Katerina Petrova

Contact Information

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Research Interests

Econometrics, Macroeconometrics, DSGE and VAR Models, MCMC Methods

Positions

Assistant Professor, Department of Economics, Universitat Pompeu Fabra,
Barcelona Graduate School of Economics Affiliated Professor
Sept 2019 –to date

Assistant Professor, School of Economics and Finance, University of St Andrews
Sept 2016 – May 2019

Research Fellow, Warwick Business School, University of Warwick
Sept 2014 – May 2016

Education

PhD Economics, Queen Mary University, London
Oct 2016

MSc Economics, Queen Mary University, London
Sept 2012 (Distinction)

BA Politics, Kingston University, London
Sept 2011 (First Class Honors Degree)

1st German High School 'Prof. K. Galaboff', Sofia
Sept 2008 (Mathematics A Level Equivalent, Distinction)

Research

Publications:

1. Kernel-based Generalised Least Squares, with George Kapetanios and Ilias Chronopoulos (accepted, *Econometrics and Statistics*)
2. Time-varying parameter structural model of the UK economy, with George Kapetanios, Riccardo Masolo and Matthew Waldron (*Journal of Economic Dynamics and Control*, 2019, Vol. **106** (103705))
3. A quasi-Bayesian nonparametric approach to time varying parameter VAR models (*Journal of Econometrics*, 2019, Vol. **212**(1), pp. 286-306)
4. Quasi-Bayesian estimation of time varying volatility in DSGE models, (*Journal of Time Series Analysis*, 2019, Vol. **40**, pp. 151-157)
5. Forecasting with rich data: model comparison and evidence from European countries, with George Kapetanios and Gian Luigi Mazzi (chapter in the Handbook of Rapid Estimates, Eurostat, 2017)
6. A time varying DSGE model with financial frictions, with Ana Galvão, Luidas Giraitis and George Kapetanios (*Journal of Empirical Finance*, 2016, Vol. **38**, pp. 690–716)

Working Papers:

1. Robust Bayesian inference in the presence of distributional misspecification and changing volatility in VAR models (revise and resubmit in the *Journal of Econometrics*)
2. A quasi-Bayesian local likelihood method for modelling parameter time variation in DSGE models, with Ana Galvão, Luidas Giraitis and George Kapetanios revise and resubmit in the *Journal of Applied Econometrics*)
3. Monetary Policy across Space and Time, with Christian Matthes and Laura Liu

(submitted)

4. Algorithms for Proxy SVARs with time-varying parameters, with Haroon Mumtaz, (submitted)
5. A Generalised Lp-norm filter for time-varying parameter models, with George Kapetanios and Ilias Chronopoulos
6. Time varying cointegration and some UK Great Ratios, with George Kapetanios, Stephen Millard and Simon Price (submitted)
7. Forecasting with large macroeconomic and financial datasets in the presence of structural change, with Petros Dellaportas

Work in Progress:

1. Robust Bayesian Inference for linear DSGE models, with Christian Matthes and Laura Liu
2. Refinements on VAR models with time-varying parameters, with Haroon Mumtaz
3. Price puzzles under imperfect information, with Marios Zachariadis
4. Stochastic volatility in risk-adjusted linear DSGE models, with Oliver de Groot
5. Structural change in the UK from the 19th century, with George Kapetanios, Riccardo Masolo and Ryland Thomas
6. Analysis of the most recent Bayesian modelling techniques for big data, with George Kapetanios and Massimiliano Marcellino

Research Grants

International Association of Applied Econometrics, Conference Grant $1,500, with Dimitris Korobilis

Alan Turing Institute-HSBC-ONS Economic Data Science Awards 2018, £29,167.38, with Petros Dellaportas

International Association of Applied Econometrics, Conference Grant $1,000

Royal Economic Society, Special Project Grant Scheme, £3,500, with Oliver De Groot

Bank of England Research Grant, £2,000, with Oliver De Groot

KE&Impact Fund, St Andrews, Small Grant, £1,500, with Oliver De Groot

KE&Impact Fund, St Andrews, Main Fund, £2,010, with Oliver De Groot

Seminar Presentations

University of California San Diego, Seminar 2019

Federal Reserve Board, Research Seminar, 2018

European Central Bank, Seminar, 2018

Bank of Ireland, Research Seminar, 2018

King's College London, Research Seminar, 2018

Queen Mary University London, Research Seminar, 2018

European Seminar on Bayesian Econometrics, Ca'Foscari University of Venice, Italy, 2016

Workshop Time Variation and Nonlinear Models in Econometrics and Macro, BoE, 2016

Bank of England, Seminar Series, 2015

University of Surrey, Macro Seminar Series, 2015

Warwick University, School of Economics, Macro Seminar, 2014

Conference Presentations

Machine Learning Workshop, Barcelona Graduate School of Economics, 2019

Econometrics Workshop, Federal Reserve of St Louis, 2018

Workshop on Machine Learning and Econometrics, CEMMAP, 2018

Big Data in Predictive Dynamic Economic Modelling, University of Pennsylvania, 2017

Royal Economic Society Conference, University of Bristol, 2017

Time Varying Models for Macro Policy and Financial Stability, , European University Institute, 2017

Conference on Computational Finance and Econometrics, Invited Session, Seville, 2016

International Association for Applied Econometrics, Annual Conference, Milan, 2016

Conference on Computational Finance and Econometrics, Invited Session, London, 2015

Conference on Research on Economic Theory & Econometrics, Chania, 2015

International Association for Applied Econometrics, Annual Conference, Thessaloniki, 2015

Workshop on Time Varying Parameter Models, European University Institute, 2015

Computational Finance and Econometrics, Invited Session on Macro and Forecasting, 2014

Financial Econometrics and Empirical Finance Conference, Essex University, 2014

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

International Association for Applied Econometrics, Annual Conference, London, 2014

Judgement and Combination in Forecasting and Policy Models Conference, Bank of England, 2014

Conference on Computational Finance and Econometrics, London, 2013

Conference on Bayesian Econometrics, University of Bologna, Rimini, Italy, 2012

Refereeing Activity

Journal of Econometrics, *Journal of the Royal Statistical Society*, *Journal of Business and Economic Statistics*, *Journal of Economic Dynamics and Control*, *Journal of Applied Econometrics*, *International Journal of Forecasting*, *Journal of Macroeconomics*, *Macroeconomic Dynamics*, *Economic Modelling*, *Journal of Forecasting*

Consultancy

Central Bank of Ireland, 2019-to date
European Central Bank, April 2018 – to date
Bank of England, 2015 – to date
EuroStat, Jan 2017 – Jan 2018

Teaching

1. Econometrics 25117, Universitat Pompeu Fabra, 2019 - to date
2. EC5203: Econometric Methods and Applications, University of St Andrews, 2016
3. EC5221: Econometric Time Series Analysis, University of St Andrews, 2017-2018
4. EC5609: Financial Econometrics, University of St Andrews , 2016-2018