## IVÁN FERNÁNDEZ-VAL

Boston University, Department of Economics 270 Bay State Road, Boston, MA 02215

Phone: (617) 353-9670, E-mail: ivanf@bu.edu

URL: <a href="http://sites.bu.edu/ivanf/">http://sites.bu.edu/ivanf/</a>

## **ACADEMIC POSITIONS**

2017-present	Professor of Economics, Department of Economics, Boston University
Spring 2019	Visiting Professor of Economics, NYU
Winter 2019	Visiting Professor of Economics, CEMFI
Fall 2018	Visiting Professor of Economics, UCL
2010-2017	Associate Professor of Economics, Department of Economics, Boston
	University
Spring 2012	Visiting Associate Professor of Economics, NYU
Fall 2011	Visiting Associate Professor of Economics, CEMFI
Summer 2011	Visiting Associate Professor of Economics, EIEF
Spring 2010	Visiting Assistant Professor of Economics, CEMFI
2005-2010	Assistant Professor of Economics, Department of Economics, Boston
	University

## **EDUCATION**

Ph.D. in Economics, Massachusetts Institute of Technology, 2005 M.A. in Economics and Finance, Centro de Estudios Monetarios y Financieros (CEMFI), 2000 B.A. in Economics, Universidad del País Vasco, 1998 B.A. in Statistics, Universidad de Zaragoza, 1993

Ph.D. Thesis Title: "3 Essays on Nonlinear Panel Data Models and Quantile Regression Analysis"

Thesis Committee: Joshua Angrist, Victor Chernozhukov, Whitney Newey

Master Thesis Title: "Household Labor Supply: Evidence for Spain"

Advisor: Pedro Mira

## **RESEARCH INTERESTS**

Econometric Theory, Applied Econometrics, Labor Economics

# HONORS, FELLOWSHIPS, AND AWARDS

1998 – 2000	Banco Bilbao Vizcaya Fellowship at CEMFI
2000 – 2002	Fundación Caja Madrid Fellowship at MIT
2002 – 2005	Fundación Ramón Areces Fellowship at MIT

Last updated: 1/23/2021 1/11

2000	Extraordinary Prize of 1998-2000 Class at CEMFI
2016	The Neu Family Award for Teaching Excellent in Economics, Boston University
2018	British Academy's Visiting Fellowship Award

### **RESEARCH GRANTS**

2008 – 2011 NSF grant SES-0752266, "Collaborative	e Research: Research on Distributional and
Quantile Methods in Econometrics," w	rith V. Chernozhukov
2011 – 2014 NSF grant SES-1060809, "Collaborative	Research: Nonparametric Distributional
and Quantile Methods in Econometric	s," with V. Chernozhukov
2016 – 2019 NSF grant SES-1559504, "Estimation a	nd Inference in Nonlinear Models with
Multidimensional Heterogeneity"	

## **ACADEMIC ACTIVITIES**

Member: Econometric Society, Royal Economic Society

Associate editor for: *Econometric Theory* (March 2014 – March 2017), *Econometrics Journal* (January 2015 – January 2024), *Econometric Reviews* (January 2015 – January 2019), *Journal of Business and Economic Statistics* (September 2015 – September 2018), *Journal of Econometric Methods* (September 2010 – January 2018), *Journal of Econometrics* (January 2019 – December 2021)

Co-Editor for: Econometric Theory (March 2017 – March 2021)

Referee for: American Economic Review, Annals of Statistics, B.E. Journals in Economic Analysis & Policy, Biometrika, Bulletin of Economic Research, Computational Statistics and Data Analysis, Econometrics Review, Econometric Theory, Econometrica, Econometrics Journal, Economic Journal, Economic Letters, Economic Modelling, Empirical Economics, ERC, Information Sciences, Investigaciones Económicas, Journal of Applied Econometrics, Journal of Business and Economic Statistics, Journal of Economic Methods, Journal of Econometrics, Journal of Economic Growth, Journal of Labor Economics, Journal of Multivariate Analysis, Journal of Political Economy, Journal of the American Statistical Association, Journal of the European Economic Association, Journal of the Royal Statistical Society, Labour Economics, NSF, Oxford Bulletin of Economics and Statistics, Quantitative Economics, Quarterly Journal of Economics, Review of Economics and Statistics, Review of Economic Studies, Scandinavian Journal of Statistics, Studies in Nonlinear Dynamics and Econometrics, TEST

Member of the Program Committee of the 2013 North American Winter Meeting of the Econometric Society, San Diego, January, 2013

Member of the Program Committee of the 28<sup>th</sup> European Economic Association (EEA) Annual Congress, Gothenburg, Sweden, August, 2013

Member of the Program Committee of the 29<sup>th</sup> European Economic Association (EEA) Annual Congress, Toulouse, France, August, 2014

Member of the Scientific Committee of the IAAE Conference, 2016-2018

Co-organizer of the BU-BC Green Line Conference in Econometrics, December, 2012-2015

Cofounder of the Econometric ArXiv econ.EM preprint repository, 2017

Program area coordinator for the field of Econometrics: Panel and Network Data, Econometric Society 2020 World Congress

Moderator of the ArXiv econ.EM domain, 2020-

### **TEACHING EXPERIENCE**

BU Empirical Economic Analysis 2 (EC 304), Undergraduate Program, Fall 2014,

Spring 2018, 2020

Introduction to Econometrics (EC 414), Undergraduate Program, Spring 2006 Statistics for Economics (EC 507), Masters Program, Fall 2005, 2009, 2010;

Spring 2007-2009

Advanced Statistics for Economists (EC 707), Graduate Program, Fall 2006-2010,

2012-2017, 2019-2020

Advanced Econometrics I (EC 708), Graduate Program, Spring 2011

Advanced Econometrics II (EC 709), Graduate Program, Fall 2015-2016, 2020 Advanced Topics in Econometrics (EC 711), Graduate Program, Spring 2008-

2010, 2013-2018, 2020

NYU Advanced Topics in Econometrics II (G31.3002-04), Graduate Program, Spring

2012, 2019

CEMFI Statistical Methods in Econometrics, Graduate Program, Fall 2011

Econometrics, Graduate Program, Spring 2010, 2019

MIT Time Series (14.384), Graduate Program, Teaching Assistant to Professor Tiemen

Woutersen, Fall 2003

Microeconomics II (14.122), Graduate Program, Teaching Assistant to Professor

Glenn Ellison, Fall 2002

### PRESENTATIONS IN CONFERENCES

2003 Econometric Society North American Winter Meeting, San Diego, January

2006 Econometric Society North American Winter Meeting, Boston, January

2007 Econometric Society North American Winter Meeting, Chicago, January

Microeconometrics: Measurement Matters, CEMMAP, London, June

2008 Econometric Society North American Winter Meeting, New Orleans, January Inference in partially identified models with applications, CEMMAP, London, March Nonsmooth Inference, Analysis, and Dependence, University of Gothenburg, June Inference with Incomplete Models, CIREQ, Montreal, October XXI Symposium Moneda y Credito: Economic Policy Evaluation (Discussant), Madrid, November 2009 Econometric Society North American Winter Meeting, San Francisco, January CEMMAP/ESRC Econometrics Study Group Workshop on Quantile Regression, London, June Econometric Society North American Summer Meeting, Boston, June Panel Data Conference, Bonn, July The 57th ISI World Statistics Congress, Durban, August Econometric Society European Summer Meeting, Barcelona, August 2010 Panel Data Conference, Amsterdam, July Econometric Society World Congress, Shanghai, August Cowles Commission/CEMMAP/Guanghua School of Management Advancing Applied Microeconometrics Conference, Beijing, August 2011 Econometric Society North American Winter Meeting, Denver, January The Econometrics of Demand, CEME Conference, MIT, Cambridge, May 4th International Conference of the ERCIM (European Research Consortium for Informatics and Mathematics) Working Group on Computing & Statistics, London, December 2012 CIREQ Econometrics Conference: High-Dimensional Problems in Econometrics, Montreal, May Mini-Workshop: Frontiers in Quantile Regression, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, December 2013 The 59th ISI World Statistics Congress, Hong Kong, August Demand Estimation and Modelling, CEMMAP Conference, Boston College, December 2014 CEME Conference on Inference in Nonstandard Problems, Princeton University, June The Econometric Study Group Annual Conference, University of Bristol, July The 68th European Meeting of the Econometric Society, Toulouse, August 2015 Econometric Society North American Winter Meeting, Boston, January Workshop 'Pietro Balestra' on Recent Developments in Panel Data Econometrics, Lugano, June Econometrics Summer Workshop, University of Warwick, June IAAE 2015 Annual Conference, Thessaloniki, June Econometric Society World Congress, Montreal, August

2016	UvA-Econometrics Panel Data Workshop, Amsterdam, March Conference on Networks, UC-Berkeley, November New Challenges on New Data in Finance and Economics, Toronto, November
2017	Cambridge INET and CeMMAP Panel Data Workshop, Cambridge, UK, May The 70th European Meeting of the Econometric Society, Lisbon, August
2018	New Frontiers in Econometrics: Sponsored by the University of Connecticut, Stamford, June
2019	Royal Economic Society (RES) Annual Conference, invited speaker, University of Warwick, April 2019 Conference Celebrating Whitney Newey's Contributions to Econometrics, MIT, May Machine Learning for Economics, invited speaker, Summer Forum, Barcelona GSE, Barcelona, June 25 <sup>th</sup> International Panel Data Conference, keynote speaker, Vilnius, July Interactions Conference: Bringing Together Econometrics and Applied Microeconomics, discussant, University of Chicago, October Brazilian Econometric Society Meeting, invited speaker, Sao Paolo, December
2020	The 2020 ASSA Annual Meeting, San Diego, January CIREQ Econometrics Conference: Recent Advances in Microeconometrics, invited speaker, Montreal, May (cancelled) The 2020 Latin American Workshop in Econometrics, invited speaker, Guayaquil, Ecuador, May (cancelled) Econometric Society World Congress, Milan, virtual, August

# **INVITED SEMINARS**

2005	Chicago GSB, University of British Columbia, Boston University, Harvard KSG, Universidad de Navarra, LSE, CEMFI, UAB, UPF, Banco de España, University of Chicago, Brown University, Harvard/MIT, Princeton University
2006	Georgetown, Boston University
2007	Boston University, University of Alicante, CEMFI, University Carlos III of Madrid, MIT
2008	Harvard, MIT, Columbia, Ohio State
2009	Syracuse, Berkeley, Northwestern, Wisconsin-Madison, Montreal, UCSD, UCR, Brown, Michigan
2010	CEMFI, Brown, Duke, BU, Connecticut

2011	Georgetown, Boston College, Penn State, Rochester, EIEF, Sciences Po, CEMFI
2012	CEMMAP, Rutgers, UT-Austin, Columbia, Upenn, Virginia, BU
2013	Yale, National University of Singapore, Singapore Management University, Harvard/MIT, Michigan State, Iowa, UCL
2014	Brown, BU, Georgetown, John Hopkins, Columbia, Stanford, Berkeley
2015	Toulouse, Cemfi, Vanderbilt
2016	Tilburg, BU, BU statistics, Harvard/MIT, Maryland, Georgetown, UBC, Simon Fraser, UCL
2017	Warwick, Cemfi, Notre Dame, Chicago Booth, BC, UCSD, UCLA, UC-Irvine, USC, Princeton
2018	NYU, UC-Davis, UCL, Northwestern, Chicago, Bristol, Cambridge, Queen Mary, Oxford, PUC, Chile Central Bank, Surrey, LSE
2019	Cemfi, Erasmus, Banco de España, Emory, Syracuse, Notre Dame, NYU, University Carlos III of Madrid, BU, York, Lancaster
2020	Michigan

# **LECTURES AND SHORT COURSES**

June 2010	Invited Lecturer, CIDE Summer School in Econometrics, "Advances in the Econometrics of Panel Data," Bertinoro, Italy
June-July 2014	Invited lecturer, 16 <sup>th</sup> ZEW Summer Workshop for Young Economists, "Advances in Microeconometrics and Programme Evaluation," Mannheim, Germany
June 2015	Invited Lecturer, Econometrics Summer Masterclass, University of Warwick
Nov. 2018	Invited Lecturer, Central Bank of Chile

# **PUBLICATIONS AND WORKING PAPERS**

# **Publications:**

1. "Household Labor Supply: Evidence for Spain," May 2003, <u>Investigaciones Económicas</u> 27(2), pp. 239-275

*Last updated: 1/23/2021* 6/11

- 2. Appendix I in Hahn, J., and W. Newey, "Jackknife and Analytical Bias Reduction for Nonlinear Panel Models," July 2004, *Econometrica* 72(4), pp. 1295-1319
- 3. "Subsampling Inference on Quantile Regression Processes," May 2005, with V. Chernozhukov, <u>Sankhya</u> 67(2), pp. 253-276
- 4. "Quantile Regression under Misspecification, with an Application to the U.S. Wage Structure," March 2006, with J. Angrist and V. Chernozhukov, <u>Econometrica</u> 74(2), pp. 539-563
- 5. "Fixed Effects Estimation of Structural Parameters and Marginal Effects in Panel Probit Models," May 2009, *Journal of Econometrics* 150(1), pp. 71-85
- 6. "Improving Estimators of Monotone Functions by Rearrangement," September 2009, with Victor Chernozhukov and Alfred Galichon, *Biometrika* 96(3), pp. 559-575
- 7. "Rearranging Edgeworth-Cornish-Fisher Expansions," February 2010, with Victor Chernozhukov and Alfred Galichon, *Economic Theory* 42(2), pp. 419-435
- 8. "Quantile and Probability Curves Without Crossing," May 2010, with Victor Chernozhukov and Alfred Galichon, *Econometrica* 78(3), pp. 1093-1125
- 9. "Inference for Extremal Conditional Quantile Models, with an Application to Market and Birthweight Risks," April 2011, with Victor Chernozhukov, <u>Review of Economic Studies</u> 78(2), pp. 559-589
- 10. "Bias Corrections for Two-Step Fixed Effects Panel Data Estimators," August 2011, with Frank Vella, *Journal of Econometrics* 163(2), pp. 144-162
- 11. "Average and Quantile Effects in Nonseparable Panel Models," March 2013, with Victor Chernozhukov, Jinyong Hahn, and Whitney Newey, formerly "Identification and Estimation of Marginal Effects in Nonlinear Panel Models," <u>Econometrica</u> 81(2), pp. 535-580, with supplement
- 12. "The Consequences of Teenage Childbearing: Consistent Estimates When Abortion Makes Miscarriage Nonrandom," September 2013, with Adam Ashcraft and Kevin Lang, <u>Economic Journal</u> 123 (571), pp. 875-905, with supplement
- 13. "Panel Data Models with Nonadditive Unobserved Heterogeneity: Estimation and Inference," November 2013, with Joonhwan Lee, *Quantitative Economics* 4(3), pp. 453-481, with supplement
- 14. "Inference on Counterfactual Distributions," November 2013, with Victor Chernozhukov and Blaise Melly, *Econometrica* 81(6), pp. 2205-2268, with supplement
- 15. "ExtrapoLATE-ing: External Validity and Overidentification in the LATE Framework," 2013, with Josh Angrist, in <u>Advances in Economics and Econometrics: Theory and Applications, Tenth World Congress</u>, Volume III: Econometrics. Econometric Society Monographs

- 16. "Quantile Regression with Censoring and Endogeneity," May 2015, with Victor Chernozhukov and Amanda Kowalski, *Journal of Econometrics* 186, pp. 201-221
- 17. "Nonparametric Identification in Panels using Quantiles," October 2015, joint with Victor Chernozhukov, Stefan Hoderlein, Hajo Holzmann, and Whitney Newey, <u>Journal of Econometrics</u> 188 (2), pp. 378-392
- 18. "Individual and Time Effects in Nonlinear Panel Data Models with Large N, T," May 2016, with Martin Weidner, *Journal of Econometrics* 196, pp. 291-312
- 19. "Program Evaluation and Causal Inference with High Dimensional Data," January 2017, joint with Alexandre Belloni, Victor Chernozhukov, and Christian Hansen, <u>Econometrica</u> 85(1), pp. 233-298, with supplement
- 20. "Evaluating the Role of Individual Specific Heterogeneity in the Relationship between Subjective Health Assessments and Income," May 2017, joint with Yevgeniya Savchenko and Frank Vella, <u>Economics & Human Biology</u> 25, pp. 85-98
- 21. "Extremal Quantile Regression," joint with Victor Chernozhukov and Tetsuya Kaji, October 2017, in Koenker, R., Chernozhukov, V., He, X. and L. Peng (Eds.), <u>Handbook of Quantile</u> Regression, Chapman and Hall/CRC
- 22. "Fixed Effects Estimation of Large T Panel Data Models," August 2018, with Martin Weidner, <u>Annual Review of Economics</u> 10, pp. 109-138
- 23. "The Sorted Effects Method: Discovering Heterogenous Effects Beyond Their Averages," November 2018, joint with Victor Chernozhukov and Ye Luo, <u>Econometrica</u> 86(6), pp. 1911-1938, with supplement
- 24. "Nonseparable Multinomial Choice Models in Cross-Section and Panel Data," July 2019, joint with Victor Chernozhukov and Whitney Newey, *Journal of Econometrics* 211, pp. 104-116
- 25. "Conditional Quantile Processes Based on Series or Many Regressors," November 2019, with Alexandre Belloni, Victor Chernozhukov and Denis Chetverikov, <u>Journal of Econometrics</u> 213, pp. 4-29, with supplement
- 26. "Generic Inference on Quantile and Quantile Effect Functions for Discrete Outcomes," March 2020, joint with Victor Chernozhukov, Blaise Melly and Kaspar Wuthrich, <u>Journal of the American Statistical Association</u> 115:529, pp. 123-137, with supplement
- 27. "Semiparametric Estimation of Structural Functions in Nonseparable Triangular Models," May 2020, joint with Victor Chernozhukov, Whitney Newey, Sami Stouli and Francis Vella, *Quantitative Economics* 11(2), pp. 503-533, with supplement
- 28. "Nonlinear Factor Models for Network and Panel Data," February 2021, joint with Mingli Chen and Martin Weidner, *Journal of Econometrics* 220, pp. 296-324

- 29. "Fast Algorithms for the Quantile Regression Process," July 2019, joint with Victor Chernozhukov and Blaise Melly, forthcoming at *Empirical Economics*
- 30. "Network and Panel Quantile Effects Via Distribution Regression," March 2016, joint with Victor Chernozhukov and Martin Weidner, forthcoming at the *Journal of Econometrics*
- 31. "Parametric Modeling of Quantile Regression Coefficient Functions with Longitudinal Data," May 2020, joint with Matteo Bottai and Paolo Frumento, accepted for publication at the *Journal of the American Statistical Association*
- 32. "Nonseparable Sample Selection Models with Censored Selection Rules," January 2018, joint with Aico van Vuuren and Francis Vella, accepted for publication at the <u>Journal of Econometrics</u>

## **Working papers:**

- 33. "Generic Machine Learning Inference on Heterogenous Treatment Effects in Randomized Experiments," December 2017, joint with Victor Chernozhukov, Mert Demirer and Esther Duflo, submitted
- 34. "Distribution Regression with Sample Selection, with an Application to Wage Decompositions in the U.K.," November 2018, with Victor Chernozhukov and Siyi Luo, first revision submitted at the *Journal of Political Economy*
- 35. "Shape-Enforcing Operators for Point and Interval Estimators," September 2018, with Xi Chen, Victor Chernozhukov, Scott Kostyshak and Ye Luo, revision invited at the <u>Journal of Machine Learning Research</u>
- 36. "Decomposing Changes in the Distribution of Real Hourly Wages in the U.S.," December 2018, joint with Franco Peracchi, Aico van Vuuren and Francis Vella, submitted
- 37. "Hours Worked and the U.S. Distribution of Real Annual Earnings 1976-2016," February 2020, joint with Franco Peracchi, Aico van Vuuren and Francis Vella, submitted
- 38. "Low-Rank Approximations of Nonseparable Panel Models," joint with Hugo Freeman and Martin Weidner, submitted

# **PUBLISHED COMMENTS AND CONFERENCE PROCEEDINGS**

- Comment on Casado-Marín, García-Gómez and López-Nicolás's "Labour and Income Effects of Caregiving," 2009, in <u>Moneda y Crédito</u> 228, pp. 226-228. Special issue for XXI Moneda y Credito Symposium on Economic Policy Evaluation
- "Conditional Quantile Processes Based on Series or Many Regressors," with Alexandre Belloni and Victor Chernozhukov, Report No. 56/2012, Mini-Workshop: Frontiers in Quantile Regression, November 25 – December 1, 2012, Mathematisches Forschungsinstitut Oberwolfach.

- 3. "Nonparametric Series Quantile Regression: Modeling, Estimation and Inference," joint with Alexandre Belloni and Victor Chernozhukov, <u>Proceedings 59<sup>th</sup> ISI World Statistics Congress</u>, 25-30 August 2013, Hong Kong.
- 4. "Mastering Panel 'Metrics: Causal Impact of Democracy on Growth," May 2019, joint with Shuowen Chen and Victor Chernozhukov, <u>American Economic Review Papers and Proceedings</u> 109, pp. 77-82, with supplement.

### **SOFTWARE**

- 1. "Rearrangement: Rearrangement in R," February 2016, joint with Wesley Graybill, Mingli Chen and Victor Chernozhukov
- 2. "Inference on Counterfactual Distributions in Stata," 2013, joint with Victor Chernozhukov and Blaise Melly
- 3. "Counterfactual Analysis in R," June 2017, joint with Mingli Chen, Victor Chernozhukov and Blaise Melly, *The R Journal* 9:1, pp. 370-384
- "quantreg.nonpar: An R Package for Performing Nonparametric Series Quantile Regression," December 2016, joint with Michael Lipsitz, Alexandre Belloni and Victor Chernozhukov, <u>The</u> R Journal 8:2, pp. 370-381
- 5. "Probitfe and logitfe: Bias Corrections for Fixed Effects Estimators of Probit and Logit Panel Models with Individual and Time Effects in Stata," September 2017, joint with Mario Cruz-Gonzalez and Martin Weidner, *The Stata Journal* 17(3), pp. 517-545
- 6. "Censored Quantile Instrumental Variable Estimation with Stata," December 2019, joint with Victor Chernozhukov, Sukjin Han and Amanda Kowalski, <u>The Stata Journal</u> 19(4), pp. 768-781
- 7. "SortedEffects: Sorted Causal Effects in R," June 2020, joint with Shuowen Chen, Victor Chernozhukov and Ye Luo, *The R Journal* 12:1, pp. 131-146
- 8. "Quantile and distribution regression in Stata: algorithms, pointwise and functional inference," April 2019, with Victor Chernozhukov and Blaise Melly

## **DEPARTMENT AND UNIVERSITY SERVICE**

2010-2011	Undergraduate instruction committee, Boston University
2005-2010	Junior recruitment committee, Boston University
2005-2011	Masters programs committee, Boston University
2005-	Co-organizer of Econometrics seminar, Boston University
2012-2013	Chair of junior recruitment, Boston University
2013-2014	PhD admissions and financial aids, Newsletter, Boston University

*Last updated: 1/23/2021* 10/11

2014-2015	Faculty Council, PhD admissions and financial aids, Newsletter, Boston
	University
2015-2016	Faculty Council, chair of junior recruitment, Boston University
2016-2017	Faculty Council, BU hub satellite committee, senior faculty appointments, PhD
	admissions
2017-2018	Faculty Council, senior faculty appointments, PhD admissions, visitors
	committee, junior faculty mentor, University Council General Education
	Committee
2019-2020	Faculty Council, visitors committee
2020-2023	Associate Chair of the Department of Economics

## **PH.D. THESIS SUPERVISION**

### Main advisor:

Rodrigo Alfaro, Ph.D. Economics, 2007, Central Bank of Chile Chih-nan Chen, Ph.D. Economics, 2008, Cambridge Health Alliance, Harvard University TszKin (Julian) Chan, Ph.D. Economics, 2015, Bates White LLC Siyi Luo, Ph.D. Economics, 2019, Lime

#### Committee member:

Ai Deng, Ph.D. Economics, 2006, Bates White LLC

Mohitosh Kejriwal, Ph.D. Economics, 2007, Purdue University

Dukpa Kim, Ph.D. Economics, 2007, University of Virginia

Silvia Prina, Ph.D. Economics, 2007, Case Western Reserve University

Ricardo Madeira, Ph.D. Economics, 2007, University of Sao Paolo

Carlos Chiapa, Ph.D. Economics, 2008, El Colegio de Mexico

Josefina Posadas, Ph.D. Economics 2009, The World Bank

Yohei Yamamoto, Ph.D. Economics 2009, University of Alberta, School of Business

Shinsuke Ikeda, Ph.D. Economics 2010, Graduate Institute of Policy Studies, Tokyo

Yunmi Nam, Ph.D. Economics 2010, Korea Information Society Development Institute (KISDI)

Tatsushi Oka, Ph.D. Economics 2010, National University of Singapore

Linxia Ren, Ph.D. Economics 2011, SAS Institute Inc.

Ye Li, Ph.D. Economics 2013, Moody's

Wendong Shi, Ph.D. Economics 2013, Renmin University, Beijing

Jiawen Xu, Ph.D. Economics 2013, Shanghai University of Finance and Economics

Jie Hou, Ph.D. Economics 2014, Capital University of Economics and Management, Beijing

Mingli Chen, Ph.D. Economics 2015, University of Warwick, UK

Yuan Tian, Ph.D. Economics 2017, Alibaba, China

Andres Sagner, Ph.D. Economics 2018, Central Bank of Chile

Mario Cruz-Gonzalez, Ph.D. Economics 2018, Mass General Hospital, Boston (post-doc)

Yi Zhang, Ph.D. Economics 2018, Jinan University, China

Undral Byambadalai, Ph.D. Economics 2021 (expected)

## **External Committee member:**

Lucciano Villacorta, Ph.D. Economics, Cemfi, 2015, Central Bank of Chile