# **Curriculum Vitae**

## Stephen W. Salant

### **CONTACT INFORMATION**

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## **EDUCATION**

1973, Ph.D., Economics, University of Pennsylvania 1967, B.A., Mathematics, Columbia University

## PROFESSIONAL EXPERIENCE

| 2015-19 | Research Professor, University of Maryland (AREC), College Park      |
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| 2015-   | Professor Emeritus, University of Michigan                           |
| 2012-13 | Invited professor, University of Paris (Dauphine)                    |
| 2013    | Visiting professor, U.C. Berkeley (Department of Agricultural and    |
|         | Resource Economics)  |
| 2012    | Senior Fellow, University of California Center for Energy and        |
|         | Environmental Economics at Energy Institute, U.C. Berkeley           |
| 2012    | Visiting professor, Santa Clara University                           |
| 2012    | Invited lecturer, European School of the New Institutional Economics |
|         | Corsica  |

| 2012              | Senior Fellow, University of California Center for Energy and<br>Environmental Economics at UCSB  |
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| 2012              | Visitor, Bren School of Environmental Science and Management, UCSB  |
| 2000              | Member of the Scientific Program Committee for the 4 <sup>th</sup> World Congress   |
| 2009              | of Environmental and Resource Economists  |
| 2009              | Nonresident Fellow, Resources for the Future (RFF)  |
| 2009              | Faculty Fellow, Michigan Memorial Phoenix Energy Institute  |
| 2008-9            | Visitor, Department of Economics, New York University   |
| 2006              | Faculty Affiliate of Erb Institute for Global Sustainable Enterprise  |
| 2004-5            | Financial Engineering Curriculum Committee  |
| 2004-5<br>2009-11 | Department of Economics Executive Committee   |
| 2004-5            | LSA Honors Faculty Advisory Board   |
| 2004-             | Associate Fellow of Centre interuniversitaire de recherche en economie quantitative (CIREQ)   |
| 2000-02           | Member of the LSA (College of Literature, Science, and Arts) Environmental Sciences/Studies Curriculum Development Committee  |
| 2002              | Member of the Advisory Committee of the Program in Environment  |
| 1994-04           | Organizer and Member of Scientific Committee for the First, Second, Third, Fourth, and Fifth Conferences on Environmental and Resource Economics (Toulouse, France) |
| 1992-93           | Gilbert White Fellow, Resources for the Future  |
| 1992              | Visiting Professor, Federal Reserve Board   |
| 1993              | Consultant to Federal Reserve Board   |
| 1986-<br>2015     | Professor of Economics, University of Michigan  |
| 1981-82,          | Visiting Associate Professor at California Institute of Technology  |
| 1983-5            | Co-editor, Rand Journal of Economics  |
| 1981-85           | Senior Economist, Rand Corporation  |
| 1981              | Visiting Associate Professor at University of Chicago, Committee on<br>Public Policy Studies  |
| 1979-81           | Senior Economist, Federal Trade Commission, Industry Analysis Section,<br>Bureau of Economics   |
| 1978-79           | Consultant to I.C.F. Inc., Washington D.C., designed model of world oil market (funded by US Department of Energy)  |
| 1972-78           | Economist, Federal Reserve Board of Governors, Trade and Financial Studies Section  |
| 1971-72           | Economist, Bureau of Labor Statistics   |

#### **COURSES**

Courses taught at University of Maryland AREC 892 (2015--present) dissertation proposal development AREC 785 (2017) half semester lectures on nonrenewable resources

Courses taught at University of Michigan:
Natural Resources (graduate and undergraduate)
Microeconomics (graduate and undergraduate)
Biological Applications of Microeconomic Theory (undergraduate)
Industrial Organization (graduate and undergraduate)
Applied Microeconomic Modeling (undergraduate seminar)

#### **PUBLICATIONS**

"Exhaustible Resources and Industrial Structure: A Nash-Cournot Approach to the World Oil Market," *Journal of Political Economy*, October 1976.

"Search Theory and Duration Data: A Theory of Sorts," *Quarterly Journal of Economics*, November 1976---anthologized in the International Library of Critical Writings volume entitled *The Economics of Unemployment* edited by P.N. Junakar, The International Library of Critical Writings in Economics, 2000.

"Hirshleifer on Speculation," *Quarterly Journal of Economics*, November 1976.

"Market Anticipation of Government Policies and the Price of Gold" (with D. Henderson), *Journal of Political Economy*, August 1978 -- anthologized in Bhattacharya and Constanides' *Classics in Finance*, 1986.

"Staving Off the Backstop: Dynamic Limit Pricing with a Kinked Demand Curve," in R.W. Pindyck (ed.), *Advances in the Economics of Energy and Resources*, JAI Press, Greenwich, Conn., 1979.

"Recurrence of a Modified Random Walk and Its Application to an Economic Model" (with R. Wenocur), *SIAM Journal of Applied Mathematics*, February 1981.

Imperfect Competition in the World Oil Market: A Computerized Nash-Cournot Model, D.C. Heath and Company, Lexington, Mass., 1981.

"Imperfect Competition in the International Energy Market" *Operations Research*, Spring 1982.

"The Vulnerability of Price Stabilization Programs to Speculative Attack," *Journal of Political Economy*, February 1983. Reprinted in *The Economics of Information*, edited by David Levine and Steve Lippman, 1995.

- "Losses from Merger: The Effects of an Exogenous Change in Industry Structure on Cournot-Nash Equilibrium" (with R. Reynolds and S. Switzer), *Quarterly Journal of Economics*, May 1983--reprinted in *Cournot Oligopoly: Characterization and Applications*, edited by Andrew Daughety, Cambridge University Press, 1988.
- "The Length of Optimal Extraction Programs When Depletion Affects Extraction Costs" (with T. Lewis and M. Eswaran), *Journal of Economic Theory*, December 1983.
- "A Theory of Futures Market Manipulations," extensive discussion of Pete Kyle's paper in *The Industrial Organization of Futures Markets*, edited by Ronald W. Anderson, D.C. Heath and Company, Lexington, Mass., 1984.
- "A Self-Enforcing Multilateral Agreement Among Oil-Importing Countries," *Contemporary Policy Issues*, March 1984.
- "Comment on Gilbert and Newbery's 'Preemptive Patenting and the Persistence of Monopoly," *American Economic Review*, March 1984.
- "A Misguided Energy Program: Reshaping OECD's Oil-Sharing Plan" (with R. Smith), *New York Times*, Sunday Forum, November 4, 1984. Supporting editorial appeared in *New York Times*, November 16, 1984.
- "Optimal Capacity Expansion by Foresighted Extractors and Producers" (with S. Switzer), in *Problemes de Ressources Naturelles et Theorie Economique* edited by G. Gaudet and P. Lasserre, 1986.
- "Cartels that Vote: Agricultural Marketing Boards and Induced Voting Behavior" (with J. Cave), *Public Regulation: New Perspectives on Institutions and Policies*, edited by Elizabeth Bailey, and published by MIT Press, 1987.
- "Ending the Hidden Subsidy to South Africa," *Newsday*, July 10, 1987 (reprinted in the *Ann Arbor News*, August 5, 1987).
- "The Positive and Normative Consequences of Treble Damage Awards in Private Lawsuits for Price Fixing," *Journal of Political Economy*, December 1987.

Testimony of March 23, 1988 before the House Foreign Affairs Committee (Subcommittee on Africa) on the economic consequences of sales from official gold stockpiles in *Proposed Economic Sanctions Against South Africa*, Hearings and Markup before the Committee on Foreign Affairs, 1988 (GPO).

"When is Inducing Self-Selection Suboptimal for a Monopolist?" *Quarterly Journal of Economics*, May 1989.

"Durable-Goods Monopoly with Discrete Demand" (with M. Bagnoli and J. Swierzbinski), *Journal of Political Economy*, December 1989.

"Predicting Committee Behavior in Majority-Rule Experiments" (with E. Goodstein), *Rand Journal*, Summer 1990.

"Existence and Uniqueness of Cournot Equilibrium: New Results from Old Methods" (with G. Gaudet), *Review of Economic Studies*, April 1991.

"Increasing the Profits of a Subset of Firms in Oligopoly Models with Strategic Substitutes" (with G. Gaudet), *American Economic Review*, June 1991.

"When to Use a Broker and How to Price the House" *Journal of Real Estate Finance and Economics*, June 1991.

"Towards a Theory of Horizontal Mergers" (with G. Gaudet) chapter 7 in *The New Industrial Economics* edited by G. Norman and M. La Manna (Edward Elgar Publishers), 1992.

"Mergers of Producers of Perfect Complements Competing in Price" (with G. Gaudet) *Economic Letters*, vol. 39, 1992.

"Intertemporal Self-Selection with Multiple Buyers under Complete Information" (with M. Bagnoli and J. Swierzbinski), *Economic Theory*, vol 5, 1995.

"Deducing Implications of Fitness Maximization When a Tradeoff Exists Among Alternative Currencies" (with K. Kalat and A. Wheatcroft), *Behavioral Ecology*, vol. 6, no. 4, winter 1995.

"The Economics of Natural Resource Extraction: A Primer for Development Economists," *World Bank Research Observer*, February 1995.

"Cartel Quotas under Majority Rule" (with J. Cave), *American Economic Review*, March 1995. Reprinted in *Agricultural Markets: Mechanisms, Failures and Regulations* edited by David Martimort, North Holland (July 1996).

"Game Theory and the Law: Is Game Theory Ready for Prime Time?" (coauthored with T. Sims), *Michigan Law Review*, May 1996.

"Optimal Asymmetric Strategies in Research Joint Ventures" (with G. Shaffer), *International Journal of Industrial Organization*, March 1998.

Microeconomics in Practice (ISBN 0-3930-974-72-3), 1999---a website of applications, questions, and answers published (electronically) by W.W. Norton, New York

"When is the Standard Analysis of Common Property Extraction under Free Access Correct?---A Game-Theoretic Justification for Non Game-Theoretic Analyses" (with R. Brooks, M. Murray, and J. Cotroneo), *Journal of Political Economy*, August 1999.

"Unequal Treatment of Identical Agents in Cournot Equilibrium: Private and Social Advantages" (with G. Shaffer), *American Economic Review*, June 1999.

"Restricting the Trash Trade" (with Eduardo Ley and Molly Macauley), *American Economic Review*, May 2000.

"Intertemporal Depletion of Resource Sites by Spatially Distributed Users" (with G. Gaudet and M. Moreaux), *American Economic Review*, September 2001.

"Spatially and Intertemporally Efficient Solid Waste Management," (with E. Ley and M. Macauley), *Journal of Environmental Economics and Management*, March, 2002.

"Private Storage of Common Property" (with G. Gaudet and M. Moreaux), *Journal of Environmental Economics and Management*, March 2002.

"Comment on `Eco-Labelling, Environment, and International Trade' by Kenzo Abe, Keisaku Higashida, and Jota Ishikawa," in *Issues and Options for U.S.-Japan Trade Policies* (edited by R. Stern), UM Press, 2002.

"Should the Same Antibiotic be Prescribed for Everyone Suffering at the Same Time from the Same Infection? Commentary on Rowthorn, Brown, Laxminarayan, and Weitzman" in Battling Resistance to Antibiotics and Pesticides: An Economic Approach (edited by R. Laxminarayan), Johns Hopkins University Press, 2003.

"The Effects of Periodic Quotas Limiting the Stock of Imported Durables" (with Gerard Gaudet), *Journal of Economic Theory*, April 2003.

"The Economics of Mutualisms: Optimal Utilization of Mycorrhizal Mutualistic Partners by Plants" (with Miroslav Kummel), *Ecology*, Vol. 87, April 2006.

"The Benefits of Expediting Government Gold Sales: Simulation Results" (with Dale Henderson, John Irons, and Sebastian Thomas), *Review of Financial Economics*, 2007.

Cartels, coedited with Margaret Levenstein, Edward Elgar, February, 2007.

Book Review of *Creating Incentives for Pharmaceutical Research on Neglected Diseases* by Michael Kremer and Rachel Glennerster, *Economic Development and Cultural Change* vol. 55, no. 4 July, 2007.

"Putting Free Riding to Work: A Partnership Solution to the Common Property Problem" (with Martin Heintzelman and Stephan Schott), *Journal of Environmental Economics and Management*, Vol. 57, no. 3, p. 309-320, May 2009.

"The Welfare Cost of Unreliable Water Service" (with Lucas Davis, Brian Baisa, and William Wilcox)---*Journal of Development Economics*, Vol. 92, p. 1-12, May 2010.

"Successful Strategic Deception: A Case Study," website launched by UM Library Scholarly Publishing Office (2010).website

"A Free Lunch in the Commons" (with Matt Kotchen), *Journal of Environmental Economics and Management*, May 2011.

"Willpower and the Optimal Control of Visceral Urges" (with Emre Ozdenoren and Dan Silverman), *Journal of the European Economic Association*, April 2012.

"Diversify or Focus? Spending to Combat Infectious Diseases When Budgets Are Tight" (with Soren Anderson and Ramanan Laxminarayan), *Journal of Health Economics*, July 2012.

"Regulating An Experience Good in Developing Countries When Consumers Cannot Identify Producers" (with Tim McQuade and Jason Winfree), *Review of Development Economics*, November 2012.

"The Equilibrium Price Path of Timber in the Absence of Replanting: Can Hotelling Rule the Forests Too?" *Resource and Energy Economics*, November 2013.

"Cap-and-Trade Programs Under Delayed Compliance: Consequences of Interim Injection of Permits" (with Makoto Hasegawa), *Journal of Public Economics*, November 2014.

"Quantifying Intertemporal Emissions Leakage" (with Carolyn Fischer) in *Climate Policy and Non-Renewable Resources – The Green Paradox and Beyond*, K. Pittel, F. van der Ploeg and C. Withagen (eds.), MIT Press, August 2014.

"Experimental Departures from Self-Interested Behavior When Competiting Partnerships Share Output," (with Joshua Cherry and Neslihan Uler), *Experimental Economics*, volume 18 (1), March 2015.

- "The Hotelling Model with Multiple Demands" (with Gerard Gaudet), in *Handbook on the Economics of Natural Resources* edited by Robert Halvorsen and David Layton (Edward Elgar), May 2015.
- "Dynamics of Pollution Permits" (with Makoto Hasegawa) *Annual Review of Resource Economics*, volume 7, November, 2015.
- "Markets with Untraceable Goods of Unknown Quality: Beyond the Small Country Case" (with Tim McQuade and Jason Winfree), *Journal of International Economics*, May 2016.
- "The Strategic Use of Early Bird Discounts for Dealers" (with Desmond Lo), *Quantitative Marketing and Economics*, June 2016.
- "The Effects of Stochastic Oscillations in Property Rights Regimes on Forest Output in China" (with Xueying Yu), *Journal of Environmental Economics and Management*, July 2016.
- "What Ails the European Union's Emissions Trading System?," *Journal of Environmental Economics and Management*, November 2016.
- "What Private Tolling Gets Wrong for America's Roads" (with Nathan Seegert), *Resources* (Issue 194), Spring 2017.
- "Balancing the Carbon Budget for Oil: the Distributive Effects of Alternative Policies" (with Carolyn Fischer), *European Economic Review*, Vol 99(C), 2017
- "Modelling Nonrenewable Resources Use with Multiple Demands and Multiple Sources" (with Gerard Gaudet), *Environmental and Resource Economics* (2018).
- "Hotelling under Pressure" (with Soren Anderson and Ryan Kellogg), *Journal of Political Economy* (June 2018).
- "Should Congestion Tolls Be Set by the Government or by the Private Sector? The Knight-Pigou Debate Revisited" (with Nathan Seegert), *Economica* (2018).
- "Hotelling under Pressure: a Non-Technical Summary," posted at www.arec.umd.edu (first published on November 13, 2018).
- "The One-Two Punch to Knock Out High Drug Prices," (with Gabriel Levitt). *The Hill*. 2/17/2021.
- "The Effects of Non-Binding Price Floors," (with William Shobe and Neslihan Uler), *European Economic Review*, 2022.

"The Effects of Seemingly Non-Binding Price Floors: An Experimental Analysis," (with William Shobe and Neslihan Uler), *European Economic Review*, October, 2023.

"How Much is a Non-Earning Asset with No Current Capital Gains Worth? (with Joshua Keller), *Dynamic Games and Applications*. October, 2023.

"Spending and Pricing by a Monopolist," *Economic Journal*. 2023. Revision resubmitted.

"Arbitrage Deterrence: A Theory of International Drug Pricing" Special Issue on U.S. Drug Pricing, *Health Management, Policy, and Innovation*. September, 2023.

#### **COMPLETED PAPERS**

"Alternative Climate Policies and Intertemporal Emissions Leakage: Quantifying the Green Paradox" (with Carolyn Fischer), RFF Discussion Paper 12-16 (April 2012)

"The Proposed Cap-and-Trade Program Under Continual Compliance: The Case of the Unbuttoned Collar" (with Makoto Hasegawa).

"Using Lorenz Curves to Represent Firm Heterogeneity in Cournot Games" (with Greg Shaffer).