commission, Forecasting with Big Data (with Giorgio Primiceri), Virtual, September 2020.

Swiss National Bank, Big Data in Macroeconomics and Finance (with Giorgio Primiceri), Zurich, February 2020.

European Central Bank, Big Data in Macroeconomics and Finance (with Giorgio Primiceri), Frankfurt, September 2019.

EABCN Training, Inference in Macro Models: From Big Data to Structural Analysis (with Giorgio Primiceri), Barcelona, June 2019.

SoFiE Financial Econometrics Summer School, Big Data in Finance and Economics (with Giorgio Primiceri), Brussels, June 2018.

Columbia University, Quantitative Methods in Social Science (QMSS), Seminar on **Nowcasting**, 2015, 2-16, 2018.

Central Bank of Brazil, Minicourse on Nowcasting, November 2017.

Universitat Pompeu Fabra, Econometrics (Master), Spring 2017.

Budapest School for Central Banking Studies, **Econometrics and Policy Analyses with Large Macroeconomic Data**, August 2017.

International Symposium of Forecasting, Workshop on **Nowcasting and Forecasting with Big Data**, Rotterdam, June 2014.

State Bank of Vietnam, Advanced Forecasting Methods, March 2014.

Central Bank of Azerbaijan, Advanced Forecasting Methods, January 2014.

Economic Research South Africa (ERSA) and the School of Economics at the University of Pretoria, Training Workshop on **Nowcasting**, January 2013.

European Commission, Short Course on Advanced Time Series Analysis, December 2010.

Central Bank of Ireland, Short Course on Large Scale Time Series Econometrics (with Antonello D'Agostino, Michele Lenza, and Giorgio Primiceri), November 2009.

EABCN-Banque Nationale de Belgique: Training School on **Dynamic Factor Models for large panels of time series**, 2004.

European Central Bank, Training School on **Dynamic Factor Models for large panels of time series**, Summer 2004.

# **Professional Services**

International Journal of Forecasting, Associate Editor.

Empirical Economics, Associate Editor (2014-2019).

Journal of Business and Economic Statistics, Associate Editor (2016-2018).

Journal of Applied Econometrics, Associate Editor (2011-2018).

Economic Policy, Panel Member (2011-2013).

CEPR, member of the Euro Area Business Cycle Dating Committee (2012-2014).

#### **Affiliations**

International Association of Applied Econometrics (IAAE): Fellow.

Centre for Economic Policy Research (CEPR): Research Fellow.

European Centre for Advanced Research in Economics and Statistics (ECARES): Fellow (since 2004) and co-director (2013-2014).

# Other professional activities

Visiting Professor, Columbia University, Fall 2018.

Visiting Professor, Harvard University, Spring 2018.

The Currency Exchange Fund (TCX): Member of the Macro Economic Advisory Committee, 2012-2014.

National bank of Belgium, Research Visitor, 2012-2013.

European Central Bank, Research Visitor, 2012-2014.

Visiting Professor, London Business School, 2009-2013.

Visiting Professor, The Graduate Institute, Geneva 2008-2012.

Scientific Coordinator of the Euro Area Business Cycle Network (EABCN), 2004-2006.

Norges Bank, Consultant for the construction of a Nowcasting platform for Norway. Fall 2006/07.

Hong Kong Institute for Monetary Research. Visiting research fellow, Fall 2006/07.

Reserve Bank of New Zealand, Consultant for the construction of an Index of Core Inflation, Summer 2006.

European Central Bank (Research Department), Research Visitors Program, Summer 2005.

Bank of England, Visiting Scholar, Fall 2004.

## Refereeing

Econometrica, American Economic Review, Journal of Finance, Review of Economic Studies, Review of Economics and Statistics, Journal of Econometrics, Journal of Monetary Economics, IMF Economic Review, International Journal of Economics, Journal of Applied Econometrics, Journal of the European Economic Association, Journal of Time Series Analysis, Journal of Money Credit and Banking, Journal of Economic Dynamics and Control, Journal of the American Statistical Association, Journal of Business and Economic Statistics, Oxford Bulletin of Economics and Statistics, Scandinavian Journal of Economics, Journal of Forecasting, Regional Science and Urban Economics. Empirical Economics, International Journal of Forecasting, Italian Research Evaluation Exercise, National Science Foundation of US, Social Sciences and Humanities Research Council of Canada, ECB Discussion Paper Series, Bank of England Working Paper Series, IMF Working Papers.

### Organization of conferences

- Co-organizer of the Annual Conference on "Real-Time Data Analysis, Methods and Applications," 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022.
- Co-organizer of the Conference on "Central Bank Forecasting", 2017, 2018, 2019.
- Co-organizer of the Board of Governors and the New York FED Conference on Developments in Empirical Macroeconomics, 2018, 2019.
- Co-organizer of the New York Fed Atlanta Fed Joint Research Day on "Quantitative Tools for Monitoring Macroeconomic and Financial Conditions," New York, February 2019.
- Co-organizer of the Oxford-New York FED Monetary Policy Conference, 2015, 2016, 2017.
- Co-organizer of the COEURE Conference on "Developments in Data and Methods for Economic Research," Université libre de Bruxelles, July 2015.
- Co-organizer (with M. Hallin and S. Hormann) of the Workshop on "Recent Advances in Time Series and Econometrics," Brussels, September 2013.

- Co-organizer (with G. Persman, H. Dewachter, R. Kollman, K. West, R. Wouters) of the Conference on "Macroeconomics and Financial Intermediation: Directions since the Crisis', Belgian National Bank, Brussels, December 2011.
- Co-organizer (with R. Kollman, A. Scott and R. Wouters) of the EABCN Conference on "Advances in Business Cycle Research Directions since the Crises', Belgian National Bank, Brussels, December 2010.
- Co-organizer (with F. Canova and A. Fisher) of the EABCN Workshop on "Estimation and Empirical Validation of Structural Models for Business Cycle Analysis", Swiss National Bank, Zurich, August 2006
- Co-organizer (with J. Henry and R. Wouters) of the EABCN Workshop on "Needed: A Real-Time Database for the Euro Area", National Bank of Belgium, Brussels, June 2005.
- Econometric Society European meeting (ESEM), 2012, 2013, 2016: program committee.
- Annual Conference of the International Association for Applied Econometrics (IAAE), 2015, 2016, 2017, 2018, 2019 program committee.
- European Economic Association meeting (EEA), 2012: program committee.
- 25th (EC)<sup>2</sup> conference on "Advances in Forecasting", 2014: program committee.
- 24th (EC)^2 conference on "The Econometric Analysis of Mixed Frequency Data", 2013: program committee.
- 22th (EC)<sup>2</sup> conference on "Econometrics for Policy Analysis: After the Crisis and Beyond", 2011: program committee.
- 17th (EC)<sup>2</sup> conference on "The Econometrics of Monetary Policy and Financial Decision-Making", 2006: program committee.

## **Seminar Presentations**

2022: Mexico Autonomous Institute of Technology (ITAM), Université de Montréal, University of Houston, Monash University, BI Norwegian Business School.

Past: University of Washington, George Washington University, King's College London, Georgetown University, University of Pavia, Princeton University, Chicago Booth, University of Southern California, National Bank of Denmark. Brandeis University. Harvard-MIT. Amazon. Texas A&M University. University of Montreal, Central Bank of Hungary, Indiana University, Duke University, Federal Reserve Bank of Atlanta, University at Albany (SUNY), Universitat Pompeu Fabra, Federal Reserve Bank of Cleveland, Bank of Canada, University of Pennsylvania, Goethe University, Bilkent University, Hong Kong University of Science and Technology, Queen Mary University, Central Bank of the Republic of Turkey, University of Rotterdam, University of Amsterdam, Vienna University of Technology, Oesterreichische Nationalbank, University of Cyprus, Banque de France; University of Leicester; LUISS Guido Carli University, Rome, Bank of England; University of Warwick; Federal Reserve Bank of Chicago; The Federal Reserve Bank of New York; University of Naples Federico II; University of Gent; Federal Reserve Bank of New York; University of Rome "Tor Vergata"; Universitat Autònoma de Barcelona; Universiteit Maastricht; Board of Governors of the Federal Reserve System; Columbia University: University of Rome "La Sapienza": New York University: Norges Bank: Koc University, Istanbul; Institute for Advanced Studies, Vienna; Louvaine-La-Neuve - Institut de statistique; Econometric Institute & Tinbergen Institute, Rotterdam; Helsinky Center of Economic Research: Ente Luigi Einaudi. Rome: European Central Bank: Université Libre de Bruxelles – ECARES; IGIER – Università Bocconi; Universidad Carlos III de Madrid; Bundesbank – CIF – ECB joint lunchtime seminars, Frankfurt.

### **Conference Presentations**

16th International Conference on Computational and Financial Econometrics (CFE22), Special Invited Session on Machine Learning and Macroeconomic Forecast, London, December 2022.

Mid-year meeting of the NBER-EFSF working group on Methods and Applications for DSGE Models, Dallas, November 2022.

Second Dolomiti Conference, Italy, June 2022.

Macroeconomics in a Post-Pandemic World, Italy, May 2022.

Conference on Non-Traditional Data, Machine Learning, Natural Language Processing in Macroeconomics, Bank of Canada, Federal Reserve Board, Bank of Italy, November 2021.

Conference on Real-Time Data Analysis, Methods and Applications, Banque de France, October 2021.

NBER Summer Institute, Boston, July 2021.

Duhram Univeristy Quantitative Research in Financial Economics (QRFE) Workshop on Financial Econometrics, Virtual, June 2021.

ASSA Annual Meetings, Virtual, January 2021.

SIT Insights in Technology Conference, Virtual, December 2020.

National Institute of Statistics and Geography of Mexico Conference on New data and methods for generating official information, Virtual, November 2020.

ECB Workshop on Tracking the Economy with High-Frequency Data, Virtual, October 2020.

Second Vienna Workshop on Economic Forecasting, Virtual, October 2020.

III Conference on Advances in Applied Macro-Finance (AAMF), Monash University, Australia, December 2019. Keynote speaker.

Banque de France - Bocconi University workshop on Using alternative datasets for macro analysis and monetary policy, Milan, October 2019. Keynote speaker.

Paris School of Economics and Banque de France – Macroeconometrics and Time Series Workshop, Milan, October 2019

EcoMod2019 Conference, University of the Azores, July 2019. Keynote speaker.

NBER Summer Institute, Boston, July 2019.

Annual Conference of the International Association of Applied Econometrics, Cyprus, June 2019.

First Dolomiti Conference, Italy, June 2019.

Workshop on High Dimensional Times Series in Macroeconomics and Finance, Vienna, May 2019.

Banca d'Italia conference on Assessing the performance of the Italian economy: the role of demand and supply factors, Rome, November 2018. Keynote speaker.

Conference of Modeling with Big Data and Machine Learning, Bank of England, November 2018. Keynote speaker.

34th CIRET Conference, Rio de Janeiro, September 2018. Keynote speaker.

Annual Conference of the International Association of Applied Econometrics, Montreal, June 2018.

Barcelona GSE Summer Forum, Time Series Econometrics and Applications for Macroeconomics and Finance, June 2018.

CARE Conference on Firm Level Information and the Macroeconomy, Washington DC, May 2018.

ASSA Annual Meetings, Philadelphia, January 2018.

Conference on Nowcasting, Central Bank of Argentina, November 2017.

Conference on Nowcasting, Central Bank of Brazil, November 2017.

27th Annual Meeting of the Midwest Econometrics Group, Texas A&M University, November 2017. Keynote speaker.

NBER-NSF Time Series Conference, Northwestern University, September 2017.

NBER Summer Institute, Boston, July 2017.

Society for Computational Economics, Fordham University, New York, June 2017.

NBER-NSF Seminars on Bayesian Inference in Econometrics and Statistics (SBIES), Washington University in St. Louis, May 2017.

Conference on "Big Data Dynamic Predictive Modeling", University of Philadelphia, May 2017.

Workshop on "Forecasting with Massive Data in Real Time", International Institute of Forecasting and Microsoft, New York, April 2017.

National Bank of Poland Workshop on Forecasting, Warsaw, November 2016.

ECB conference on DSGE and Forecasting, Frankfurt, September 2016.

ERNSI Workshop (European Research Network System Identification, Padova, September 2016.

Annual Conference of the International Association of Applied Econometrics, Milan, June 2016.

ASSA Annual Meetings, San Francisco, January 2016.

OFCE Workshop on Empirical Monetary Economics, Paris, December 2015.

NBER-NSF Time Series Conference, Vienna, September 2015.

56th Annual Conference of the Italian Economic Association, Conference, Naples, October 2015.

NBER Summer Institute, Boston, July 2015.

EC^2 conference on "Advances in Forecasting," Barcelona, December 2014.

Conference on "Advances in Applied Macro Finance and Forecasting," Bilgi University, Istanbul, September 2014.

Eighth ECB Workshop on Forecasting Techniques, Frankfurt, June 2014.

34nd International Symposium on Forecasting, Rotterdam, June 2014.

Workshop on "The Econometric Analysis of Recurrent Events in Macroeconomics and Finance," Rotterdam, June 2014.

EC^2 conference on The Econometric Analysis of Mixed Frequency Data, Cyprus, December, 2013.

14th IWH-CIREQ Macroeconometric Workshop, Halle (Germany), December 2013. Keynote speaker.

Economic Policy 57th Economic Policy Panel, Vilnius, October 2013.

9th Annual CIRANO Workshop on Forecasting and Data Revision in Macroeconomics," Montreal, October 2013.

Barcelona GSE Summer Forum, Time Series in Macro and Finance, June 2013.

Forecasting Conference at the Econometric Institute in Rotterdam, May 2013.

Workshop on High Dimensional Times Series in Macroeconomics and Finance, Vienna, May 2013.

3rd VALE - EPGE Global Economic Conference on "Business Cycles," Rio de Janeiro, May 2013.

Frontiers of Macroeconometrics, University College London, April 2013.

Advances in Econometrics Conference on Vector Autoregressive Models, Dallas, November 2012.

Economic Policy 56th Economic Policy Panel, Central Bank of Cyprus, Nicosia, November 2012.

The Annual Congress of the European Economic Association (EEA) and European Meeting of the Econometric Society (ESEM), Malaga, August 2012.

NBER Summer Institute, Boston, July 2012.

Sydney Econometric Theory Workshop, University of New South Wales, July 2012.

North American Meeting Econometric Society, Northwestern University, Evanston, June 2012.

32nd International Symposium on Forecasting, Boston, June 2012.

Annual Meeting of the Society for Economic Dynamics, Limassol, June 2012.

Workshop on Recent Theory and Applications of DSGE Models, Rotterdam, June 2012.

Seventh ECB Workshop on Forecasting Techniques - New directions for forecasting, May 2012.

Economic Policy 55th Economic Policy Panel, National Bank of Denmark, Copenhagen, April 2012.

Conference on Policy Responses to Commodity Price Movements, Central Bank of the Republic of Turkey and the International Monetary Fund, Istanbul, April 2012.

Conference on Bayesian Econometrics in Macroeconomics and Finance. Erasmus University Rotterdam, January 2012.

The 4th International Conference of the ERCIM Working Group on Computing & Statistics, University of London, December 2011

Conference on Forecasting the Business Cycle, Banque de France and International Institute of Forecasters, Paris, December 2011.

European Seminar on Bayesian Econometrics, ESOBE, Bruxelles, November 2011.

Riksbank Workshop on Nowcasting, Stockholm, November 2011.

Australasian Meeting of the Econometric Society, Adelaide, July 2011.

Handbook of Economic Forecasting Conference, Federal Reserve of St. Louis, May 2012.

The Royal Economic Society Conference 2011, Royal Holloway-University of London, April 2011.

Workshop on Densities, Forecasting and Communicating Uncertainty, Bank of England, April 2011.

Second Carlo Giannini Workshop in Econometrics, Einaudi Institute for Economics and Finance (EIEF), Rome, December 2010

Conference on High-Dimensional Econometric Modeling, Cass University, London, December 2010.

Conference on International Risk Sharing, Brussels, October 2010.

6th Colloquium on Modern Tools for Business Cycle Analysis: "The Lessons from Global Economic Crisis," Luxembourg, September 2010.

Econometric Society World Congress, Shanghai, August 2010

2010 Joint Statistical Meetings of the American Statistical Association, Vancouver, August 2010

Conference on 'Advances in International Macroeconomics: Lessons from the Crisis' (co-organized by the EU Commission and ECARES), Brussels, July 2010.

Sixth CSEF-IGIER Symposium on Economics and Institutions, Capri, June 2010

CEPR conference on International Business Cycles - Linkages, Differences and Implications, Magyar Nemzeti Bank, Budapest, June 2010.

CEPR / ECGI / IESE Conference on 'The Governance and Regulation of Financial Institutions Lessons from the Crisis', Madrid, June 2010

Fourth CIREQ Time Series Conference, Montreal, May 2010.

The Royal Economic Society Conference 2010, University of Surrey, March 2010.

6th Workshop on Forecasting Techniques Forecasting, Real time and Survey data, European Central Bank, Frankfurt am Main, March 2010.

ENTER Program Jamboree, Universite' de Toulouse, February 2010.

Conference on "Economic Linkages, Spillovers and the Financial Crisis," Banque de France, Paris; January 2010

Applied Econometrics and Forecasting in Macroeconomics and Finance Workshop, St. Louis FED, November, 2009

3rd International Conference on Computational and Financial Econometrics (CFE'09), Cyprus, October 2009.

Fifth CSEF-IGIER symposium on Economics and Institutions, Capri, June 2009

North American Summer Meeting of the Econometric Society, June 2009.

Research Forum on "Recent Developments in DSGE Model, Bank of England, London, June 2009.

Seminar on Macroeconomics (ISOM), Cyprus, June 2009.

NBER conference on the Euro, Bocconi University, Milan, October 2008.

Workshop on "International Linkages," the Asian Developments Bank, Tokyo, October 2008.

40th Annual Conference of the Money Macro and Finance Research Group, London, September 2008.

28th Annual Congress of the European Economic Association, Milan, August 2008.

Third Japanese-European Bayesian Econometrics and Statistics Meeting, Brescia, August 2008.

Conference on "Forecasting in Rio," Rio de Janeiro, July 2008.

Annual Meeting of the Society for Economic Dynamics, Boston, July 2008.

Conference on "The Euro Area, the Euro and the World Business Cycle," Aix en Provence, July 2008.

Conference on "DSGE Models in the Policy Environment," Bank of Italy, Rome, June 2008.

The 2008 World Congress on National Accounts and Economic Performance Measures for Nations, Washington D.C., May 2008.

EABCN workshop on Euro Area Data: Issues and Implications for Economic Analysis, Cambridge, March 2008.

5th Workshop on Forecasting Techniques "Forecast Uncertainty in Macroeconomics and Finance," Frankfurt, November 2007.

Cleveland Workshop on Methods and Applications for Dynamic Stochastic General Equilibrium Models, Cleveland, October 2007.

EABCN workshop on Changes in Inflation Dynamics and Implications for Forecasting, Paris, September 2007.

62nd European Meeting of the Econometric Society, Budapest, August 2007.

22nd Annual Congress of the European Economic Association, Budapest, August 2007.

NBER SUMMER INSTITUTE 2007, Working Group on Forecasting & Empirical Methods in Macroeconomics & Finance, Boston, July 2007.

The 28th International Symposium on Forecasting, New York, June 2007.

13th International Conference on Computing in Economics & Finance, Montreal, June 2007.

Workshop on Nowcasting, Norges Bank, Oslo, June 2007.

European Summer Symposium in International Macroeconomics (ESSIM) 2007, Izmir, May 2007.

Workshop on "Factor Models in Theory and Practice," Robert Schuman Centre for Advanced Studies, European University Institute, Florence, November 2006.

MMF2006: Money, Macro and Finance Research Group, 38th Annual Conference, University of York, September 2006.

EABCN Workshop on "Estimation and Empirical Validation of Structural Models for Business Cycle Analysis", Swiss National Bank, Zurich, August 2006.

The 21th Annual Congress of the European Economic Association (EEA) and 61st European Meeting of the Econometric Society (ESEM), Vienna, August 2006.

Macroeconometrics and Model Uncertainty, Conference of Reserve Bank of New Zealand, CAMA, The Australian National University, Wellington, June 2006.

Australasian Meeting of the Econometric Society, Alice Springs, Northern Territory, Australia, July, 2006.

Macroeconometrics and Model Uncertainty, Conference of Reserve Bank of New Zealand, CAMA, The Australian National University, Wellington, June 2006.

Society for Computational Economics, 12th International Conference On Computing In Economics And Finance, Cyprus, June 2006.

Seminar on Macroeconomics (ISOM), Tallin, June 2006.

New developments in economic forecasting, 8th Bundesbank Spring Conference, Eltville, May 2006.

Conference to Honor the 25th Anniversary of Seminal Research by S. Beveridge and C. R. Nelson, Federal Reserve Bank of Atlanta, Atlanta, March 2006.

Flexible Statistical Analysis Adapted to Complex Data Structures, Fifth workshop of the IAP research network, Louvain-la-Neuve, March 2006.

Fourth workshop on Forecasting Techniques: Forecast Evaluation and Conditional Forecasts, European Central Bank, Frankfurt, December 2005.

Workshop on Macroeconomic Forecasting, Analysis and Policy with Data Revision, CIRANO, Montreal, October 2005.

The 20th Annual Congress of the European Economic Association (EEA), Amsterdam, August 2005.

Conference on "Growth and cyclical asymmetries between France, Germany and Italy," Banque de France, Paris, June 2005.

Conference on "What effects is EMU having on the euro area and its member countries?", European Central Bank, Frankfurt, June 2005.

EABCN Workshop on "Needed: A Euro Area Real-Time Database for the Euro Area", National Bank of Belgium, Brussels, June 2005.

Conference in Memory of the Late Professor Oved Yosha, Tel-Aviv University, January 2005.

EABCN Workshop on Recent Advances on Forecasting Combination, National Bank of Belgium, Brussels, November 2004.

EABCN Workshop on Business Cycle and Acceding Countries, Oesterreichische Nationalbank, Vienna, April 2004.

2nd Young Researchers Day on "Many explanatory variables? A challenge for regression modelling", Louvain-La-Neuve, April 2001.

International Statistical Institute (ISI), 54th Session, Berlin, August 2003.

CEPR workshop on "Macroeconomics and Economic Geography," Modena, May 2003.

CEPR Workshop on "Cities and Geography," Paris, December 2002.

European Meeting of the Econometric Society, Venice, September 2002.

Conference "Common Features in Rio," Rio de Janeiro, August 2002.

Latin-American Meeting of the Econometric Society, Sao Paolo, August 2002.

Brussels - York annual meeting in Statistics, York University, June 2002.

European Summer Symposium in International Macroeconomics (ESSIM), Tarragona, May 2002.

Societé Française de Statistique, XXIVes Journées de Statistique, Brussels, May 2002.

ENTER Program Jamboree 2002, Universite' de Toulouse.

Workshop on Analysing Multivariate Dynamical Data, Dortmund University, November 2001.

ENTER Program Jamboree 2001, Mannheim University.