

# Parkash Chander

## Current Academic Position

Professor and Executive Director, Centre for Environmental Economics and Climate Change, Jindal School of Government and Public Policy.

## Previous Academic Positions

Professor of Economics, National University of Singapore (2002-2013)

Professor of Economics, Indian Statistical Institute, Delhi (1978-2003).

## Previous Administrative Positions

Head, Department of Economics, National University of Singapore (2006 – 2008)

Head, Indian Statistical Institute, Delhi (1987-1991)

Head, Economics and Planning Unit, Indian Statistical Institute, Delhi (1986-87)

## Recent Other Professional Activities

- Fellow of the Econometric Society
- Research Associate, CORE, Universite Catholique de Louvain, Belgium (2008-12).
- Editorial Services
  - Editor, jointly with Euston Quah, Book Series on Sustainable Development, Springer, Singapore (2015-present).
  - Associate Editor, *Journal of Public Economic Theory*, Blackwell Publishing, Boston (2005-present).
  - Member, International Advisory Board, *Singapore Economic Review* (2014-present)
  - Member, Advisory Board, *Journal of Economic Surveys*, Basil Blackwell, Oxford and Cambridge, MA (1986-present).
  - Co-edited with Ted Bergstrom a special issue of *Journal of Public Economic Theory* on Leadership, Altruism and Social Organization, 2010.
- Board/Council Membership
  - Member, Advisory Board for Economics, World Scientific Publishing (2007-2013).

- Member, Executive Council of the Economic Society of Singapore (2007-2009).
- Recent Conferences and Workshops
  - Distinguished Speech, The 7<sup>th</sup> Congress of the East Asian Association of Environmental and Resource Economics (EAAERE), August 2017.
  - Distinguished Lecture, Singapore Economic Review Conference (SERC), August 2017.
  - Distinguished Public Lecture, S. Rajaratnam School of International Studies, January 2017.
  - Presented two papers at the 5<sup>th</sup> World Congress of the Game Theory Society, Maastricht, 2016
  - Chaired a session at the 5<sup>th</sup> World Congress of the Game Theory Society, Maastricht, 2016.
  - Invited Speaker, Research Workshop on Contemporary Topics in Economics of the Environment and Sustainability, Nanyang Technological University, March 2016.
  - Discussant, Workshop on Climate Change Policy Research after Paris, Earth Institute, Columbia University, September 2015.
  - Member, Scientific Committee, the International Institute of Public Finance conference, held in Dublin, August 2015.
  - Keynote Speaker, XI<sup>th</sup> annual Conference of Asian Law & Economics Association, held at Chulalongkorn University, Bangkok, August, 2015.
  - Member, Organizing Committee of Public Economic Theory (PET) conferences 2005, 2006, 2007, 2008, 2012, and 2013.
  - Chair, Program Committee, Special PET conference on Leadership, Altruism and Social Organization, held at the National University of Singapore, June, 2008.
  - Member, Program Committee, Far Eastern Meeting of the Econometric Society, held at the Singapore Management University, July, 2008.
  - Chair, Program Committee, Singapore Economic Theory (SET) conferences 2007 and 2008, held at the National University of Singapore.

## **Current Research**

Environmental Economics, Public Economics, Game Theory and Applications, Microeconomics, Indian Economic Policy

## **Visiting Positions**

NTUC Chair Professor, S. Rajaratnam School of International Studies, Jan-Feb.2017  
 Visiting Professor, Nanyang Technological University, fall 2016  
 Visiting Professor, Vanderbilt University, spring 2010  
 Visiting Professor, University of Pennsylvania, fall 2009  
 Visiting Scholar, International Monetary Fund, Washington DC, summer 2001  
 Visiting Professor, Johns Hopkins University, spring 1998  
 Visiting professor, National University of Singapore, 1999-2000  
 Visiting Professor, California Institute of Technology, 1993-94, 1991-92, and spring 1988  
 Visiting Professor, CORE, fall 2009, fall 2008, fall 2003, fall 1998, fall 1988, and fall 1985  
**Shorter visits:** Vanderbilt 2016, Yale 1999, Bielefeld 1992, CORE 2010, Biejer Institute 1993, Alicante, Institute De Analysis Economico 1991, Delhi School of Economics 2004, National Institute of Public Finance and Policy 2009, 2010.

## **Publications**

### **Journal Articles**

1. A Simple Proof of the Non-substitution Theorem, *Quarterly Journal of Economics*, November 1974: 198-201.
2. The Computation of Equilibrium Prices, *Econometrica*, May 1978: 723-726.
3. On a Planning Process due to Taylor, *Econometrica*, July 1978: 761-777.
4. On the Informational Size of Message Spaces for Efficient Resource Allocation Processes, *Econometrica*, July 1983: 919-938.
5. The Nonlinear Input-Output Model, lead article in *Journal of Economic Theory*, August 1983: 219-229.
6. On the Informational Efficiency of the Competitive Resource Allocation Process, *Journal of Economic Theory*, October 1983: 418-432.
7. On Material Balances When There Are Capacity Limitations, *Journal of Comparative Economics*, June 1984: 159-167.
8. Input-Output Prices with Endogenous Demand, with Pradeep Dubey, *Economic Letters*, September 1986.
9. The Optimal Product-Mix for a Monopolist in the Presence of Congestion Effect: A Model and Some Results, with Luc Leruth, *International Journal of Industrial Organization*, 1989: 437-449.

10. Theory and Practice of Decentralized Procedures of Planning, with Ashok Parikh, *Journal of Economic Surveys*, March 1990: 19-58.
11. Alternative Approaches to the Computation of Controlled Prices for Industrial Goods in India, with T.R. Kundu, lead article in *International Journal of Development Planning Literature*, 1991: 1-16.
12. Comparing Iterative Planning Procedures, with T.R. Kundu, *Journal of Comparative Economics*, 1991: 491-499.
13. Aspects Stratégiques des négociations internationales sur les pollutions transfrontières et du partage des coûts de l'épuration, with Henry Tulkens, *Revue Economique* (in french), 1992: 755-767.
14. Corruption in Tax Administration, with Louis Wilde, *Journal of Public Economics*, 1992: 333-349. **Reprinted** in the *International Library of Critical Writings in Economics* volume entitled *The Economics of Corruption and Illegal Markets*, (eds.) G. Fiorentini and S. Zamagni, 2001, and in the *International Library of Comparative Law* volume entitled *Economics of Tax Avoidance and Evasion*, (ed.) Dhammika Dharmapala, forthcoming.
15. Theoretical Foundations of Negotiations and Cost Sharing in Transfrontier Pollution Problems, with Henry Tulkens, *European Economic Review*, 1992: 388-398.
16. Dynamic Procedures and Incentives in Public Good Economies, *Econometrica*, November 1993: 1341-1354.
17. A Core Theoretic Solution for the Design of Co-operative Agreements on Transfrontier Pollution, with Henry Tulkens, *International Tax and Public Finance*, 1995: 277-291. **Reprinted** in an *International Library of Critical Writings in Economics* volume and in *Environmental Policy, International Agreements, and International Trade*, (ed.) Alistair Ulph, Oxford University Press (2001): 66-80.
18. The Core of an Economy with Multilateral Environmental Externalities, with Henry Tulkens, *International Journal of Game Theory*, 1997: 379-401.
19. A General Characterization of Optimal Income Taxation and Enforcement, with Louis Wilde, *Review of Economic Studies*, 1998: 165-183. **Reprinted** in the *International Library of Comparative Law* volume entitled *Economics of Tax Avoidance and Evasion*, (ed.) Dhammika Dharmapala, forthcoming.
20. Politics of Subsidies in Developing countries, *Reflets et Perspectives de la Vie économique*, January 1999: 21-22.

21. International Treaties on Trade and Global Pollution, with M.A. Khan, lead article in the *International Review of Economics and Finance*, 2001: 303-324.
22. Technology Adoption, Education and Immigration Policy, with S.M. Thangavelu, *Journal of Development Economics*, 2004: 79-94.
23. Repetitive Risk Aversion, *Economic Theory*, 2006: 701-711.
24. The Gamma-core and Coalition Formation, *International Journal of Game Theory*, 2007: 539-556.
25. Income Tax Evasion and the Fear of Ruin, *Economica*, 2007: 299-313.
26. Introduction to the Special Issue on Leadership, Altruism, and Social Organization, with J. P. Conley and L. Vesterlund, *Journal of Public Economic Theory*, 2010: 603-608.
27. Cash vs. Price Subsidies, *Economic and Political Weekly*, April 2014: 104-108.
28. Green Consumerism and Pollution Control, with S. Muthukrishnan, *Journal of Economic Behavior and Organization*, 2015: 27-35.
29. Public Provision of Private Goods in Developing Countries, *Singapore Economic Review*, 2016, 61, no.3, pp. 1-13.
30. Climate Change and International Trade, *Reflète et Perspectives de la Vie économique*, 2016: 89-97.
31. Reforming the National Food Security Program, *Singapore Economic Review*, 2016, 61, no.4, pp.1-6.
32. Subgame-perfect Cooperative Agreements in a Dynamic Game of Climate Change, *Journal of Environmental Economics and Management*, 2017: 173-188.

#### **Recent newspaper publications and book reviews**

1. “Poor without subsidies”, Op-Ed in *The Hindu*, March 15, 2014
2. “Tackling haze with cost sharing”, with Euston Quah, article in *The Straits Times*, June 13, 2014
3. “How to talk climate change in Paris”, Op-Ed in *The Hindu*, December 17, 2014
4. “India’s gold policy”, article in *Business Line*, July 31, 2014

5. “Review of Cost-Benefit Analysis of Multi-Level Government, by Alessandro Ferrara”, *Singapore Economic Review*, 2014, 58, 330-333.
6. “Climate Policy without the US”, Op-Ed in *The Pioneer*, August 26, 2017.

#### Book Chapters

1. The Design of Efficient Resource Allocation Mechanisms, *Microeconomic Theory*, (ed.) Larry Samuelson, Kluwer-Nijhoff Publishing (1985): 139-157.
2. Exchange Processes, the Core and Competitive Allocations, with Henry Tulkens, *Economic Decision Making*, Festschrift in Honor of Jacques Dreze, J. Gabszewicz, J.F. Richard and L. Wolsey, eds., Elsevier Science Publishers (1990): 15-31.
7. On the Multiple Basis Exchange Algorithm, with T.R. Kundu, *Proceedings of the National Symposium on Modeling: Stochastic Processes and O.R.*, 1991: 1-23.
8. Cost-Sharing Local Games in Dynamic Processes for Public Goods, in *Theoretical Issues in Development Economics*, (eds.) B. Dutta, D. Mookherjee and Debraj Ray, Oxford University Press (1993): 159-180.
9. Incentives in Iterative Planning, *Poverty, Environment and Economic Development*, (eds.) N.S.S. Narayana and Anindya Sen, Interline Publishing (1995): 279-292.
10. International Treaties on Global Pollution: A Dynamic Time-Path Analysis, in *Trade, Growth and Development*, Festschrift in honor of T.N. Srinivasan, (eds.) G. Ranis and L.K. Raut, Elsevier Science, Amsterdam, 1999.
11. Strategically Stable Cost Sharing in an Economic-Ecological Negotiations Process, with Henry Tulkens, in *Environmental Policy, International Agreements, and International Trade*, Alistair Ulph, ed., Oxford University Press (2001): 66-80.
12. The Kyoto Protocol: An Economic and Game Theoretic Interpretation, with Henry Tulkens, Jean-Pascal Van Ypersele, and Stefan Willems, *Economic Theory for the Environment*, Festschrift in honor of Karl-Göran Mäler, (eds.) P. Dasgupta, B. Kriström and K.-G. Löfgren, Edward Elgar, (2002): 98-117.
13. The Kyoto Protocol and Developing Countries: Strategy and Equity Issues, *India and Global Climate Change*, (eds.) M.A. Toman, U. Chakravorty, S. Gupta, Resources For the Future, Washington D.C., (2003): 271-282.
14. Environment, Public Goods and Externalities, **Public Goods, Environmental Externalities and Fiscal Competition**, (eds.) Parkash Chander, Jacques Dreze, Knox Lovell and Jack Mintz, Springer, 2006: 101-105.

15. Cooperation, Stability, and Self-Enforcement: A Conceptual Discussion, with Henry Tulkens, in *The Design of Climate Policy*, (eds.) Roger Guesnerie and Henry Tulkens, MIT Press (2008): 165-186.
16. Singapore in Fifty Years from Now, *Singapore 2065: Leading Insights on Economy and Environment from Fifty Singapore Icons and Beyond*, (ed.) Euston Quah, World Scientific (2015).
17. Why the Southeast Asian Haze Problem is Difficult to Solve, *Pollution Across Borders: Transboundary Fire, Smoke and Haze in Southeast Asia*, (ed.) Euston Quah, World Scientific (2017).

#### Recent papers and reports

1. Growing Importance of Global Public Goods: The Case of Climate Change, Commentary No. 174/2017, S. Rajaratnam School of International Studies, September 2017.
2. Climate Policy without the US, Commentary No. 150/2017, S. Rajaratnam School of International Studies, August 2017.
3. Climate Policy without the US, keynote address, XIII Annual Conference of Asian Law & Economics Association, held at University of Economics, Ho Chi Minh City. June, 2017.
4. A Political Economy Analysis of the Southeast Asian Haze Problem and Some Solutions, Working Paper NO. 303, S. Rajaratnam School of International Studies, June 2017.
5. The Subgame-perfect core, presented at the 5<sup>th</sup> World Congress of the Game Theory Society, Maastricht. July, 2016.
6. An Infinitely Farsighted Stable Set, presented at Vanderbilt University, January 2016, and at the 5<sup>th</sup> World Congress of the Game Theory Society, Maastricht. July, 2016.
7. Penalties for crime and corruption, keynote address, XIth Annual Conference of Asian Law & Economics Association, held at Chulalongkorn University, Bangkok. August, 2015.
8. The subgame-perfect core, jointly with Myrna Wooders, January 2016.
9. The core of a strategic game, October 2017
10. Coase and the core, May 2015.
11. The Copenhagen Accord: a pathway to a climate treaty, March 2014.

12. Coase and climate change, presented at Singapore Economic Review Conference, 2012.
13. Cores of games with externalities, CORE DP No. 2010/4
14. Green consumerism and collective action, CORE DP No.2007/58
15. Subsidy Reforms and Poverty Alleviation, IMF working Paper no. 617, August 2001.
16. Limits to Climate Change, with Henry Tulkens, CLIMNEG Working Paper no. 42, 2001.
17. A Simple Measure of Risk Aversion in the Large and an Application, CORE Discussion Paper No. 2000/41. Presented as a invited paper at the Twelfth World Congress of the International Economic Association held in Buenos Aires, August 1999.
18. Incentives and a Process converging to the Core of a Public Good Economy, California Institute of Technology, Social Sciences Working Paper No. 676, June 1988. Presented at the 1989 Far Eastern Meeting of the Econometric Society, Kyoto Institute of Economic Research, Kyoto, Japan, June 1989.
19. On the Informational Efficiency of the MDP Process, presented at the Econometric Society World Congress, Massachusetts Institute of Technology, August 1985.
20. Dimension of Euclidean Message Spaces, mimeo, Indian Statistical Institute, 1982.
21. Informational Requirements for Efficient Resource Allocation Processes, ISI Technical Report No. 7916, March 1979, presented at the Econometric Society World Congress, Aix-en-Provence, August 1980.

#### **Books**

1. *Public Goods, Environmental Externalities and Fiscal Competition*. (eds.) Parkash Chander, Jacques Dreze, Knox Lovell and Jack Mintz, Springer, 2006.
2. *Game Theory and Climate Change*. Forthcoming, early 2018.

#### **Past Other Professional Activities (Brief Summary)**

Member, Program Committee of the Econometric Society World Congress held in August 1985 at Massachusetts Institute of Technology.



Member, Program Committee of the Twelfth World Congress of the International Economic Association held in August 1999, Buenos Aires.

Special invitee to the workshop on “Developing Countries and Global Warming” organized by Kenneth J. Arrow, Larry Goulder and David Victor at Stanford University in May 2002.

Presented an invited paper at the international conference on “Game Theory and Applications” held in Bombay, January 2003.

Member, Organizing Committee of the international conference on “Game Theory and its Applications”, held in Mumbai, January 8 -10, 2003.

Chaired a session and presented a paper at the North American Summer Meeting of the Econometric Society, held at Brown University, June 2004.

## **Education and Training**

Ph.D. (Economics), Indian Statistical Institute, 1975

Research Associate, University of Minnesota, 1974-75

Post-doctoral Fellow, University of Rochester, 1973-74

M.A., Punjab University, 1969 (First Class and Roll of Honor)

## **Contact Information:**

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Link to personal webpage: [www.parkashchander.com](http://www.parkashchander.com)