ALEXEI ONATSKI

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EDUCATION

Ph.D. in Economics, Harvard University. Thesis Title: “Robust Monetary Policy under Model Uncertainty”. 2001

MA in Economics, New Economic School, Moscow, *Summa cum Laude.* 1996

Diploma in Mathematics/Applied Mathematics, Moscow State University, Department of Mechanics and Mathematics, *Summa cum Laude.* 1993

ACADEMIC POSITIONS

Professor of Econometrics, Faculty of Economics, University of Cambridge. 2016-present

Teaching Associate, London Business School. 2018-present

Teaching Associate, London School of Economics, 2018-2020.

Director of Teaching of the Faculty Board of Economics, University of Cambridge. 2014-2017

External Examiner at Adam Smith Business School, University of Glasgow, 2016-present

Reader in Economics (UK equivalent of Associate Professor), Faculty of Economics, University of Cambridge. 2010-2016

Fellow of Churchill College, University of Cambridge. 2014-present

Director of Studies in Economics, St. Catharine’s College, University of Cambridge. 2013-14.

Fellow of St. Catharine’s College, University of Cambridge. 2010-2014

Assistant Professor of Economics, Economics Department of Columbia University, New York. 2001-2010

Research Assistant at National Bureau of Economic Research, USA. 1998-1999

Teaching Fellow at Harvard University and Harvard Business School. 1997-1999

OTHER POSITIONS

Associate Editor, Journal of Business and Economic Statistics, 2019-

Member of the Editorial Board, Random Matrices: Theory and Applications, 2018-present

Assistant Editor, Econometrics Journal, 2012-2016

Associate Editor, Journal of Econometrics, 2013-2016

Programme Coordinator of Empirical Finance, Cambridge INET. 2014-present

Summer Program Instructor, Columbia University, NY. 2011, 2013.

Consultant, Federal Reserve Bank of New York, NY. 2005.

Visiting Professor of Economics, New Economic School, Moscow, Russia. 2000.

PUBLISHED AND FORTHCOMING PAPERS

1. Spectral distribution of the sample covariance of high-dimensional time series with unit roots, with Chen Wang, *Statistica Sinica* 32, 1-21*, 2022*
2. Spurious Factor Analysis, with Chen Wang, *Econometrica* 89 (2), 591-614*, 2021*
3. Testing in High-dimensional Spiked Models, with Iain Johnstone, *Annals of Statistics* 48(3), 1231-1254*, 2020*
4. Extreme canonical correlations and high-dimensional cointegration analysis, with Chen Wang, *Journal of Econometrics* 212(1), 307-322, 2019.
5. Alternative Asymptotics for Cointegration Tests in Large VARs, with Chen Wang, *Econometrica* 86, 1465-1478, 2018.
6. Asymptotic Analysis of the Squared Estimation Error in Misspecified Factor Models, *Journal of Econometrics* 186, Issue 2, 388-406, 2015.
7. Detection of Weak Signals in High-dimensional Complex Valued Data, *Random Matrices: Theory and Applications* 3, No.1, 2014.
8. Signal Detection in High Dimension: The Multispiked Case, with Marc Hallin and Marcelo J. Moreira, *Annals of Statistics* 42, 225-254, 2014.
9. Asymptotic power of sphericity tests for high-dimensional data, with Marcelo J. Moreira and Marc Hallin, *Annals of Statistics* 41, 1204-1231, 2013.
10. Factor Analysis of a Large DSGE Model, with Francisco J. Ruge-Murcia, *Journal of Applied Econometrics* 28, 903-928, 2013.
11. Asymptotics of the principal components estimator of large factor models with weakly influential factors, *Journal of Econometrics* 168, 244-258, 2012. Received 2014 *Zellner Award for the best paper in theoretical econometrics* published by the Journal of Econometrics in 2012 or 2013
12. Set coverage and robust policy, with M. Henry, *Economics Letters* 115, 256-257, 2012.
13. Unit roots in white noise, with H. Uhlig, *Journal of Econometric Theory* 28 (03), 485-508, 2012.
14. Determining the number of factors from empirical distribution of eigenvalues, *Review of Economics and Statistics* 92 (4), 1004-1016, 2010.
15. Empirical and Policy Performance of a Forward-Looking Monetary Model, with Noah Williams, *Journal of Applied Econometrics* 25 (10), 145-176, 2010.
16. A formal statistical test for the number of factors in the approximate factor models, *Econometrica* 77 (5), 1447-1479, 2009.

17. The Tracy-Widom limit for the largest eigenvalues of singular complex Wishart matrices, *Annals of Applied Probability* 18, No. 2, 470-490, 2008.
18. Curve Forecasting by Functional Autoregression, with Vladislav Kargin, *Journal of Multivariate Analysis* 99, Issue 10, 2508-2526, 2008.
19. Winding Number Criterion for Existence and Uniqueness of Equilibrium in Linear Rational Expectations Models, *Journal of Economic Dynamics and Control* 30, 323-345, 2006.
20. Monetary Policy under Uncertainty in Microfounded Macroeconometric Models, with Andrew Levin, Noah Williams, and John Williams, *Macro Annual* 2005, MIT press
21. Modeling Model Uncertainty, with Noah Williams, *Journal of European Economic Association* 1, No. 5, 2003.
22. Robust Monetary Policy under Model Uncertainty in a Small Model of the US Economy, with James Stock, *Macroeconomic Dynamics* 6, No. 1, 2002.
23. Searching for Prosperity, with Michael Kremer and James Stock, *Carnegie-Rochester Conference Series on Public Policy*55, December, 2001

OTHER PUBLISHED WORK

24. Model Uncertainty, An article for The New Palgrave Dictionary of Economics, Second Edition, 2008
25. Discussion of Y. Fan et al. Journal of the Royal Statistical Society, Series B, 2013

SELECTED WORKING PAPERS

Local Asymptotic Normality of the spectrum of high-dimensional spiked F-ratios, with Prathapasinghe Dharmawansa and Iain M. Johnstone. *arXiv:1411.3875*

An edge CLT for the log determinant of Gaussian ensembles, with Iain M. Johnstone, Egor Klochkov, and Damian Pavlyshyn. *arXiv:2011.13723*

Spin glass to paramagnetic transition in Spherical Sherrington-Kirkpatrick model with ferromagnetic interaction, with Iain M. Johnstone, Egor Klochkov, and Damian Pavlyshyn. *arXiv:2104.07629*

SCHOLARSHIPS, PRIZES AND AWARDS

Keynes Fund Grant, 14th round, 2019. Project's title: High-dimensional Cointegration Analysis.

Keynes Fellowship Award, 2013-2017

Frank Khan Fellow in Economics, Churchill College 2014-present

2014 Zellner Award for the best paper in theoretical econometrics published by the Journal of Econometrics in 2012 or 2013

Certificate of Appreciation for Excellence in Graduate Teaching, Awarded by the Association of Graduate Economic Students of Columbia University, 2008

Award for the Best Graduate Teacher, Awarded by the Association of Graduate Economic Students of Columbia University, 2003

Outstanding Graduate Teaching Award from the Association of Graduate Economic Students of Columbia University, 2002

Summer Research Fellowship awarded by the Faculty Development Committee of Columbia University, 2002

Graduate Student Fellowship, Economics Department of Harvard University, 1996-1998

Merle Fainsod Prize, Davis Center for Russian and Eurasian Studies at Harvard. Awarded to top incoming graduate students in the field of Russian, Soviet, or post-Soviet studies, 1996

TEACHING

Econometric Methods E300 (masters' level course), 2014-present

Theory and Practice of Econometrics I, Paper 3 Part 2A, Macroeconometrics (undergraduate-level course), 2015-present

Topics in Applied Econometrics, Paper 3 (a course for Advanced Diploma students), 2015-present

Topics in Advanced Econometrics (Topics in Partial Identification, GMM, Factor Models, Nonparametric statistics, PhD level course), 2011-2015.

Theory and Practice of Econometrics II, Paper 10 Part 2B (final year undergraduate course), 2010-2014.

Preparatory Econometrics (Probability and Statistics course for Advanced Diploma students), 2010-2014.

Introduction session (an introductory lecture for Cambridge Economics students), 2014-2016.

Time Series and Financial Econometrics, Paper 11 Part2B (final year undergraduate course), 2010-2011.

Mathematical Surgery (questions and answers sessions for master-level students), 2010-2012.

Supervising undergraduate students' econometric studies (Cambridge system), 2010-present

Introduction to Econometrics II, G6412, (Core graduate level course at Columbia University), 2002-2004, 2007, 2009

Topics in Econometrics II, G6428 (Topics include: inverse problems in econometrics, factor models, empirical likelihood), 2009

Introduction to Econometrics, W3412 (Core undergraduate course, Columbia University), 2005-2009, 2011, 2013

Econometrics of Monetary Policy, G6429 (Applied macro-econometrics course including estimation of DSGE models and structural VAR analysis), 2004, 2006-2007

Quantitative Methods for Economic Analysis, U4609 (masters' level course), 2004-2005

Intermediate Macroeconomics, W3213 (undergraduate level course), 2002-2004

Time Series Analysis (A course for Harvard Kennedy School students), 1999

PhD Advising

Thomas Auld, dissertation supervisor, 2017-
David Delgado, dissertation supervisor, 2015
Ekaterina Smetanina, dissertation advisor, 2014-
Haihan Tang, dissertation advisor, 2016-2017.
Alexis De Boeck, dissertation advisor, 2016-
Bowei Guo, dissertation advisor, 2016-
Steve Thiele, a member of dissertation committee, 2016.
Lukas Laffers, dissertation advisor, 2014.
Frank DiTraglia, a member of dissertation committee, 2012
Heather Battey, a member of dissertation committee, 2011
Simeon Tsonev, dissertation sponsor, 2009
Yuki Sakasai, inside reader on the dissertation committee, 2008
Sungjun Cho, outside reader on the dissertation committee, 2007
Marcos Alvarez Diaz, inside reader on the dissertation committee, 2006
Seonghoon Cho, outside reader on the dissertation committee, 2004
Antonio Moreno, inside reader on the dissertation committee, 2003
Francesco Saraceno, inside reader on the dissertation committee, 2002
Anton Granik, dissertation sponsor, 2002
Niklas Westelius, outside reader on the dissertation committee, 2002

Conference Sessions

Joint Statistical Meetings, 2019. IMS-sponsored inited session – Random matrices and high dimensional statistics.
32nd European Meeting of Statisticians, invited talk, Palermo, Italy 2019.

6th RCEA Time Series Econometrics Workshop, invited keynote talk, Cyprus 2019.

Big Data Methods in Econometrics and Finance, INET conference, 2019.

Advances in Econometrics, cemmap, London 2018.

Symposium on Statistical Penalisation Methods and Dimension Reduction Methods for Economic and Financial Analysis, JSPS London, ESRC & DERS, University of York, 2018.
Barcelona GSE Summer Forum: Time Series Workshop, 2018.

Joint Statistical Meetings, 2017. IMS invited session on Random Matrices and Applications.

Inference Issues in Econometrics, Tinbergen Institute Conference, 2017.
10th International Conference on Computational and Financial Econometrics, 2016, Special Invited Session on Efficiency Results in High Dimension
Complex Systems in Time Series Conference, LSE Statistic, 2015.

Big Data Big Methods Conference, INET, Cambridge, 2015

Time Series and Financial Econometrics Conference, CIREQ, Montreal. 2015

Random Matrices and Their Applications Conference, University of Hong Kong, China. 2015.

North American Winter Meeting of the Econometric Society, Philadelphia 2013, New Orleans 2008, Boston 2006.

Large-Scale Factor Models in Finance Conference, Society for Financial Econometrics, Lugano, Switzerland. 2013.

New Developments in Econometrics and Time Series, ECARES, ULB, Brussels. 2013.

High-Dimensional Econometric Models, cemmap and UCL, London. 2013.

High-Dimensional Problems in Econometrics, CIREQ, Montreal. 2012.

New Developments in Econometrics and Time Series, ECARES, ULB, Brussels. 2011.

Econometrics of Interactions Conference, CIRANO-CIREQ, Montreal. 2009.

North American Summer Meeting of the Econometric Society: Boston, USA. 2009.

NBER-NSF Time Series Conference: UC Davis, USA 2009; Aarhus, Denmark 2008, Montreal, Canada 2006.

NY Area Workshop on Monetary Policy: New York, USA. 2008.

VSAM Vienna Symposia on Asset Management, University of Vienna 2007.

Greater New York Area Metropolitan Econometrics Colloquium: Philadelphia 2007.

Conference on Financial Econometrics, CIREQ, Montreal, 2007.

NBER Summer Institute: Boston, USA 2005-2007.

Workshop on Empirical Methods and Applications for Dynamic Stochastic General Equilibrium Models and Factor Models, Federal Reserve Bank of Cleveland, USA. 2004, 2005.

Workshop on Robustness, Federal Reserve Bank of Cleveland, USA. 2003.

Society of Computational Economics, conference on Learning and Macroeconomic Dynamics, Seattle, USA. 2003.

NBER Economic Fluctuations and Growth Working group on Forecasting & Empirical Methods in Macroeconomics and Finance: Boston, USA. 2003.

The State of Economics and of Transition, New Economic School with CEFIR, EERC, SITE, and WDI, Moscow, Russia. 2002.

International Seminar on Macroeconomics, NBER and European Central Bank, Frankfurt, Germany. 2002.

Annual Meeting of the American Economic Association, Atlanta 2002, New Orleans 2001.

Monetary Policy and the Labor Market in the U.S., the Euro-area and Japan, Center for Economic Policy Analysis and the Economics Department of the New School University, NY, USA. 2002.

Macroeconomic Policy in a Dynamic, Uncertain Economy, NBER, Cambridge, MA, USA. 2001.

Carnegie-Rochester Conference on Public Policy, Pittsburg, USA. 2000.

Econometric Society World Congress, Seattle, USA. 2000.

Meeting of the MacArthur Foundation Network on Economic Inequality and Social Interactions, Los Angeles, USA. 2000.

The 6-th Annual Conference on Monetary Economics and Monetary Policy, Stanford University, USA. 2000.

RECENT SEMINARS

Princeton University 2019, University of Pennsylvania 2019, MIT-Harvard 2019, Weierstrass Institute, Berlin 2019, Singapore Management University 2019, National University of Singapore 2019, Hong Kong University of Science and Technology 2019, University of Warwick 2018, University of York, UK 2017. Heidelberg University 2017. Erasmus School of Economics 2016. Nuffield College at Oxford 2016,2012. UPF Barcelona 2016, 2011. Banco do Portugal 2016. Tinbergen Institute 2016. UQAM, Montreal, Canada 2015. Fundacao Getulio Vargas, Rio de Janeiro, Brazil 2014. Penn State University 2014. LSE, London 2014. University of Illinois Urbana-Champaign, USA 2013. Catholic University of Louvain, Belgium 2013. University of Zurich, Switzerland 2013. Toulouse School of Economics 2012. UCL, London 2012. University of Southampton 2012, University of Vienna, Austria 2011. University of Manchester 2011.

REFEREE

Econometrica, Journal of Econometrics, Journal of the American Statistical Association, Annals of Statistics, Biometrika, Review of Economics and Statistics, The Journal of Applied Econometrics, Journal of Multivariate Analysis, Econometric Theory, Econometrics Journal, Electronic Communications in Probability, Journal of Monetary Economics, Journal of Economic Dynamics and Control, American Economic Review, Journal of European Economic Association, The Economic Journal, Journal of Money Credit and Banking, Review of Economic Dynamics, National Science Foundation.

ADMINISTRATIVE WORK AND CONFERENCE ORGANIZING

Placement Director, 2010-2013, 2017-present
Member of the Faculty Board, University of Cambridge, 2011-present.
Graduate Admissions Officer, 2017-present.
Director of Studies for Diploma students, 2016-present.
Director of Teaching, Faculty of Economics, University of Cambridge. 2014-2017.
Managing Committee of the Faculty Board of Economics. 2014-2017.
Course Director for Economics at CamCORS. 2014-2017.
Member of Teaching Committee, 2011-2017.
Moodle Virtual Learning Environment Coordinator for the Faculty of Economics, 2015-2017.
Member of Undergraduate Committee of the School of the Humanities and Social Sciences, University of Cambridge, 2015-2017.
Chair of the Econometrics Subject Group. 2011-2014, 2015-2016.
Member of Degree Committee, 2011
Member of Search Committee, 2013-2015.
Working Group on Graduate Reform. 2015.
Working Group on Part IIB Supervisions. 2011-12.
Graduate Studies Committee, 2011.
Finance Committee, St. Catharine's College, University of Cambridge. 2010-2014.
Graduate Admissions Committee, Columbia University, 2005-2010.
Royal Economic Society Conferences: Programme Committee Member, 2011-13.
INET Conference organizer: Econometrics of Networks, 2015.

PERSONAL INFORMATION

Date of Birth: 17 June 1969

Languages: Russian (native), English (Fluent)
Citizenship: Russia, UK.