

**Ingmar R. Prucha**  
**Curriculum Vitae**  
March 2024

**Address:**

Office:  
Department of Economics  
University of Maryland  
College Park, MD 20742  
Tel.: 301-405-3499  
Fax: 301-405-3542  
Email: [prucha@umd.edu](mailto:prucha@umd.edu)

Web: <http://econweb.umd.edu/~prucha/>

Home:  
43494 Firestone Pl  
Leesburg, VA 20176  
Tel.: 703-443-1890  
Fax: 703-443-1809

**Citizenship and Place of Birth:**

United States and Austria

**Education:**

1973 M.A. (Dipl.Ing.) in Communications Engineering, University of  
Technology Vienna, Vienna, Austria  
1976 Diploma in Economics, Institute for Advanced Studies, Vienna, Austria  
1977 Ph.D. (Dr.techn.) in Mathematical Economics, University of Technology  
Vienna, Vienna, Austria  
Thesis Topic: "An Econometric Model of the Austrian Economy with  
Special Emphasis on Medium Term Aspects and the Measurement of the  
Capital Stock." Advisor: Gerhard Tintner.

**Current Position:**

2014- Distinguished University Professor, University of Maryland, College Park  
1991- Professor, Department of Economics, University of Maryland, College  
Park

**Affiliate Position:**

2008- Honorary Professor, University of Innsbruck, Innsbruck, Austria

**Past Positions:**

1987-1991 Associate Professor, Department of Economics, University of Maryland,  
College Park  
1981-1987 Assistant Professor, Department of Economics, University of Maryland,  
College Park  
1980-1981 Visiting Researcher and Adjunct Assistant Professor, C.V. Starr Center for  
Applied Economics and Department of Economics, New York University,  
New York  
1979-1980 Visiting Assistant Professor, Department of Economics, University of  
Maryland, College Park  
1977 Visiting Researcher, Department of Economics, University of  
Pennsylvania, Philadelphia  
1976-1980 "Assistent", Department of Economics, Institute for Advanced Studies,  
Vienna, Austria

## Visiting Appointments:

1982 summer	Visiting Researcher, National Bureau of Economic Research, New York
1983 summer	Visiting Researcher, National Bureau of Economic Research, New York
1995 October	Visiting Researcher, University of Konstanz, Germany
1995 December	Visiting Professor, Institute for Advanced Studies, Vienna, Austria
2002 April	Visiting Professor, Institute for Advanced Studies, Vienna, Austria
2003 October	Visiting Professor, University of Innsbruck, Austria
2005 July	Visiting Professor, CESifo Institute, Munich, Germany
2006 June	Visiting Professor, Singapore Management University, Singapore
2007 January	Visiting Professor, University of Innsbruck, Austria
2007 July	Visiting Professor, CESifo Institute, Munich, Germany
2007 July	Visiting Professor, University of Munich, Germany
2008 January	Visiting Professor, University of Innsbruck, Austria
2008 June	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2008 October	Visiting Professor, CESifo Institute, Munich, Germany
2009 January	Visiting Professor, CESifo Institute, Munich, Germany
2009 June	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2009 July	Visiting Professor, University of Innsbruck, Austria
2009 December	Visiting Researcher, ETH Zuerich, Zuerich, Switzerland
2010 June	Visiting Researcher, ETH Zuerich, Zuerich, Switzerland
2010 July	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2011 May	Distinguished Adjunct Professor, American University, Washington
2011 June	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2012 January	Visiting Professor, Vienna Graduate School of Economics, Vienna
2012 January	Visiting Researcher, ETH Zuerich, Zuerich, Switzerland
2012 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2013 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2014 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2014 June	Visiting Researcher, ETH Zuerich, Zuerich, Switzerland
2015 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2015 July	Guest Professor, ETH Zuerich, Zuerich, Switzerland
2015 November	Guest Professor, ETH Zuerich, Zuerich, Switzerland
2016 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2016 June	Guest Professor, ETH Zuerich, Zuerich, Switzerland
2017 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2018 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2019 May	Visiting Professor, Spatial Econometric Advanced Institute, Rome
2022 October	Visiting Researcher, Université Paris-Panthéon Assas, Paris, France
	Visiting Researcher, ETH Zuerich, Zuerich, Switzerland

### **Affiliate Appointments:**

1985-1989	Faculty Research Fellow, National Bureau of Economic Research, Cambridge, Massachusetts
1989-1992	Research Associate, National Bureau of Economic Research, Cambridge, Massachusetts
1985 -	Faculty Member, Applied Mathematics and Scientific Computing Program, University of Maryland
1988-	Member, Conference of Research in Income and Wealth
2003 -	Faculty Member, Statistics Consortium, University of Maryland
2004 -2018	Faculty Associate, Maryland Population Research Center, University of Maryland
2005-	Fellow, CESifo Institute, Munich, Germany

### **Research Interests:**

**Theoretical Econometrics:** Cross sectional and panel data models with cross sectional (spatial, social) network dependencies; dynamic nonlinear time series models; asymptotic theory for M-estimators, including maximum likelihood and GMM estimators; seemingly unrelated and simultaneous panel data models; robust and adaptive estimation methods.

**Applied Econometrics, Research on Investment, Productivity and R&D:** Growth convergence; productivity; determinants of dynamic factor demand, including investment in physical and R&D capital; econometric modeling and estimation of depreciation rates for physical and R&D capital; capital utilization.

### **Recent Research Grant:**

“Specification and Estimation of Spatial Models”, National Science Foundation, June 1, 2000 - December 31, 2003. Joint research project with Harry Kelejian. Budget: \$231,578.

“New Methods and Software for Spatial-Regression Analysis”, National Institute of Health, SBIR, Phase I, with Stata Corp, September 1, 2006-November 30, 2007. Joint research project with David Drukker and Harry Kelejian. Budget: \$100,000.

“New Methods and Software for Spatial-Regression Analysis”, National Institute of Health, SBIR, Phase II, with Stata Corp, September 30, 2007-September 29, 2009. Joint research project with David Drukker and Harry Kelejian. Budget: \$750,000.

“New Methods of Inference and Software for the Empirical Analysis of Network Generated Data”, National Institute of Health, SBIR, Phase I, with Stata Corp, June 1, 2017-November 30, 2017. Joint research project with David Drukker and Guido Kuersteiner. Budget: \$150,000.

### **Editorial Activities:**

2000-present	Associate Editor of <i>Econometric Theory</i>
2007-present	Member of the Editorial Board of <i>Letters in Spatial and Resource Sciences</i>
2016-present	Member of the Editorial Board of <i>Spatial Econometrics and Spatial Statistics</i> , Elsevier Book Series.
2012-2023	Associate Editor of <i>Regional Science and Urban Economics</i>
2004-2018	Associate Editor of <i>Journal of Econometrics</i>
1997-2012	Member of the editorial board of <i>Empirical Economics</i>
1988-1992	Member of the editorial board of <i>Empirica</i>

Program Committee of the North American Summer Meeting of the Econometric Society (Theoretical Econometrics) College Park, 2001.

Guest Editor (jointly with B.M. Poetscher) of *Journal of Econometrics* for annals issue entitled “Contributions to Econometrics, Time Series Analysis, and Systems Identification: A Festschrift in Honor of Manfred Deistler”, published 2004

Guest Editor (jointly with B. Baltagi and H.H. Kelejian) of *Journal of Econometrics* for annals issue entitled “Analysis of Spatially Dependent Data”, published in 2007

Guest Editor (jointly with Giuseppe Arbia) of *Spatial Economic Analysis* for a special issue entitled: “Contributions to Spatial Analysis: A Festschrift in Honor of Harry Kelejian”, published in 2013.

Guest Editor (jointly with Giuseppe Arbia and Gianfranco Piras) of *The Review of Regional Studies* for a special issue entitled: “Spatial Econometric Association Special Issue”, published in 2014.

Guest Co-Editor (jointly with Manfred Deistler and Hannes) of *Econometric Theory* for a special issue entitled: “Special Issue of Econometric Theory in Honor of Benedikt M. Poetscher”, published in 2023.

### **Awards, Honors and Keynote/Plenary Lectures:**

Ph.D., summa cum laude (“Mit Auszeichnung”)

2006 Fellow, *Journal of Econometrics*

2006 Founding Fellow and Member of Board of Directors, *Spatial Econometrics Association*

2008 Honorary Professor, University of Innsbruck, Innsbruck, Austria

2019 Fellow, *Regional Science Association International*, 2019

2020 Award of Best Paper, published in *Econometric Reviews* 2006-2016, for the paper ‘On Two-Step Estimation of a Spatial Autoregressive Model with Autoregressive Disturbances and Endogenous Regressors,’ (with D.M. Drukker and P. Egger), *Econometric Reviews* 32, 2013, 686-733.

2023 Selection of paper “Spatial Models with Spatially Lagged Dependent Variables and Incomplete Data,” (with H.H. Kelejian), *Journal of Geographical Systems*, 12, 2010, 241-257, for inclusion in the Twenty-Fifth Anniversary Issue collecting the 25 most influential papers published in the *Journal of Geographical Systems* over the last 25 years.

Summer General Research Board Summer Research Award, University of Maryland, College Park, 1983 and 1985

General Research Board Semester Research Award and BSOS Scholarship Incentive Award, University of Maryland, College Park, 1990/1991

Departmental Teaching Award, Department of Economics, University of Maryland, Fall 1981, Spring 1982, Fall 1982, Spring 2014, Spring 2017, Spring 2019

Who’s Who in America, 2007 Edition, Marquis Who's Who, N.J.

Keynote/plenary lecture on “Perspectives of Spatial Econometrics: Today and Tomorrow,” International Workshop on Spatial Econometrics and Statistics, Rome, Italy, May 2006.

Keynote/plenary lecture on “Spatial Econometrics,” Interdisciplinary Workshop on Data Driven Modelling, Free University Brussels, Brussels, Belgium, November 2007. (Due to illness my slides were presented by a colleague.)

Keynote/plenary lecture on “Limit Theory for Panel Data Models with Cross Sectional Dependence and Sequential Exogeneity,” Cemmap Workshop on Cross-sectional Dependence, University College London and the Institute for Fiscal Studies, London, England, October 2009.

Keynote/plenary lecture on “Limit Theory for Panel Data Models with Cross Sectional Dependence and Sequential Exogeneity,” Conference in Honor of Manfred Deistler on Econometrics, Time Series Analysis and Systems Theory, Institute for Advanced Studies, Vienna, Austria, June 2009.

Keynote/plenary lecture on “Limit Theory for Panel Data Models with Cross Sectional Dependence and Sequential Exogeneity,” Statistical Week 2011, 100 Year Anniversary Meeting of the German Statistics Society, Leipzig, Germany, September 2011.

Keynote/plenary lecture on “Dynamic Panel Data Models with Cross-Sectional Dependence, Sequential Exogeneity and Time-Varying Individual Effects,” 19th International Panel Data Conference, Cass Business School, London, England, July 2013.

Keynote/plenary lecture on “Dynamic Panel Data Models with Cross-Sectional Dependence, Sequential Exogeneity and Time-Varying Individual Effects,” 4th Shanghai

Econometrics Workshop, Shanghai University of Finance and Economics, Shanghai, China, June 2014.

Invited lecture on “Dynamic Panel Data Models with Cross-Sectional Dependence, Sequential Exogeneity and Time-Varying Individual Effects,” Joint Statistical Meetings 2014, Boston, August 2014.

Keynote/plenary lecture on “Dynamic Spatial Panel Models, Common Shocks and Sequential Exogeneity,” 14th International Workshop of Spatial Econometrics and Statistics, University Panthéon-Assas Paris, Paris, France, May 2015.

Keynote/plenary lecture on “A Robust Test for Network Generated Cross Sectional Dependence,” 26th EC<sup>2</sup> Conference on Theory and Practice of Spatial Econometrics, Heriot-Watt University, Edinburgh, Scotland, December 2015.

Invited lecture on “A Robust Test for Network Generated Cross Sectional Dependence,” XI<sup>th</sup> World Conference of the Spatial Econometrics Association, Singapore, June 2017.

Invited lecture on “Simultaneous Equation Models with Higher-Order Spatial or Social Network Interactions,” XII<sup>th</sup> World Conference of the Spatial Econometrics Association, Vienna, June 2018.

### **Activities in Model-building and Forecasting:**

- |           |  |
|-----------|--|
| 1976-1980 | Member of the quarterly economic forecasting team of the Institute for Advanced Studies, Vienna  |
| 1976-1979 | Construction of a macro econometric model of the Austrian economy used in the regular forecasting exercise of the Institute for Advanced Studies, Vienna, and within the world model of Project LINK, University of Pennsylvania, Philadelphia |
| 1978-1980 | Head (jointly with G. Munduch) of Project LINK Austria and Austrian representative to Project LINK   |
| 1978-1980 | Member of the Interactive Simulation (IAS) System project for the development of a user-oriented program package for economic research, Institute for Advanced Studies, Vienna   |

### **Referee for:**

Advances in Econometrics, American Economic Review, Austin Symposia in Economics, Canadian Journal of Economics, Communications in Statistics, Econometrica, Econometric Reviews, Econometrics Journal, Econometric Theory, Empirica, Empirical Economics, German Economic Review, International Economic Review, International Regional Science Review, Journal of Applied Econometrics,

Journal of Business and Economic Statistics, Journal of Econometrics, Journal of Economic Dynamics and Control, Journal of Regional Science, Letters in Spatial and Resource Sciences, National Science Foundation, NBER, Conference in Research in Income and Wealth, Regional Science and Urban Economics, Review of Economics and Statistics, Review of Regional Studies, Statistics Papers, Structural Change and Economic Dynamics

**Memberships:**

American Economic Association  
American Statistical Association  
Econometric Society  
Royal Economic Society

**References:** Available upon request.

**Publications**

A. Books and Edited Volumes

B.M. Poetscher and I.R. Prucha, “*Dynamic Nonlinear Econometric Models: Asymptotic Theory*,” New York: Springer Verlag, 1997.

B.M. Poetscher and I.R. Prucha, guest eds., “*Contributions to Econometrics, Time Series Analysis, and Systems Identification: A Festschrift in Honor of Manfred Deistler*,” Annals Issue, *Journal of Econometrics*, 118(1-2), 2004.

B. Baltagi, I.R. Prucha and H.H. Kelejian, guest eds., “*Analysis of Spatially Dependent Data*,” Annals Issue, *Journal of Econometrics*, 140(1), 2007.

G. Arbia and I.R. Prucha, guest eds., “*Contributions to Spatial Analysis: A Festschrift in Honor of Harry Kelejian*,” Special Issue, *Spatial Economic Analysis*, 8(3), 2013.

G. Arbia, G. Piras and I.R. Prucha, guest eds., “*Spatial Econometric Association Special Issue*,” Special Issue, *Review of Regional Studies*, 44(3), 2014.

M. Deistler, H. Leeb and I.R. Prucha, guest eds., “Special Issue of Econometric Theory in Honor of Benedikt M. Poetscher,” *Econometric Theory*, 39(6), 2023

B. Articles<sup>1</sup>

---

<sup>1</sup>Consistent with UM policy, for publications where I am the sole or senior author my name is placed in bold.

Beaumont, P., Filatov, V., and Prucha, I.R., "Performance of the LINK System: 1970 vs. 1975 Trade Share Matrix," *Empirical Economics*, 4, 1979, 11-41.

Mohnen, P.A., Nadiri, M.I., and Prucha, I.R., "R&D, Production Structure, and Productivity Growth in the U.S., Japanese, and German Manufacturing Sectors," in *Proceedings of the Conference on Quantitative Studies of Research and Development in Industry*, Paris, 1983, 171-221.

**Prucha, I.R.**, "On the Asymptotic Efficiency of Feasible Aitken Estimators for Seemingly Unrelated Regression Models with Error Components," *Econometrica*, 52, 1984, 203-207.

**Prucha, I.R.**, and Kelejian, H.H., "The Structure of Simultaneous Equation Estimators: A Generalization towards Nonnormal Disturbances" *Econometrica*, 52, 1984, 721-736.

**Prucha, I.R.**, "Maximum Likelihood and Instrumental Variable Estimation in Simultaneous Equation Systems with Error Components," *International Economic Review*, 26, 1985, 491-506.

Kelejian, H.H., and Prucha, I.R., "Independent and Uncorrelated Disturbances in Linear Regression: An Illustration of the Difference," *Economics Letters*, 19, 1985, 35-38.

Poetscher, B.M., and Prucha, I.R., "A Class of Partially Adaptive One-Step M-Estimators for the Nonlinear Regression Model with Dependent Observations," *Journal of Econometrics*, 32, 1986, 219-251.

Mohnen, P.A., Nadiri, M.I., and Prucha, I.R., "R&D, Production Structure and Rates of Return in the U.S., Japanese and German Manufacturing Sectors: A Nonseparable Dynamic Factor Demand Model," *European Economic Review*, 30, 1986, 749-771.

**Prucha, I.R.**, and Nadiri, M.I., "A Comparison of Alternative Methods for the Estimation of Dynamic Factor Demand Models under Nonstatic Expectations," *Journal of Econometrics*, 33, 1986, 187-211.

**Prucha, I.R.**, "Seemingly Unrelated Regression," in S. Kotz and N.L. Johnson (eds.), *Encyclopedia of Statistical Sciences*, Vol. 8, New York: Wiley, 1987, 329-331.

**Prucha, I.R.**, "The Variance-Covariance Matrix of the Full Information Maximum Likelihood Estimators in Triangular Structural Systems: Consistent Estimation," *Econometrica*, 55, 1987, 977-978.

**Prucha, I.R.**, and Nadiri, M.I., "On the Computation of Estimators in Systems with Implicitly Defined Variables," *Economics Letters*, 26, 1988, 141-145.

Poetscher, B.M., and Prucha, I.R., "Generic Uniform Law of Large Numbers," in S. Kotz and N.L. Johnson (eds.), *Encyclopedia of Statistical Sciences*, Supplementary Volume, New York: Wiley, 1989, 67-69.

Poetscher, B.M., and Prucha, I.R., "A Uniform Law of Large Numbers for Dependent and Heterogeneous Data Processes," *Econometrica*, 57, 1989, 675-683.

Madan, D.B., and Prucha, I.R., "A Note on the Estimation of Non-Symmetric Dynamic Factor Demand Models," *Journal of Econometrics*, 42, 1989, 275-283.

Nadiri, M.I., and Prucha, I.R., "Dynamic Factor Demand Models, Productivity Measurement, and Rates of Return: Theory and an Empirical Application to the U.S. Bell System," *Structural Change and Economic Dynamics*, 2, 1990, 263-289.

Nadiri, M.I., and Prucha, I.R., "Comparison and Analysis of Productivity Growth and R&D Investment in the Electrical Machinery Industries of the United States and Japan," in C.R. Hulten, ed., *Productivity Growth in Japan and the United States, Studies in Income and Wealth Series*, 53, University of Chicago Press, 1990, 109-133.

**Prucha, I.R.**, "Comments on 'The Impacts of Fixed Inputs on Investment Behavior and Productivity: An Empirical Comparison for the U.S. and Japanese Manufacturing Industries' by Catherine Morrison," in C.R. Hulten, ed., *Productivity Growth in Japan and the United States, Studies in Income and Wealth Series*, 53, University of Chicago Press, 1990, 167-172.

**Prucha, I.R.**, and Nadiri, M.I., "On the Specification of Accelerator Coefficients in Dynamic Factor Demand Models," *Economics Letters*, 35, 1991, 123-129.

Poetscher, B.M., and Prucha, I.R., "Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models, Part I: Consistency and Approximation Concepts," *Econometric Reviews*, 10, 1991, 125-216.

Poetscher, B.M., and Prucha, I.R., "Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models, Part II: Asymptotic Normality," *Econometric Reviews*, 10, 1991, 253-325.

Poetscher, B.M., and Prucha, I.R., "Reply to Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models," *Econometric Reviews*, 10, 1991, 349-357.

**Prucha, I.R.**, "Maximum Likelihood and Instrumental Variable Estimation in Simultaneous Equation Systems with Error Components," in G.S. Madalla (ed.), *The Econometrics of Panel Data*, Vol. I, Edward Elgar Publishing Co., 1993, 308-326. (Reprint of article in *International Economic Review*, 26, 1985.)

Poetscher, B.M., and Prucha, I.R., "Generic Uniform Convergence and Equicontinuity Concepts for Random Functions: An Exploration of the Basic Structure," *Journal of Econometrics*, 60, 1994, 23-63.

Poetscher, B.M., and Prucha, I.R., "On the Formulation of Uniform Laws of Large Numbers: A Truncation Approach," *Statistics*, 25, 1994, 343-360.

**Prucha, I.R.**, "On the Econometric Estimation of a Constant Rate of Depreciation," *Empirical Economics*, 20, 1995, 299-302.

Nadiri, M.I., and Prucha, I.R., "Estimation of the Depreciation Rate of Physical and R&D Capital in the U.S. Total Manufacturing Sector," *Economic Inquiry*, 34, 1996, 43-56.

**Prucha, I.R.**, and Nadiri, M.I., "Endogenous Capital Utilization and Productivity Measurement in Dynamic Factor Demand Models: Theory and an Application to the U.S. Electrical Machinery Industry," *Journal of Econometrics*, 71, 1996, 343-379.

Kelejian, H.H., and Prucha, I.R., "Econometrics," in S.I. Gass and C. M. Harris, eds., *Encyclopedia of Operations Research and Management Science*, Kluwer, 1996, 175-177.

Nadiri, M.I., and Prucha, I.R., "Sources of Growth of Output and Convergence of Productivity in Major OECD Countries," *International Journal of Production Economics*, 52, 1997, 133-146.

**Prucha, I.R.**, "Estimation of a Variable Rate of Depreciation: A Dummy Variable Approach," *Structural Change and Economic Dynamics*, 8, 1997, 319-325.

Kelejian, H.H., and Prucha, I.R., "Estimation of the Spatial Autoregressive Parameter by Two Stage Least Squares Procedures: A Serious Problem," *International Regional Science Review*, 20, 1997, 103-111.

Poetscher, B.M., and Prucha, I.R., "Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models, Part I: Consistency and Approximation Concepts," in H. Bierens and R. Gallant (eds.), *Nonlinear Models*, Vol. 1, Edward Elgar Publishing, 1997, 333-424. (Reprint of article in *Econometric Reviews*, 10, 1991.)

Poetscher, B.M., and Prucha, I.R., "Basic Structure of the Asymptotic Theory in Dynamic Nonlinear Econometric Models, Part II: Asymptotic Normality," in H. Bierens and R. Gallant (eds.), *Nonlinear Models*, Vol. 1, Edward Elgar Publishing, 1997, 425-497. (Reprint of article in *Econometric Reviews*, 10, 1991.)

Kelejian, H.H., and Prucha, I.R., "A Generalized Spatial Two Stage Least Squares Procedure for Estimating a Spatial Autoregressive Model with Autoregressive

- Disturbances,” *Journal of Real Estate Finance and Economics*, 17, 1998, 99-121.  
(Invited contribution to a volume on Spatial Statistics and Real Estate.)
- Kelejian, H.H., and Prucha, I.R., “A Generalized Moments Estimator for the Autoregressive Parameter in a Spatial Model,” *International Economic Review*, 40, 1999, 509-533.
- Kelejian, H.H., and Prucha, I.R., “On the Asymptotic Distribution of the Moran I Test Statistic with Applications,” *Journal of Econometrics*, 104, 2001, 219-257.
- Nadiri, M.I., and Prucha, I.R., “Dynamic Factor Demand Models and Productivity Analysis,” in E. Dean, M. Harper and C. Hulten (eds.), *New Directions in Productivity Analysis*, University of Chicago Press, 2001, 103-164.
- Nadiri, M.I., and Prucha, I.R., “Reply to Dynamic Factor Demand Models and Productivity Analysis,” in E. Dean, M. Harper and C. Hulten (eds.), *New Directions in Productivity Analysis*, University of Chicago Press, 2001, 167-171.
- Poetscher, B.M., and Prucha, I.R., “Basic Elements of Asymptotic Theory,” in B. Baltagi (ed.), *A Companion in Theoretical Econometrics*, Basil Blackwell, 2001, 201-229.
- Kelejian, H.H., and Prucha, I.R., “2SLS and OLS in a Spatial Autoregressive Model with Equal Spatial Weights,” *Regional Science and Urban Economics*, 32, 2002, 691-707.
- Das, D., Kelejian, H.H., and Prucha, I.R., “Small Sample Properties of Estimators of Spatial Autoregressive Models with Autoregressive Disturbances,” *Papers in Regional Science*, 82, 2003, 1-26.
- Poetscher, B.M., and Prucha, I.R., “Guest Editorial: Contributions to Econometrics, Time Series Analysis, and Systems Identification: A Festschrift in Honor of Manfred Deistler,” *Journal of Econometrics*, 118, 2004, 1-5.
- Kelejian, H.H., and Prucha, I.R., “Estimation of Simultaneous Systems of Spatially Interrelated Cross Sectional Equations,” *Journal of Econometrics*, 118, 2004, 27-50.
- Kelejian, H.H., Prucha, I.R., and Yuzefovich, Y., “Instrumental Variable Estimation of a Spatial Autoregressive Model with Autoregressive Disturbances: Large and Small Sample Results,” in J. LeSage and R.K. Pace, *Spatial and Spatiotemporal Econometrics, Advances in Econometrics*, Vol. 18, Elsevier, 2004, 163-198.
- Kelejian, H.H., Prucha, I.R., and Yuzefovich, Y., “Estimation Problems in Models with Spatial Weighting Matrices which have Blocks of Equal Elements,” *Journal of Regional Science*, 46, 2006, 507-517.

- Kelejian, H.H., and Prucha, I.R., "Guest Editorial: Analysis of Spatially Dependent Data," *Journal of Econometrics*, 140, 2007, 1-4.
- Kapoor, M., Kelejian, H.H., and Prucha, I.R., "Panel Data Models with Spatially Correlated Error Components," *Journal of Econometrics*, 140, 2007, 97-130.
- Kelejian, H.H., and Prucha, I.R., "HAC Estimation in a Spatial Framework," *Journal of Econometrics*, 140, 2007, 131-154.
- Kelejian, H.H., and Prucha, I.R., "The Relative Efficiencies of Various Predictors in Spatial Econometric Models Containing Spatial Lags," *Regional Science and Urban Economics*, 37, 2007, 363-374.
- Jenish, N., and Prucha, I.R., "Central Limit Theorems and Uniform Laws of Large Numbers for Arrays of Random Fields," *Journal of Econometrics*, 150, 2009, 86-98.
- Arraiz, I., Drukker, D.M., Kelejian, H.H., and Prucha, I.R., "A Spatial Cliff-Ord-type Model with Heteroskedastic Innovations: Small and Large Sample Results," *Journal of Regional Science*, 50, 2010, 592-614.
- Kelejian, H.H., and Prucha, I.R., "Specification and Estimation of Spatial Autoregressive Models with Autoregressive and Heteroskedastic Disturbances," *Journal of Econometrics*, 157, 2010, 53-67.
- Kelejian, H.H., and Prucha, I.R., "Spatial Models with Spatially Lagged Dependent Variables and Incomplete Data," *Journal of Geographical Systems*, 12, 2010, 241-257.
- Jenish, N., and Prucha, I.R., "On Spatial Processes and Asymptotic Inference under Near-Epoch Dependence," *Journal of Econometrics*, 170, 2012, 178-190.
- Drukker, D.M., Egger, P., and Prucha, I.R., "On Two-step Estimation of a Spatial Autoregressive Model with Autoregressive Disturbances and Endogenous Regressors," *Econometric Reviews*, 32, 2013, 686-733.
- Kuersteiner, G., and Prucha, I.R., "Limit Theory for Panel Data Models with Cross Sectional Dependence and Sequential Exogeneity," *Journal of Econometrics*, 174, 2013, 107-126.
- Drukker, D.M., Raciborski, R., and Prucha, I.R., "Maximum-Likelihood and Generalized Spatial Two-Stage Least-Squares Estimators for a Spatial-Autoregressive Model with Spatial-Autoregressive Disturbances," *Stata Journal*, 10, 2013, 221-241.
- Drukker, D.M., Peng, H., Raciborski, R., and Prucha, I.R., "Creating and Managing Spatial-Weighting Matrices Using the `spmat` Command," *Stata Journal*, 10, 2013, 242-286.

Drukker, D.M., Raciborski, R., and Prucha, I.R., “A Command for Estimating Spatial-Autoregressive Models with Spatial-Autoregressive Disturbances and Additional Endogenous Variables,” *Stata Journal*, 10, 2013, 287-301.

Arbia, G., and Prucha, I.R., “Guest Editorial: Contributions to Spatial Econometrics, A Festschrift in Honor of Harry H. Kelejian,” *Spatial Economic Analysis*, 8, 2013, 215-217.

Drukker, D.M., and Prucha, I.R., “Small Sample Properties of the  $I^2(q)$  Test Statistic for Spatial Dependence,” *Spatial Economic Analysis*, 8, 2013, 271-292.

**Prucha, I.R.**, “Generalized Method of Moments Estimation of Spatial Models,” in M.M. Fischer and P. Nijkamp (eds.), J.P. LeSage (section editor), *Handbook of Regional Science, Spatial Econometrics*, Springer Verlag, 2014, 1597-1617.

Arbia, G., Piras, G., and Prucha, I.R., “Special Issue on Spatial Econometrics: An Editorial Note,” *Review of Regional Studies*, 44, 2014, 221-222.

Piras, G., and Prucha, I.R. “Finite Sample Properties of Pre-test Estimators of Spatial Models,” *Regional Science and Urban Economics*, 46, 2014, 103-116.

Liu, X., and Prucha, I.R., “A Robust Test for Network Generated Dependence”, *Journal of Econometrics*, 207, 2018, 92-113.

Kuersteiner, G.M., and Prucha, I.R., “Dynamic Spatial Panel Models: Networks, Common Shocks, and Sequential Exogeneity,” *Econometrica*, 88, 2020, 2109-2146.

**Prucha, I.R.**, “Generalized Method of Moments Estimation of Spatial Models,” in M.M. Fischer and P. Nijkamp (eds.), J.P. LeSage (section editor), *Handbook of Regional Science, Spatial Econometrics*, Springer Verlag, 2021, 2097-2116. (Original handbook article published in 2014.)

“Refined GMM Estimators for Simultaneous Equations Models with Network Interactions,” (with P. Egger), *Empirical Economics* 64, 2023, 2535-2542.

“Efficient Peer Effects Estimators with Random Group Effects,” (with G.M. Kuersteiner and Y. Zeng), *Journal of Econometrics* 235, 2023, 2155-2194.

Deistler, M., Leeb, H., and Prucha, I.R., “Guest Editor’s Introduction: Special Issue of Econometric Theory in Honor of Benedikt M. Poetscher”, *Econometric Theory* 39, 2023, 1093-1096.

Drukker, D.M., Egger, P., and Prucha, I.R., “Simultaneous Equations Models with Higher-Order Spatial or Social Network Interactions,” *Econometric Theory* 39, 2023, 1154-1201.

### **Working Papers and Working Papers in Progress:**

“Generalized Moran I Tests for Network Dependence in Panel Data,” (with X. Liu), Working Paper, 2023, revise and resubmit at *Journal of Econometrics*.

“Differential Test Performance and Peer Effects,” (with G.M. Kuersteiner and Y. Zeng), Working Paper, 2024.

“GMM Estimation of a Multi-Dimensional Panel Data Model with Network Interactions and Nested Error Components,” (with X. Liu and A. Pirotte).

“LIVE and FIVE Type Estimators of Simultaneous Equations Models with Higher-Order Spatial and Social Interactions: Small and Large Sample Properties,” (with J. Chen).

“On Spatial Models: Data Generating Process, Identification and Estimation,” (with G.M. Kuersteiner and Y. Zeng).

“Identification and Estimation of a Network Model Based on Generalized Methods of Moments,” (with J.C. Chao).

“Location Choice under Spatial Price Interdependency,” (with N. Locano-Gracia and G. Piras)

“A Model of Spatially Dependent Discrete Choices,” (with H.H. Kelejian)

“Spatial  $\beta$ - and  $\sigma$ -Convergence,” (with P. Egger and M. Pfaffermayr)

### **Older Unpublished Papers:**

A list of earlier unpublished papers is available upon request. Those papers were written at the Institute for Advanced Studies, Vienna, between 1976 and 1980 and reflect my work as an applied economist at that institute. The topics of those papers range over the following areas of applied research:

- macro-econometric model building
- forecasting (including forecasts for Project LINK)
- policy evaluation
- econometric software development
- data construction