

# JESÚS FERNÁNDEZ-VILLAVERDE

September 25, 2024

**Address:** Department of Economics  
The Ronald O. Perelman Center for Political Science and Economics  
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University of Pennsylvania  
Philadelphia, PA 19104

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**Homepage:** <http://www.sas.upenn.edu/~jesusfv>

## **Current Appointments:**

Howard Marks Presidential Professor of Economics, University of Pennsylvania.  
Director, Penn Initiative for the Study of the Markets.  
Co-Director, The Business, Economic, and Financial History Project at the Wharton Initiative on Financial Policy and Regulation.  
Faculty, Graduate Group in Applied Mathematics and Computational Science (Penn).  
John H. Makin Visiting Scholar, American Enterprise Institute.  
Civitas Institute Nonresidential Fellow, University of Texas at Austin.  
Collegium Institute, Fellow.  
Research Associate, National Bureau of Economic Research.  
Research Affiliate, Centre for Economic Policy Research.  
Member, CESifo Research Network.

## **Past Appointments:**

Houblon-Norman/George fellow, Bank of England, 2023.  
National Fellow, Hoover Institution at Stanford University, 2014-2015.  
Kenen Fellow in International Economics, Princeton University, 2013-2014.  
Director, Penn Institute for Economic Research, 2011-2012.  
Associate Professor of Economics, University of Pennsylvania, 2007-2011.  
Associate Professor of Economics, Duke University, 2006-2007.  
Assistant Professor of Economics, University of Pennsylvania, 2001-2007.  
Faculty Research Fellow, National Bureau of Economic Research, 2005-2007.  
Research Associate Chair (*Director de Cátedra*), FEDEA (Spain), 2009-2013.

## **Visiting Appointments:**

Visiting Professor, University of California Santa Barbara, Winter 2024..  
Wesley Clair Mitchell Visiting Research Professor, Columbia University, Spring 2022.  
Visiting Professor, Harvard University, Spring 2018, Spring 2019.  
Visiting Professor, University of Oxford, Trinity 2018, Trinity 2019, Trinity 2021.  
Visiting Professor, University of Melbourne, August 2017.  
Visiting Professor, University of Oxford and Nuffield College, Hillary and Trinity 2017.  
Visiting Scholar, Bank of Spain 2016-current.  
Visiting Scholar, Federal Reserve Bank of Philadelphia, 2002-current.

Visiting Scholar, Federal Reserve Bank of Chicago, 2014-2019.  
Visiting Scholar, Federal Reserve Bank of Cleveland, 2021.  
Visiting Scholar, Federal Reserve Bank of St. Louis, 2010.  
Visiting Scholar, Federal Reserve Bank of Atlanta, 2002-2008.  
Visiting Scholar, The Cambridge-INET Institute, University of Cambridge, 2015.  
Visiting Scholar, Becker-Friedman Institute, University of Chicago, 2014.  
Visiting Professor, Yale University, 2012.  
Visiting Associate Professor, Yale University, 2008.  
Visiting Assistant Professor, New York University, 2005-2006.

**Degrees:**

Ph.D. in Economics, University of Minnesota, 2001.  
B.Sc. in Economics and Management, ICADE, Spain, 1996.  
LL.B., ICADE, Spain, 1995.

**Honors:**

Fellow of the Econometric Society, 2020.  
IX Herrero Prize, Outstanding Economist or Social Scientist in Spain under 40, 2010.  
Richard Stone Prize in Applied Econometrics 2004/2005, 2006.  
Kravis Award for Distinction in Undergraduate Teaching. University of Pennsylvania, 2004, 2019.  
Hardy Fellowship, Department of Economics, University of Minnesota, 1999-2000.  
La Caixa Graduate Fellowship, Spain, 1996-1998.

**Publications (English)****Books:**

1. "Macroeconomics: A Dynamic Approach." Joint with Dirk Krueger. Under contract with *Princeton University Press*.

**Papers in Academic Journals:**

2. (2024) "Search Complementarities, Aggregate Fluctuations, and Fiscal Policy" with Federico Mandelman, Yang Yu, and Francesco Zanetti. *Review of Economic Studies*, forthcoming.
3. (2024) "Climate Change through the Lens of Macroeconomic Modeling" with Kenneth Gillingham and Simon Scheidegger. *Annual Reviews of Economics*, forthcoming.
4. (2024) "Inequality and the Zero Lower Bound," with Joël Marbet, Galo Nuño, and Omar Rachedi. *Journal of Econometrics*, forthcoming.
5. (2024) "Programming FPGAs for Economics: An Introduction to Electrical Engineering Economics," Bhagath Cheela, Andre DeHon, and Alessandro Peri. *Quantitative Economics*, conditionally accepted.

6. (2024) “Central Bank Digital Currency: when Price and Bank Stability Collide” with Linda Schilling and Harald Uhlig. *Journal of Monetary Economics*, 145, 103554.
7. (2023) “A Model of the Gold Standard,” with Daniel Sanches. *Journal of Economic Theory*, 214, 105759.
8. (2023) “Accounting for the Duality of the Italian Economy,” joint with Dario Laudati, Lee Ohanian, and Vincenzo Quadrini. *Review of Economic Dynamics*, 50, 267-290.
9. (2023) “Financial Frictions and the Wealth Distribution,” joint with Galo Nuño and Samuel Hurtado. *Econometrica*, 91, 869-901.
10. (2023) “The Fractured-Land Hypothesis” with Mark Koyama, Youhong Lin, and Tuan-Hwee Sng. *Quarterly Journal of Economics*, 138, 1173-1232.
11. (2023) “The Causal Effects of Lockdown Policies on Health and Macroeconomic Outcomes,” with Jonas E. Arias, Juan F. Rubio-Ramírez, and Minchul Shin. *American Economic Journal: Macroeconomics*, 15, 287-319.
12. (2022) “Deciphering the Macroeconomic Effects of Internal Devaluations in a Monetary Union,” Joint with Javier Andrés, Óscar Arce, and Samuel Hurtado. *International Journal of Central Banking*, 18, 343-389.
13. (2022) “Safe Assets,” joint with Robert Barro, Oren Levintal, and Andrew Mollerus. *Economic Journal*, 132, 2075-2100.
14. (2022) “Estimating and Simulating a SIRD Model of COVID-19 for Many Countries, States, and Cities” with Chad Jones. *Journal of Economic Dynamics and Control*, 140.
15. (2021) “Has Machine Learning Rendered Simple Rules Obsolete?” *European Journal of Law and Economics*, 52, 251-265.
16. (2021) “Central Bank Digital Currency: Central Banking For All?” Joint with Harald Uhlig, Daniel Sanches, and Linda Schilling. *Review of Economic Dynamics*, 41, 225-242.
17. (2021) “The ‘Matthew Effect’ and Market Concentration: Search Complementarities and Monopsony Power.” Joint with Federico Mandelman, Yang Yu, and Francesco Zanetti. *Journal of Monetary Economics*, 121, 62-90.
18. (2021) “Bargaining Shocks and Aggregate Fluctuations,” joint with Thorsten Drautzburg and Pablo Guerrón-Quintana. *Journal of Economic Dynamics and Control*, 127, 104-121.

19. (2021) “Estimating DSGE Models: Recent Advances and Future Challenges.” Joint with Pablo Guerrón. *Annual Review of Economics*, 13, 229-252.
20. (2021) “Cryptocurrencies and All That: Two Ideas from Monetary Economics.” *Cato Journal*, 41, 321-332.
21. (2020) “Macroeconomic outcomes and COVID-19: A Progress Report.” Joint with Charles I. Jones. *Brookings Papers on Economic Activity*, Fall 2020.
22. (2020) “Uncertainty Shocks and Business Cycle Research.” Joint with Pablo Guerrón. *Review of Economic Dynamics*, 37, S118-S146.
23. (2019) “Can Currency Competition Work?” Joint Daniel Sanches. *Journal of Monetary Economics*, 106, 1-15.
24. (2018) “Cryptocurrencies: A Crash Course in Digital Monetary Economics.” *Australian Economic Review*, 51(4), 514-526.
25. (2018) “The Pruned State-Space System for Non-Linear DSGE Models: Theory and Empirical Applications.” Joint with Martin Andreasen and Juan F. Rubio-Ramírez. *Review of Economic Studies*, 85, 1, 1-49.
26. (2018) “Solution Methods for Models with Rare Disasters,” joint with Oren Levintal . *Quantitative Economics*, 9, 903-944.
27. (2018) “The Economic Consequences of Labor Market Regulations.” *University of Chicago Legal Forum* 2017, 119-141.
28. (2017) “Institutions and Political Party Systems: the Euro Case,” joint with Tano Santos (Columbia Business School). *Arizona State Law Journal*, 49, 985-1022.
29. (2016) “Magna Carta, the Rule of Law, and the Limits on Government.” *International Review of Law and Economics*, 47, 22-28.
30. (2015) “Fiscal Volatility Shocks and Economic Activity.” Joint with Pablo Guerrón, Keith Kuster, and Juan F. Rubio-Ramírez. *American Economic Review*, 105, 3352-3384.
31. (2015) “Estimating Dynamic Equilibrium Models with Stochastic Volatility.” Joint with Pablo Guerrón and Juan F. Rubio-Ramírez . *Journal of Econometrics* 185 (1), 216-229
32. (2015) “Nonlinear Adventures at the Zero Lower Bound.” Joint with Pablo Guerrón , Grey Gordon, and Juan F. Rubio-Ramírez. *Journal of Economic Dynamics and Control*, 57, 182-204.

33. (2015) “A Comparison of Programming Languages in Macroeconomics.” Joint with S. Boragan Aruoba. *Journal of Economic Dynamics and Control* 58, 265-273.
34. (2014) “Supply-Side Policies and the Zero Lower Bound.” Joint with Pablo Guerrón and Juan F. Rubio-Ramírez . *IMF Economic Review* 62(2), 248-260.
35. (2014) “From Shame to Game in One Hundred Years: An Economic Model of the Rise of Pre-Marital Sex and its Destigmatization.” Joint with Jeremy Greenwood, and Nezih Guner. *Journal of the European Economic Association*, 12 (1), 25-61.
36. (2013) “Political Credit Cycles: The Case of the Euro Zone.” Joint with Luis Garicano and Tano Santos. *Journal of Economic Perspectives*, 27(3), 145-66.
37. (2012) “Computing DSGE Models with Recursive Preferences and Stochastic Volatility.” Joint with Dario Caldara, Juan F. Rubio-Ramírez , and Yao Wen. *Review of Economic Dynamics* 15, 188-206.
38. (2012) “The Term Structure of Interest Rates in a DSGE Model with Recursive Preferences.” Joint with Jules H. van Binsbergen, Ralph S.J. Koijen, and Juan F. Rubio-Ramírez . *Journal of Monetary Economics* 59, 634-648.
39. (2011) “Risk Matters: The Real Effects of Volatility Shocks.” Joint with Pablo Guerrón, Juan F. Rubio-Ramírez, and Martín Uribe. *American Economic Review* 101, 2530-61.
40. (2011) “Monetary and Fiscal Policy after the Great Recession.” *Moneda y Crédito* 232, 339-385.
41. (2011) “Tapping the Supercomputer Under Your Desk: Solving Dynamic Equilibrium Models with Graphics Processors.” Joint with Eric Aldrich, A. Ronald Gallant, and Juan F. Rubio-Ramírez. *Journal of Economic Dynamics and Control* 35, 386-393.
42. (2011) “Consumption and Saving over the Life Cycle: How Important are Consumer Durables?” Joint with Dirk Krueger. *Macroeconomic Dynamics* 15, 725-770.
43. (2010) “The Econometrics of DSGE Models.” *SERIES: Journal of the Spanish Economic Association* 1, 3-49 (lead article of inaugural issue).
44. (2010) “MEDEA: A DSGE Model for the Spanish Economy.” Joint with Pablo Burriel and Juan F. Rubio-Ramírez. *SERIES: Journal of the Spanish Economic Association* 1, 175-243.
45. (2010) “Fiscal Policy in a Model with Financial Frictions.” *American Economic Review Papers and Proceedings* 100:2, 35-40.

46. (2008) “How Structural are Structural Parameters?” Joint with Juan F. Rubio-Ramírez. *2007 NBER Macroeconomics Annual*, 83-137.
47. (2008) “Horizons of Understanding: a Review of Ray Fair’s How the Macroeconomy Works.” *Journal of Economic Literature* 66, 685-703.
48. (2007) “Consumption over the Life Cycle: Some Facts from Consumer Expenditure Survey Data.” Joint with Dirk Krueger. *Review of Economics and Statistics* 89, 552-565.
49. (2007) “On the Solution of the Growth Model with Investment-Specific Technological Change.” Joint with Juan F. Rubio-Ramírez. *Applied Economic Letters* 14, 549-553.
50. (2007) “A Generalization of the Endogenous Grid Method.” Joint with Francisco Barillas. *Journal of Economic Dynamics and Control* 31, 2698-2712.
51. (2007) “Estimating Macroeconomic Models: A Likelihood Approach.” Joint with Juan F. Rubio-Ramírez. *Review of Economic Studies* 74, 1059-1087.
52. (2007) “A, B, C, (and D)’s for Understanding VARs.” Joint with Juan F. Rubio-Ramírez, Thomas Sargent, and Mark Watson. *American Economic Review* 97, 1021-1026.
53. (2006) “Convergence Properties of the Likelihood of Computed Dynamic Models.” Joint with Juan F. Rubio-Ramírez and Manuel Santos. *Econometrica* 74, 93-119.
54. (2006) “Economic and VAR Shocks: What Can Go Wrong?” Joint with Juan F. Rubio-Ramírez. *Journal of the European Economic Association Papers and Proceedings* 4, 466-474.
55. (2006) “Comparing Solution Methods for Dynamic Equilibrium Economies.” Joint with S. Boragan Aruoba and Juan F. Rubio-Ramírez. *Journal of Economic Dynamics and Control* 30, 2447-2508.
56. (2006) “Solving DSGE Models with Perturbation Methods and a Change of Variables.” Joint with Juan F. Rubio-Ramírez. *Journal of Economic Dynamics and Control* 30, 2509-2531.
57. (2005) “Estimating Dynamic Equilibrium Economies: Linear versus Nonlinear Likelihood.” Joint with Juan F. Rubio-Ramírez. *Journal of Applied Econometrics* 20, 891-910. Awarded the Richard Stone Prize in Applied Econometrics for the years 2004/2005.
58. (2004) “Comparing Dynamic Equilibrium Economies to Data.” Joint with Juan F. Rubio-Ramírez. *Journal of Econometrics* 123, 153-187.

**Other Publications:**

59. (2022) “Politics and Income Distribution,” joint with Thorsten Drautzburg and Pablo Guerrón-Quintana. *Economic Insights*, 2022Q2, 11-18.
60. (2021) “Facing the Central Bank Digital Currency Trilemma. ” Joint with Linda Schilling and Harald Uhlig. In *Central Bank Digital Currency: Considerations, Projects, Outlook*, Dirk Niepelt (ed.).
61. (2021) “Economists and the Pandemic.” In *Capitalism after Covid: Conversations with 21 Economists*, Luis Garicano (ed.).
62. (2019) “The Economics of Minimum Wage Regulations.” In *Cambridge Handbook of US Labor Law for the Twenty-First Century*.
63. (2018) “Tracking Business Conditions in Delaware.” Joint with Jonas E. Arias, *Economic Insights*, Fall 2018, 1-7.
64. (2018) “Economic Policy Challenges Facing California’s Next Governor.” Joint with Scott Atlas, Eric Hanushek, Ed. Lazear, Lee Ohanian, Joshua D. Rauh, and Frank Wolak, *Hoover Institution*.
65. (2017) “Cryptocurrencies: Some Lessons from Monetary Economics.” Joint with Daniel Sanches. In Michael Bordo (ed.), *The Structural Foundations Of Monetary Policy*, 136-143.
66. (2015) “Solution and Estimation Methods for DSGE Models.” Joint with Juan F. Rubio-Ramírez and Frank Schorfheide. *Handbook of Macroeconomics, Volume 2*, 527-724.
67. (2015) “Healthcare.” In James R. Stoner, Jr. and Harold James (eds.), *The Thriving Society*, 189-204.
68. (2014) “Discussion of “Can Structural Reforms Help Europe?” by Gauti Eggertsson, Andrea Ferrero, and Andrea Raffo.” *Journal of Monetary Economics* 61, 23-31.
69. (2014) “Anxieties of Fairness.” *First Things*, August/September 2014, 54-56.
70. (2013) “Macroeconomics and Volatility: Data, Models, and Methods.” Joint with Juan F. Rubio-Ramírez. In *Advances in Economics and Econometrics: Theory and Applications, Tenth World Congress of the Econometric Society*, Cambridge University Press.
71. (2010) “Reading the Recent Monetary History of the U.S., 1959-2007.” Joint with Pablo Guerrón and Juan F. Rubio-Ramírez. *Federal Reserve Bank of St. Louis Review* 92, 311-338.

72. (2010) “The New Macroeconometrics: A Bayesian Approach.” Joint with Pablo Guerrón and Juan F. Rubio-Ramírez. In Anthony O’Hagan and Mike West (eds.), *Handbook of Applied Bayesian Analysis*, Oxford University Press.
73. (2010) “The Spanish Crisis from a Global Perspective.” Joint with Lee Ohanian. *The Crisis of the Spanish Economy, FEDEA*.
74. (2009) “Two Books on the New Macroeconometrics.” Joint with Juan F. Rubio-Ramírez. *Econometric Reviews* 28, 376-387.
75. (2008) “Kalman and Particle Filtering.” *The New Palgrave Dictionary of Economics*.
76. (2008) “Structural Vector Autoregressions.” Joint with Juan F. Rubio-Ramírez. *The New Palgrave Dictionary of Economics*.
77. (2007) “Modern Macroeconomics in Action: Estimating a DSGE Model for the Europe.” Joint with Juan F. Rubio-Ramírez and David Taguas. *European Watch*, 19-24.
78. (2006) “Discussion of “Optimal Fiscal and Monetary Policy in a Medium-Scale Macroeconomic Model” by Stephanie Schmitt-Grohé and Martín Uribe.” *2005 NBER Macroeconomics Annual*, 427-444.
79. (2006) “The Research Agenda: Jesús Fernández-Villaverde and Juan F. Rubio-Ramírez on Estimation of DSGE Models.” *Economic Dynamics Newsletter* 8, Issue 1, November 2006. Joint with Juan F. Rubio-Ramírez .

### **Publications (Spanish)**

#### **Books:**

80. (2011) “Testigos: 25 Años de Economía Española.” Editor and author of two chapters (“Introducción,” and “Cristobal Montoro”). *FEDEA*.
81. (2011) “Nada Es Gratis: Cómo Evitar una Generación Perdida.” Joint with Samuel Bentolila, Antonio Cabrales, Luis Garicano, Juan F. Rubio-Ramírez , and Tano Santos. *Editorial Destino*.
82. (2010) “La Ley de Economía Sostenible y las Reformas Estructurales: 25 Propuestas.” Edited jointly with Manuel Bagües and Luis Garicano. FEDEA. In addition, author of three chapters (“Las Reformas Estructurales: Empezar a Caminar,” “Marco Fiscal y Tributario,” and “El Futuro”). *FEDEA*.

#### **Other Publications:**

83. (2015) “Imperio de la Ley y Crecimiento Económico.” *El Notario: Revista de Colegio Notarial de Madrid* 60, 162-165.

84. (2015) “Imperio de la Ley y Crecimiento Económico: Teoría, Historia y Evidencia.” *Anales de la Academia Matritense del Notariado* 55, 215-240.
85. (2013) “Entrevista a Jesús Fernández-Villaverde: Cinco Libros para Pensar la Historia.” *Politikon* 1.
86. (2012). “La Ley de Estabilidad Presupuestaria.” *Los Primeros Cien días: Reformas Estructurales, Estabilidad Presupuestaria y lo que Queda por Hacer*, Luis Garicano (ed.).
87. (2012) “La Salida de la Crisis: Cómo y Cuándo.” *Anales de Mecánica y Electricidad*, Noviembre-Diciembre 2012, 12-21.
88. (2011) “El Sistema de Pensiones ante los Retos Demográficos.” *Geconomía*, Primavera 2011, 105-116.
89. (2010) “¿Qué Papel Deben Tener los Programas de Trabajo Reducido en la Lucha contra el Paro?” Joint with Luis Garicano in *Propuesta para la Reactivación Laboral en España*, FEDEA.
90. (2010) “El Índice Fedea de Actividad Económica.” Joint with Juan F. Rubio-Ramírez. *Observador Económico Financiero* 501, 14-16.
91. (2010) “El Crecimiento de las Naciones y la Política Económica.” In *Libros de Economía y Empresa V*, 8-10.
92. (2009) “Una Propuesta de Política Fiscal ante la Crisis.” Joint with Juan F. Rubio-Ramírez in *La Crisis de la Economía Española: Lecciones y Propuestas*, FEDEA.
93. (2009) “G20: El Futuro Dura Mucho Tiempo.” Joint with Juan F. Rubio-Ramírez in *La Crisis de la Economía Española: Lecciones y Propuestas*, FEDEA.

### Completed Research Papers

94. (2024) “Technological Synergies, Heterogenous Firms, and Idiosyncratic Volatility” with Yang Yu and Francesco Zanetti.
95. (2024) “The Distributional Effects of Asset Returns” with Oren Levintal.
96. (2024) “The Causal Effects of Global Supply Chain Disruptions on Macroeconomic Outcomes: Evidence and Theory,” with Xiwen Bai, Yiliang Li, and Francesco Zanetti.
97. (2024) “Navigating by Falling Stars: Monetary Policy with Fiscally Driven Natural Rates,” with Rodolfo Campos, Galo Nuño, and Peter Paz.

98. (2023) “The Working Wealth of Nations,” with Gustavo Ventura and Wen Yao.
99. (2023) “Differentiable State-Space Models and Hamiltonian Monte Carlo Estimation,” with David Childers, Jesse Perla, Christopher Rackauckas, and Peifan Wu.
100. (2023) “Spooky Boundaries at a Distance: Exploring Transversality and Stability with Deep Learning,” with Mahdi Ebrahimi Kahou, Sebastián Gómez-Cardona, Jesse Perla, and Jan Rosa.
101. (2023) “Exploiting Symmetry in High-Dimensional Dynamic Programming,” with Mahdi Ebrahimi Kahou, Jesse Perla, and Arnav Sood.
102. (2023) “Dynamic Programming on a Quantum Annealer: Solving the RBC Model,” with Isaiah Hull.
103. (2023) “The Neoclassical Growth of China,” with Lee Ohanian and Wen Yao.
104. (2023) “Filtering with Limited Information,” with Thorsten Drautzburg, Pablo Guerrón-Quintana, and Dick Oosthuizen.
105. (2023) “Ricardian Business Cycles,” with Lorenzo Bretscher and Simon Scheidegger.
106. (2023) “Demographic Transitions Across Time and Space,” joint with Matthew J. Delventhal and Nezih Guner .
107. (2013) “Optimal Capital Versus Labor Taxation with Innovation-Led Growth,” joint with Philippe Aghion and Ufuk Akcigit.
108. (2011) “Evaluating Labor Market Reforms: a General Equilibrium Approach.” Joint with César Alonso-Borrego and José E. Galdón-Sánchez.
109. (2011) “Was Malthus Right? Economic Growth and Population Dynamics.”
110. (2011) “Some Further Notes on Was Malthus Right? Economic Growth and Population Dynamics.”
111. (2011) “Entrepreneurship, Financial Intermediation and Aggregate Activity.” Joint with Luis Carranza and José E. Galdón-Sánchez.
112. (2011) “Can We Really Observe Hyperbolic Discounting?” Joint with the late Arijit Mukherji. Also in NAJ Economics, Volume 3 - December 12, 2001.
113. (2011) “Optimal Fiscal Policy in a Business Cycle Model without Commitment.” Joint with Aleh Tsyvinski.
114. (2011) “Una Propuesta para el Seguimiento Puntual de la Coyuntura de la Economía de Madrid.” Joint with Mario Alloza.

115. (2011) “Una Propuesta para el Seguimiento Puntual de la Coyuntura de la Economía de Madrid.” Joint with Mario Alloza.
116. (2010) “La Política Fiscal y la Crisis de la Economía Española.”

**Op-eds, Articles, Podcasts, and Interviews in Public Media**

All available at <https://www.sas.upenn.edu/~jesusfv/media.html>.

## Teaching Material

117. Lecture Notes on Methods on Macroeconomic Dynamics (944 slides). Notes for a second-year graduate class on computation and estimation of macroeconomic models.
118. Lecture Notes on Macroeconomics (573 slides). Notes for a first-year graduate class on macroeconomics.
119. Lecture Notes on Equilibrium Macroeconomics (627 slides). Notes for a two-semester sequence of undergraduate macroeconomics.
120. Lecture Notes on Global Economic History (1748 slides). Notes for a two-semester sequence of global economic history.
121. Lecture Notes on the Political Economy of Early America (1256 slides). Notes for a two-semester class on the economics and politics of Early America.
122. Lecture Notes on the Economic History of Latin America (803 slides). Notes for a two-semester class on the economics and politics of Early America. The videos of the course are online at: <https://sites.google.com/view/pismilatam/topics?authuser=0>.

## Grants:

- Peter Singer Foundation, 2022-2024.
- Penn China Research and Engagement Fund, grant on “China in Global Economic History,” 2015-2018.
- National Science Foundation Grant, “Health Risks, Health Technology, and Public Policy,” 2013-2015.
- National Science Foundation Grant, “Perturbation Methods for Markov-Switching Models,” 2012-2014.
- National Science Foundation Grant, “New Bayesian Methods for the Estimation of DSGE Models,” 2007-2012.
- National Science Foundation Grant, “Optimal Fiscal Policy in a Business Cycle Model without Commitment,” 2003-2006.
- National Science Foundation Grant, “Durable Goods and the Business Cycle,” 2002-2003.
- Spanish Ministry of Education and Science Grant, “Institutional Design and New Technology,” 2002-2005.
- University of Pennsylvania Research Foundation Grant, 2002-2003.
- University of Minnesota Supercomputer Institute, Principal User, project Computation and Estimation of Dynamic General Equilibrium Models with Microeconomic Heterogeneity, 2000-2003.

**Editorial Activities:**

Editorial Board, *International Economic Review*.

Editor, *Nada es Gratis*. Also, author of 618 entries.

Editor, *Review of Economic Dynamics (2012-2016)*.

Editor, *The B.E. Journals of Macroeconomics (2007-2009)*.

Associate Editor (current), *Econometrica*, *AEJ: Macro*.

Associate Editor (past), *American Economic Review*, *Journal of the European Economic Association*, *International Economic Review*, *Journal of Economic Dynamics and Control*, *Review of Economic Dynamics*, *SERIES (Journal of the Spanish Economic Association)*.

*AER Excellence in Refereeing Award, 2016 and 2017*.

**Professional Activities and Conferences (Selected):**

President, CREDO (<http://www.credo-economists.org/>). Formerly, vicepresident (2013-2023).

Advisor, Hamilton Center, University of Florida.

Advisor to the Hoover Institution's Regulation and Rule of Law Initiative (2017-2020).

Board of Directors, Fundación Hay Derecho (2011-2018).

Advisory Council, Círculo de Empresarios (2011-2020).

Scientific Committee, UP Comillas International Graduate School.

Faculty Fellow, Collegium Institute.

Associated Researcher at ADEMU- A Dynamic Economic and Monetary Union.

Vicepresident, Asociación Nada es Gratis (<http://nadaesgratis.es/>) (until 2017).

Co-coordinator of the Estimation of MEDEA, Modelo de Equilibrio Dinámico de la Economía Española, a large-scale Dynamic Stochastic General Equilibrium Model of the Spanish Economy for the Economic Bureau of the President of the Spanish Government.

Co-coordinator of the FEDEA Business Cycle Index of the Spanish Economy: Índice F (2011-2013).

Co-coordinator of the FEDEA Business Cycle Index of the Madrid Economy (2011-2013).

Program Chair, with Martin Schneider, Society for Economic Dynamics meetings, July 2008.

Co-organizer: "Central Bank Digital Currencies: Implications and Challenges for Financial Stability." Central Bank of Chile, July 2022.

Co-organizer with Rafael Repullo: "Workshop on Central Bank Digital Currencies." CEMFI, June 2022.

Co-organizer with Frank Schorfheide of NBER group on "Methods and Applications for Dynamic Equilibrium Models." Yearly meetings at the NBER Summer Institute.

Co-organizer with Giorgio Primiceri and Frank Schorfheide of conference: "Empirical Methods and Application for Dynamic Stochastic General Equilibrium Models." Federal Reserve Bank of Philadelphia (October 2011, October, 2010, October 2009, October

2013, October 2015, October 2017, October 2019), Federal Reserve Bank of Chicago (October 2019), Federal Reserve Bank of Cleveland (October 2008, October 2007, October 2006, October 2005, and September 2004), Federal Reserve Bank of Atlanta (October 2012, October 2014), and Federal Reserve Bank of Dallas (2022).

Co-organizer: “Philadelphia Workshop on the Economics of Digital Currencies,” September 2021.

Co-organizer and co-instructor: “Markets and Morals,” Elm Institute, June, 2017, and June, 2018.

Co-organizer: “The Macroeconomics of Uncertainty and Volatility,” SITE, August 2016, August 2017, August 2018, August 2019, July 2015 and June 2013.

Co-organizer “Foundation of Liberty Conference,” July 2015, Hoover Institutions.

Co-organizer “25 Years of Recursive Methods in Macroeconomic Dynamics,” May 2014, Federal Reserve Bank of Minneapolis.

Co-organizer: “The Human Person, Economics, and Catholic Social Thought,” April 2014.

Co-organizer: “Toward a Moral Economy: Globalization and the Developing World,” May 2013.

Program Committee of Econometric Society meetings, Society for Economic Dynamics meetings, European Economic Association, and Simposio de Análisis Económico (meetings of the Spanish Economic Association): several years.

### **Plenaries and Public Lectures (Selected):**

Society of Economic Measurement, Milan, July 2023.

TRIADs Lecture, Washington University of St. Louis, November 2022.

5th International Conference of China Development Studies.

Data Analytics and Machine Learning, Bank of England, October 2021.

SCOR-Paris School of Economics Lecture, April 2020.

Astor Lecture, University of Oxford, May 2016.

“The Macroeconomics of Uncertainty.” SCE, Vancouver, July 2013 (invited).

“The Macroeconomics of Uncertainty.” Midwest Macro Conference, Boulder, November 2012.

“The New Macroeconometrics: Foundations and Applications.” Dynare Conference, Paris, October 2007.

“The New Macroeconometrics: Foundations and Applications.” Simposio de Análisis Económico, Granada, December 2007.

### **Doctoral Advising:**

Director of the Graduate Group in Economics at University of Pennsylvania, 2015-2021.

### **Thesis Advisor of:**

Rodrigo Morales Mendoza (2024). First Job: TBC.

Ryan Zalla (2022). First Job: Vanguard.  
Hanbaek Lee (2021). First Job: Tokyo University.  
Marc Folch (2021). First Job: University of Chicago (3-year position).  
Sherwin Lott (2021): Susquehanna International Group.  
Byan Collopy (2020): First Job: Amazon.  
Le Xu (2020). First Job: Shanghai Jiao Tong University.  
Minsu Chang (2019). First Job: Georgetown University.  
David Zarruk Valencia (2018). First Job: ITAM.  
Zach Stangebye (2015). First Job: Notre Dame University.  
Molin Zhong (2015). First Job: Federal Reserve Board.  
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