



UNIVERSITY OF
MARYLAND

Professor Peter Cramton
Economics, Tydings Hall
University of Maryland
College Park MD 20742-7211

pcramton@gmail.com
www.cramton.umd.edu
+1 240-396-1043

11 February 2009

Peter Cramton is Professor of Economics at the University of Maryland. Since 1983, he has conducted research on auction theory and practice. This research appears in the leading economics journals. The main focus is the design of auctions for many related items. Applications include spectrum auctions, electricity auctions, and treasury auctions. On the practical side, he is Chairman of Market Design Inc., an economics consultancy founded in 1995, focusing on the design of auction markets. Since 2001, he has played a lead role in the design and implementation of electricity auctions in France and Belgium, gas auctions in Germany, and the world's first auction for greenhouse gas emissions held in the UK in 2002. He has advised numerous governments on market design and has advised dozens of bidders in high-stake auction markets. Since 1997, he has advised ISO New England on electricity market design and was a lead designer of New England's forward capacity auction. He led the design of electricity and gas markets in Colombia, including the Firm Energy Market, the Forward Energy Market, and the Long-term Gas Market. Since June 2006, he played a leading role in the design and development of Ofcom's spectrum auctions in the UK. He has advised the UK, the US, and Australia on greenhouse gas auction design. He led the development of the FAA's airport slot auctions for the New York City airports. He received his B.S. in Engineering from Cornell University and his Ph.D. in Business from Stanford University.

Academic Positions

Professor of Economics—Department of Economics, University of Maryland, August 1996 to present.

Associate Professor of Economics—Department of Economics, University of Maryland, August 1993 to June 1996.

National Fellow—Hoover Institution, Stanford University, September 1992 to August 1993.

Associate Professor of Economics and Management—Yale School of Management, Yale University, July 1988 to August 1993.

Assistant Professor of Decision Theory—Yale School of Management, Yale University, July 1984 to June 1988.

Education

Stanford University, Doctor of Philosophy, June 1984, Graduate School of Business.
Dissertation: *The Role of Time and Information in Bargaining*.

Cornell University, Bachelor of Science with distinction, May 1980, School of Operations Research and Industrial Engineering. Graduated first in class.

Courses Taught

[*Advanced Microeconomics*](#). Doctoral course in the foundations of game theory.

[*Game Theory*](#). Undergraduate introduction to modern game theory.

[*Market Design*](#). An advanced undergraduate course on auction and market design.

[*Methods and Tools of Economic Analysis*](#). Undergraduate introduction to the mathematical tools used in economics.

Microeconomic Analysis I. Doctoral core course in microeconomic theory.

Intermediate Microeconomics.

Negotiation and Competitive Decisions. Developed for management program.

Economic Analysis. Taught in management program.

Quantitative Analysis for Management Decisions. Taught in management program.

Theory of Choice II: Game Theory. Doctoral course in game theory with emphasis on information and dynamics.

Research Interests

Auction theory and practice, bargaining theory, dispute resolution, incentives, contract theory, game theory, decision theory, labor economics, industrial organization, experimental economics, information economics, and law and economics.

Honors

Resident Scholar, Rockefeller Foundation, Villa Serbelloni, Bellagio, Italy, Spring 2007.

Departmental Undergraduate Teaching Award, Spring 1996 (2), Spring 1997 and Spring 2002.

Departmental Graduate Teaching Award, Fall 1994, Fall 1998, and Fall 2007.

Hoover National Fellow, Hoover Institution, Stanford University, 1992-93.

Winner of the *1984 Leonard J. Savage Thesis Award* for an outstanding dissertation in Bayesian Economics.

American Assembly of Collegiate Schools of Business Doctoral Fellowship, 1983-84.

National Association of Purchasing Management Scholarship, 1983-84.

Dean's Award for Service to Stanford University, 1983-84.

Two-time recipient of *Stanford Merit Fellowship*, 1981-83.

Elected by the Operations Research faculty as outstanding senior, 1980.

Affiliations

Econometric Society, American Economic Association, Society for Economic Analysis, and Society for the Promotion of Economic Theory.

Research on Auctions

["Making Sense of the Aggregator Bank"](http://www.bepress.com/ev/vol6/iss3/2) (with Lawrence M. Ausubel), *The Economists' Voice*, 6:3, www.bepress.com/ev/vol6/iss3/2, February 2009.

["No Substitute for the 'P'-Word in Financial Rescue"](http://www.bepress.com/ev/vol6/iss2/2) (with Lawrence M. Ausubel), *The Economists' Voice*, 6:2, www.bepress.com/ev/vol6/iss2/2, February 2009.

["Common-Value Auctions with Liquidity Needs: An Experimental Test of a Troubled Assets Reverse Auction,"](#) (with Lawrence M. Ausubel, Emel Filiz-Ozbay, Nathaniel Higgins, Erkut Ozbay, and Andrew Stocking), Working Paper, University of Maryland, December 2008.

["Auctions for Injecting Bank Capital"](#) (with Lawrence M. Ausubel), Addendum to *A Troubled Asset Reverse Auction*, University of Maryland, October 2008.

["A Troubled Asset Reverse Auction"](#) (with Lawrence M. Ausubel), Working Paper, University of Maryland, September 2008. [[Presentation](#)]

["Auction Design Critical for Rescue Plan"](http://www.bepress.com/ev/vol5/iss5/art5) (with Lawrence M. Ausubel), *Economists' Voice*, 5:5, www.bepress.com/ev/vol5/iss5/art5, September 2008.

National media on financial rescue plan

Print

["Gaming the Financial System,"](#) *Newsweek*, 18 November 2008.

["Economists Look at Ways to Structure Auctions,"](#) *Wall Street Journal*, 25 September 2008.

["Auctions May Be Only Option for U.S. Bailout,"](#) *Reuters*, 22 September 2008.

Radio

["How about Taking Bids on Bad Assets?"](#) *National Public Radio Marketplace*, 2 February 2009.

["Study Suggests Buying Toxic Assets Could Work,"](#) *National Public Radio All Things Considered*, 18 November 2008. [[Transcript](#)]

["Complicated Reverse Auction May Aid In Bailout,"](#) *National Public Radio Morning Edition*, 10 October 2008.

TV

["Geithner to Unveil Financial Rescue Plan Monday,"](#) *PBS Nightly Business Report*, 6 February 2009.

["Will the Government Take Away the Toxicity on Bank Books?,"](#) *PBS Nightly Business Report*, 29 January 2009.

["What Price Should Fed Pay"](#) *CBS Evening News*, 23 September 2008.

[“A Review of the 10-40 GHz Auction,” Office of Communications](#), United Kingdom, September 2008.

[“A Review of the L-Band Auction,” Office of Communications](#), United Kingdom, September 2008.

[“The Quadratic Core-Selecting Payment Rule for Combinatorial Auctions”](#) (with Robert Day), Working Paper, University of Maryland, September 2008.

[“Auctioning Long-term Gas Contracts in Colombia,” Working Paper, University of Maryland, September 2008. \[Presentation\]](#)

[“Innovation and Market Design.”](#) In Josh Lerner and Scott Stern (eds.), *Innovation Policy and the Economy*, National Bureau of Economic Research, forthcoming, 2008.

[“Market Design: Auctions and Matching.”](#) In John Siegfried (ed.), *Better Living Through Economics*, Harvard University Press, forthcoming, 2008.

[“Comments on the RGGI Market Design.”](#) Submitted to RGGI, Inc. by ISO New England and NYISO, 15 November 2007.

[“The 700 MHz Spectrum Auction: An Opportunity to Protect Competition In a Consolidating Industry”](#) (with Andrzej Skrzypacz and Robert Wilson), submitted to the U.S. Department of Justice, Antitrust Division, 13 November 2007.

[“Forward Reliability Markets: Less Risk, Less Market Power, More Efficiency”](#) (with Steven Stoft) *Utilities Policy*, 16, 194-201, 2008.

[“Colombia’s Forward Energy Market,”](#) Working Paper, University of Maryland, August 2007.

[“Comments on the FCC’s Proposed Competitive Bidding Procedures for Auction 73”](#) (with Gregory Rosston, Andrzej Skrzypacz, and Robert Wilson), 31 August 2007.

[“An Overview of Combinatorial Auctions”](#) (with Yoav Shoham and Richard Steinberg), *ACM SIGecom Exchanges*, 7, 3-14, 2007.

[“The Effect of Incumbent Bidding in Set-Aside Auctions: An Analysis of Prices in the Closed and Open Segments of FCC Auction 35”](#) (with Allan T. Ingraham and Hal J. Singer) *Telecommunications Policy*, 32, 273-290, 2008.

[Economist Letter to NTIA on 700 MHz Spectrum Auction](#) (with Andrzej Skrzypacz, Simon Wilkie, and Robert Wilson), 30 July 2007.

[“Essential Entry: Revenues in the 700 MHz Spectrum Auction.”](#) Working Paper, University of Maryland, 13 July 2007.

[“Revenues in the 700 MHz Spectrum Auction”](#) (with Andrzej Skrzypacz and Robert Wilson), Working Paper, University of Maryland, 27 June 2007.

[“Economic Comments on the Design of the 700 MHz Spectrum Auction”](#) (with Andrzej Skrzypacz and Robert Wilson), submitted with [testimony of James L. Barksdale](#) to the U.S. Senate Committee on Commerce, Science, and Transportation, 14 June 2007.

- [“Product Design for Colombia’s Regulated Market.”](#) Working Paper, University of Maryland, June 2007.
- [“Market-Based Alternatives for Managing Congestion at New York’s LaGuardia Airport.”](#) (with Michael O. Ball, Lawrence M. Ausubel, Frank Berardino, George Donohue, Mark Hansen, and Karla Hoffman), in *Optimal Use of Scarce Airport Capacity, Proceedings of AirNeth Annual Conference*, The Hague, April 2007.
- [“Colombia Firm Energy Market.”](#) (with Steven Stoft), *Proceedings of the Hawaii International Conference on System Sciences*, January 2007.
- “Spectrum Auction Design,” Working Paper, University of Maryland, April 2007.
- [“Why We Need to Stick with Uniform-Price Auctions in Electricity Markets.”](#) (with Steven Stoft), *Electricity Journal*, 20:1, 26-37, 2007.
- [“Simulation of the Colombian Firm Energy Market.”](#) (with Steven Stoft and Jeffrey West), Working Paper, University of Maryland, December 2006.
- [“New England’s Forward Capacity Auction.”](#) University of Maryland, June 2006.
- [“The Convergence of Market Designs for Adequate Generating Capacity.”](#) (with Steven Stoft), Working Paper, University of Maryland, April 2006.
- Combinatorial Auctions*, (with Yoav Shoham and Richard Steinberg) [MIT Press](#), 2006.
- [“Introduction to Combinatorial Auctions.”](#) (with Yoav Shoham and Richard Steinberg) in Peter Cramton, Yoav Shoham, and Richard Steinberg (eds.), *Combinatorial Auctions*, 1-13, [MIT Press](#), 2006.
- [“The Clock-Proxy Auction: A Practical Combinatorial Auction Design.”](#) (with Lawrence M. Ausubel and Paul Milgrom) in Peter Cramton, Yoav Shoham, and Richard Steinberg (eds.), *Combinatorial Auctions*, Chapter 5, 115-138, [MIT Press](#), 2006.
- [“Simultaneous Ascending Auctions.”](#) in Peter Cramton, Yoav Shoham, and Richard Steinberg (eds.), *Combinatorial Auctions*, Chapter 4, 99-114, [MIT Press](#), 2006.
- [“Dynamic Auctions in Procurement.”](#) (with Lawrence M. Ausubel) in Nicola Dimitri, Gustavo Piga, and Giancarlo Spagnolo (eds.) *Handbook of Procurement*, Cambridge, England: Cambridge University Press, 2006.
- [“How Best to Auction Oil Rights.”](#) in Macartan Humphreys, Jeffrey D. Sachs, Joseph E. Stiglitz (eds.), *Escaping the Resource Curse*, Chapter 5, 114-151, New York: Columbia University Press, 2007.
- [“A Capacity Market that Makes Sense.”](#) (with Steven Stoft) *Electricity Journal*, 18, 43-54, August/September 2005.
- [“Review of the Proposed Reserve Markets in New England.”](#) (with Hung-po Chao and Robert Wilson) White Paper, Market Design Inc., January 2005.
- [“Auctioning Many Divisible Goods.”](#) (with Lawrence M. Ausubel) *Journal of the European Economic Association*, 2, 480-493, April-May 2004.

- [“Competitive Bidding Behavior in Uniform-Price Auction Markets,”](#) *Proceedings of the Hawaii International Conference on System Sciences*, January 2004.
- [“Vickrey Auctions with Reserve Pricing,”](#) (with Lawrence M. Ausubel) *Economic Theory*, 23, 493-505, April 2004. Reprinted in Charalambos Aliprantis, et al. (eds.), *Assets, Beliefs, and Equilibria in Economic Dynamics*, Berlin: Springer-Verlag, 355-368, 2003.
- [“Competitive Bidding Behavior in Uniform-Price Auction Markets,”](#) Report before the Federal Energy Regulatory Commission, March 2003.
- [“Rebuttal Addendum: Assessment of Submissions of the California Parties,”](#) Report before the Federal Energy Regulatory Commission, March 2003.
- [“Electricity Market Design: The Good, the Bad, and the Ugly,”](#) *Proceedings of the Hawaii International Conference on System Sciences*, January, 2003.
- [“Collusive Bidding in the FCC Spectrum Auctions,”](#) (with Jesse Schwartz) *Contributions to Economic Analysis & Policy*, 1:1, www.bepress.com/bejeap/contributions/vol1/iss1/art11, 2002.
- [“Demand Reduction and Inefficiency in Multi-Unit Auctions,”](#) (with Lawrence M. Ausubel) Working Paper, University of Maryland, July 2002.
- [“Spectrum Auctions,”](#) in Martin Cave, Sumit Majumdar, and Ingo Vogelsang, eds., *Handbook of Telecommunications Economics*, Amsterdam: Elsevier Science B.V., Chapter 14, 605-639, 2002.
- [“Tradeable Carbon Permit Auctions: How and Why to Auction Not Grandfather,”](#) (with Suzi Kerr) *Energy Policy*, 30, 333-345, 2002.
- [“Pricing in the California Power Exchange Electricity Market: Should California Switch from Uniform Pricing to Pay-as-Bid Pricing?”](#) (with Alfred E. Kahn, Robert H. Porter, and Richard D. Tabors), Blue Ribbon Panel Report, California Power Exchange, January 2001.
- [“Uniform Pricing or Pay-as-Bid Pricing: A Dilemma for California and Beyond,”](#) (with Alfred E. Kahn, Robert H. Porter, and Richard D. Tabors), *Electricity Journal*, 70-79, July 2001.
- “How Affirmative Action at the FCC Auctions Decreased the Deficit,” (with Ian Ayres) in Ian Ayres, ed., *Pervasive Prejudice? Unconventional Evidence of Race and Gender Discrimination*, Chicago: University of Chicago Press, 315-395, 2001.
- [“Lessons Learned from the UK 3G Spectrum Auction.”](#) In U.K. National Audit Office Report, *The Auction of Radio Spectrum for the Third Generation of Mobile Telephones*, Appendix 3, October 2001.
- [“A Review of Markets for Clean Air: The U.S. Acid Rain Program,”](#) *Journal of Economic Literature*, 38, 627-633, September 2000.
- [“Eliminating the Flaws in New England's Reserve Markets,”](#) (with Jeffrey Lien) Working Paper, University of Maryland, March 2000.
- [“Review of the Reserves and Operable Capability Markets: New England's Experience in the First Four Months,”](#) White Paper, Market Design Inc., November 1999.

[“Collusive Bidding: Lessons from the FCC Spectrum Auctions,”](#) (with Jesse Schwartz) *Journal of Regulatory Economics*, 17, 229-252, May 2000.

[“The Optimality of Being Efficient,”](#) (with Lawrence M. Ausubel) Working Paper, University of Maryland, March 2001.

[“The Role of the ISO in U.S. Electricity Markets: A Review of Restructuring in California and PJM,”](#) (with Lisa Cameron) *Electricity Journal*, 71-81, April 1999.

[“A Review of ISO New England's Proposed Market Rules,”](#) (with Robert Wilson) White Paper, Market Design Inc., September 1998.

[Maryland Auction Conference,](#) May 29-31, 1998.

[“Auctioning Securities,”](#) (with Lawrence M. Ausubel) Working Paper, University of Maryland, March 1998.

[Simultaneous Ascending Auctions with Package Bidding,](#) (with John McMillan, Paul Milgrom, Bradley Miller, Bridger Mitchell, Daniel Vincent, and Robert Wilson) Report to the Federal Communications Commission, March 1998.

[“Efficient Relocation of Spectrum Incumbents,”](#) (with Evan Kwerel and John Williams) *Journal of Law and Economics*, 41, 647-675, October 1998.

[“The Distributional Effects of Carbon Regulation,”](#) (with Suzi Kerr) in Thomas Sterner (ed.) *The Market and the Environment*, Cheltenham, United Kingdom: Edward Elgar, chapter 12, 1999.

[“Ascending Auctions,”](#) *European Economic Review*, 42:3-5, 745-756, May 1998.

[“The Efficiency of the FCC Spectrum Auctions,”](#) *Journal of Law and Economics*, 41, 727-736, October 1998.

[“Auctions and Takeovers,”](#) *New Palgrave Dictionary of Economics and the Law*, Peter Neuman (ed.), London: MacMillan Press, 1, 122-125, 1998.

[Package Bidding for Spectrum Licenses,](#) (with John McMillan, Paul Milgrom, Bradley Miller, Bridger Mitchell, Daniel Vincent, and Robert Wilson) Report to the Federal Communications Commission, October 1997.

[Auction Design Enhancements for Non-Combinatorial Auctions,](#) (with John McMillan, Paul Milgrom, Bradley Miller, Bridger Mitchell, Daniel Vincent, and Robert Wilson) Report to the Federal Communications Commission, September 1997.

[“The FCC Spectrum Auctions: An Early Assessment,”](#) *Journal of Economics and Management Strategy*, 6:3, 431-495, 1997. Reprinted in Donald L. Alexander (ed.), *Telecommunications Policy*, Praeger Publishers, 1997.

[“Synergies in Wireless Telephony: Evidence from the Broadband PCS Auctions,”](#) (with Lawrence M. Ausubel, R. Preston McAfee, and John McMillan) *Journal of Economics and Management Strategy*, 6:3, 497-527, 1997.

[“Auction Design for Standard Offer Service,”](#) (with Andrew Parece and Robert Wilson) Working Paper, University of Maryland, July 1997.

[“Using Auctions to Divest Generation Assets,”](#) (with Lisa J. Cameron and Robert Wilson) *Electricity Journal*, 10:10, 22-31, December 1997.

[“Deficit Reduction Through Diversity: How Affirmative Action at the FCC Increased Auction Competition,”](#) (with Ian Ayres) *Stanford Law Review*, 48:4, 761-815, 1996.

[“Money Out of Thin Air: The Nationwide Narrowband PCS Auction,”](#) *Journal of Economics and Management Strategy*, 4, 267–343, 1995.

[“The Case for Affirmative Auction: From Conscience to Cooffers,”](#) (with Ian Ayres) *New York Times*, 21 May 1995, F13.

[“Using Auction Theory to Inform Takeover Regulation,”](#) (with Alan Schwartz) *Journal of Law, Economics, and Organization*, 7, 27–53, 1991.

[“Dissolving a Partnership Efficiently,”](#) (with Robert Gibbons and Paul Klemperer) *Econometrica*, 55, 615–632, 1987. Reprinted in Paul Klemperer (ed.), *The Economic Theory of Auctions*, Volume 2, Cheltenham, UK: Edward Elgar, 2000.

Research on Bargaining

[“ESOP Fables: The Impact of Employee Stock Ownership Plans on Labor Disputes,”](#) (with Hamid Mehran and Joseph Tracy) Working Paper, University of Maryland, August 2008.

[“Unions, Bargaining and Strikes,”](#) (with Joseph S. Tracy) in John T. Addison and Claus Schnabel, eds., *International Handbook of Trade Unions*, Cheltenham, UK: Edward Elgar, Chapter 4, 86-117, 2003.

[“Bargaining with Incomplete Information,”](#) (with Lawrence M. Ausubel and Raymond J. Deneckere), Robert J. Aumann and Sergiu Hart, eds., *Handbook of Game Theory*, Vol. 3, Amsterdam: Elsevier Science B.V., Chapter 50, 1897-1945, 2002.

[“The Effect of Collective Bargaining Legislation on Strikes and Wages,”](#) (with Morley Gunderson and Joseph S. Tracy) *Review of Economics and Statistics*, 81:3, 475-487, 1999.

[“Impacts of Strike Replacement Bans in Canada,”](#) (with Morley Gunderson and Joseph S. Tracy), *Labor Law Journal*, 50:3, 173-179, Fall 1999.

[“The Use of Strike Replacements in Union Contract Negotiations: the U.S. Experience 1980–1989,”](#) (with Joseph S. Tracy) *Journal of Labor Economics*, 16:4, 667-701, 1998.

[“Efficient Relocation of Spectrum Incumbents,”](#) (with Evan Kwerel and John Williams) *Journal of Law and Economics*, 41, 647-675, October 1998.

[“Deception and Mutual Trust: A Reply to Strudler,”](#) (with J. Gregory Dees) *Journal of Business Ethics*, 5, 813–822, 1995. Reprinted in Carrie Menkel-Meadow and Michael Wheeler (eds.), *What's Fair*, John Wiley & Sons, 2004.

[“Wage Bargaining with Time-Varying Threats,”](#) (with Joseph S. Tracy), *Journal of Labor Economics*, 12, 594–617, 1994.

[“The Determinants of U.S. Labor Disputes,”](#) (with Joseph S. Tracy), *Journal of Labor Economics*, 12, 180–209, 1994.

[“Promoting Honesty in Negotiation: An Exercise in Practical Ethics,”](#) (with J. Gregory Dees) *Business Ethics Quarterly*, 3, 359–394, 1993. Reprinted in Patricia Werhane and Tom Donalson, *Ethical Issues in Business: A Philosophical Approach*, Prentice-Hall, 1996, and Carrie Menkel-Meadow and Michael Wheeler (eds.), *What's Fair*, John Wiley & Sons, 2004.

[“Strikes and Holdouts in Wage Bargaining: Theory and Data,”](#) (with Joseph S. Tracy) *American Economic Review*, 82, 100–121, 1992. Reprinted in Bengt Holmstrom, Paul Milgrom, and Alvin E. Roth (eds.), *Game Theory in the Tradition of Bob Wilson*, Berkeley Electronic Press, www.bepress.com/wilson, May 2002.

[“Strategic Delay in Bargaining with Two-Sided Uncertainty,”](#) *Review of Economic Studies*, 59, 205–225, 1992.

[“Dynamic Bargaining with Transaction Costs,”](#) *Management Science*, 37, 1221–1233, 1991.

[“Shrewd Bargaining on the Moral Frontier: Toward a Theory of Morality in Practice,”](#) (with J. Gregory Dees) *Business Ethics Quarterly*, 1, 135–167, 1991.

[“Sequential Bargaining Mechanisms,”](#) in *Game-Theoretic Models of Bargaining*, Alvin Roth (ed.), Cambridge University Press, Chapter 8, 149–179, 1985.

[“Bargaining with Incomplete Information: An Infinite-Horizon Model with Two-Sided Uncertainty,”](#) *Review of Economic Studies*, 51, 579–593, 1984.

Other Research

[“Ratifiable Mechanisms: Learning from Disagreement,”](#) (with [Thomas R. Palfrey](#)) *Games and Economic Behavior*, 10, 255–283, 1995.

[“Relational Investing and Agency Theory,”](#) (with [Ian Ayres](#)) *Cardozo Law Review*, 15, 1033–1066, 1994.

[“Cartel Enforcement with Uncertainty About Costs,”](#) (with Thomas R. Palfrey) *International Economic Review*, 31, 17–47, 1990. Reprinted in Stephen W. Salant and Margaret C. Levenstein (eds.), *Cartels*, Volume 1, Cheltenham, UK: Edward Elgar, 2005.

[“Nonrandom Mixing Models of HIV Transmission,”](#) (with Edward Kaplan, and A. David Paltiel) in *Mathematical and Statistical Approaches to AIDS Epidemiology*, edited by Carlos Castillo-Chávez, *Lecture Notes in Biomathematics Series*, Springer-Verlag, 218–239, 1989.

Research Grants

“Dynamic Matching Mechanisms,” National Science Foundation, August 2005 to July 2008, \$264,188.

“Slot Auctions for U.S. Airports,” Federal Aviation Administration, Department of Transportation, September 2004 to August 2005, \$309,729.

“Rapid Response Electronic Markets for Time-Sensitive Goods,” National Science Foundation, July 2002 to June 2005, \$2,000,000.

“Multiple-Item Auctions,” National Science Foundation, July 2001 to June 2004, \$313,872.

“Auctions for Multiple Items,” National Science Foundation, April 1998 to March 2001, \$318,175.

- “Auctions and Infrastructure Conference,” National Science Foundation, April 1998 to March 1999, \$25,000.
- “Auctions and Infrastructure,” World Bank, March-June 1998, \$25,000.
- “Applying Strategic Bargaining Models to Union Contract Negotiations,” National Science Foundation, April 1995 to March 1998, \$143,637.
- “Applying Strategic Bargaining Models to Union Contract Negotiations,” National Science Foundation, April 1992 to March 1994, \$177,760.
- “Strikes and Delays in Wage Bargaining: Theory and Data,” National Science Foundation, April 1990 to March 1992, \$153,407.
- “Gaming Exercises in Negotiation and Dispute Resolution,” National Institute of Dispute Resolution, July to August 1988, \$6,000.
- “The Role of Time and Information in Bargaining,” National Science Foundation, July 1986 to June 1988, \$40,000.
- “Public Sector Cases on Negotiation,” Mellon Foundation, July to August 1985, \$12,000.

Editorial and Public Service

Journal of Industrial Economics, Associate Editor, 1998-2007.

Member, RTO Futures (a working group of economists, executives, and government leaders to address critical issues in electricity restructuring), 2000-2007.

Panelist, National Science Foundation, Economics, 1999-2002.

Panelist, National Science Foundation, Electricity Power System Efficiency and Security, 2002.

Program Committee Chair, *North American Econometric Society Summer Meetings*, June 21-24, 2001.

Panelist, National Science Foundation, Knowledge and Distributed Intelligence, 1998.

Referee for

American Economic Review, American Political Science Review, Cambridge University Press, *Econometrica*, *Economic Inquiry*, *Economic J*, *Economic Letters*, *Economic Theory*, *Energy J*, *Games & Economic Behavior*, *Group Decision & Negotiation*, *International Economic Review*, *International J of Game Theory*, *J of Business*, *J of Business & Economic Statistics*, *J of Conflict Resolution*, *J of Economic Theory*, *J of Economic Surveys*, *J of Economics & Management Strategy*, *J of Industrial Economics*, *J of Labor Economics*, *J of Law and Economics*, *J of Law, Economics & Organization*, *J of Political Economy*, *J of Public Economics*, *J of Regulatory Economics*, *Labour Economics*, *Management Science*, *Mathematical Social Sciences*, *Marketing Science*, MIT Press, National Institute for Dispute Resolution, National Science Foundation, *Omega*, *Operations Research*, *OPSEARCH*, *Quarterly J of Economics*, *Rand J of Economics*, *Research in Experimental Economics*, *Review of Economic Studies*, *Scandinavian J of Economics*, *Science*, *Social Choice & Welfare*, *Southern Economic J*.

Recent PhD Committees Chaired (Initial Placement)

Dipan Ghosh, May 2008 (CRA International)

Martin Ranger, May 2005 (Indiana University)

Jeffrey Lien, August 2001 (US Department of Justice)

Allan Ingraham, May 2001 (Criterion Auctions)

Jesse Schwartz, August 1999 (Vanderbilt University)

Laurent Martin, July 1999 (University of Washington)

Entrepreneurship and Consulting

Chairman, [Market Design Inc.](#) (with Lawrence Ausubel, R. Preston McAfee, Paul Milgrom, and Robert Wilson), a consulting firm that works with governments and companies in designing and implementing state-of-the-art auctions, 1995 to present (President since 1999, Chairman since 2003). Major projects:

- Design auction and suggest market reforms for British Columbia timber market.
- Design and implement auction to sell electricity capacity in France for Electricite de France and in Belgium for Electrabel.
- Design and implement auction to sell gas capacity in Germany and France.
- Design and implement U.K. auction to procure greenhouse gas emission reductions.
- Design and implement spectrum auctions in U.S., Canada and Mexico.
- Comment on design of spectrum auctions in Australia and U.S.
- Design and implement electricity auctions in California and New England
- Design auctions to divest electricity generation plants and power purchase agreements in U.S. and Canada.

Founder, [Criterion Auctions](#), a consulting firm that provides auction support services to governments and companies in high-stake auctions. December 2000 to June 2007.

Chairman and Founder, [Spectrum Exchange](#) (with Lawrence Ausubel, Paul Milgrom, and [Market Design Inc.](#)), a firm to create value for the public by promoting the efficient exchange of spectrum. 1999 to present.

Expert Reports, Affidavits, and Testimony

["Report on Key Design Elements of Auctions Under Australia's Carbon Pollution Reduction Scheme."](#)

Tradeslot Report to Australian Department of Climate Change, 26 October 2008.

DC Energy, LLC v. HQ Energy Services (US) Inc., Docket No. EL07-67-000, Federal Energy Regulatory Commission, ["Affidavit of Peter Cramton."](#) August 2007. Affidavit arguing that HQ manipulated the NYISO TCC and day-ahead energy markets. On behalf of DC Energy, LLC.

The People of the State of Illinois, et al., Docket No. EL07-47-000, Federal Energy Regulatory Commission, ["Affidavit of Peter Cramton."](#) June 2007. Affidavit arguing that the Illinois auction for energy for small customers was a competitive auction. On behalf of J. Aron & Company and Morgan Stanley Capital Group Inc.

Australia National Emissions Trading Taskforce, "Possible Design for a Greenhouse Gas Emissions Trading System," July 2007.

700 MHz Auction, Federal Communications Commission, ["Why Large Licenses are Best for the 700 MHz Spectrum Auction."](#) April 2007. On behalf of Verizon Wireless.

New York Independent System Operator, Docket No. ER07-360-000, Federal Energy Regulatory Commission, ["Affidavit of Peter Cramton."](#) February 2007. Affidavit identifying manipulation of New York's capacity market by KeySpan and the need for market monitoring and mitigation. On behalf of Consolidated Edison Company of New York.

Devon Power LLC, et al., Docket No. ER03-563-030, Federal Energy Regulatory Commission, ["Affidavit of Peter Cramton."](#) March 2006. Affidavit in support of the settlement agreement defining the New England Forward Capacity Market. For ISO New England.

- AWS Auction, Federal Communications Commission, [“Declaration of Peter Cramton.”](#) February 2006. Declaration on various auction rules for the AWS auction. On behalf of T-Mobile US.
- AWS Auction, Federal Communications Commission, [“Reply Declaration of Peter Cramton.”](#) February 2006. Reply declaration on various auction rules for the AWS auction. On behalf of T-Mobile US.
- AWS Auction, Federal Communications Commission, [“Ex Parte of Peter Cramton.”](#) March 2006. Ex parte communication on various auction rules for the AWS auction. On behalf of T-Mobile US.
- [MDI retained as Auction Manager](#) for virtual divestiture of 2,600 MW of nuclear energy as part of the proposed merger between Exelon and PSEG. August 2005.
- US-Canada Softwood Lumber Trade Dispute, [“Competitive Auction Markets in British Columbia”](#) (with Susan Athey). December 2005. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Comments on DOC Notice of Preliminary Results of Countervailing Duty Review”](#) (with Susan Athey). July 2005. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Competitive Auction Markets in British Columbia”](#) (with Susan Athey). February 2004. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Upset Pricing in Auction Markets: An Overview”](#) (with Susan Athey and Allan Ingraham). March 2003. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“An Analysis of Auction Volume and Market Competition for the Coastal Forest Regions in British Columbia”](#) (with Susan Athey and Allan Ingraham). September 2002. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Reserve Prices, Stumpage Fees, and Efficiency”](#) (with Susan Athey and Allan Ingraham). September 2002. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Auction-Based Timber Pricing and Complementary Market Reforms in British Columbia”](#) (with Susan Athey and Allan Ingraham). March 2002. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Setting the Upset Price in British Columbia Timber Auctions”](#) (with Susan Athey and Allan Ingraham). September 2002. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Auctioning Timber to Maximize Revenues in British Columbia”](#) (with Susan Athey and Allan Ingraham). June 2002. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“A Comparison of Equation-Based and Parity Pricing of Stumpage Fees for British Columbia Timber Under Long-Term Tenures”](#) (with Susan Athey and Allan

- Ingraham). April 2002. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- US-Canada Softwood Lumber Trade Dispute, [“Testing for Anti-Competitive Bidding in Auction Markets”](#) (with Susan Athey and Allan Ingraham). March 2002. White Paper, Market Design Inc. On behalf of British Columbia Ministry of Forests.
- New England Power Pool, Federal Energy Regulatory Commission, [“Review of the Proposed Reserve Markets in New England.”](#) (with Hung-po Chao and Robert Wilson) Market Design Inc., January 2005.
- U.S. Department of Defense, [“Estimating Auction Revenues for the Proposed FCC Sale of 3G Spectrum for Broadband and Advanced Wireless Services.”](#) Criterion Auctions, December 2003.
- Expert Report of Peter Cramton, *D. Lamar Deloach, et al. v. Philip Morris, Inc., et al.*, Civil Action No. 00-CV-1253, United States District Court, Middle District of North Carolina. October 2003. For R.J. Reynolds. Concluded that R.J. Reynolds did not collude in U.S. tobacco auctions during the class period.
- Supplier Behavior in California Energy Crisis, Federal Energy Regulatory Commission, Docket Nos. EL00-95-075 and EL00-98-063, [“Competitive Bidding Behavior in Uniform-Price Auction Markets.”](#) March 2003. For Duke Energy.
- Supplier Behavior in California Energy Crisis, Federal Energy Regulatory Commission, Docket Nos. EL00-95-075 and EL00-98-063, [“Rebuttal Addendum: Assessment of Submissions of the California Parties.”](#) March 2003. For Duke Energy.
- U.S. Department of Transportation, Docket Nos. FAA–2001–9852, FAA–2001–9854, [“Comments on Alternative Policy Options for Managing Capacity and Mitigating Congestion and Delay at LaGuardia Airport.”](#) June 2002. Recommending auctions to manage congestion at LaGuardia.
- Verizon Wireless Petition for Permanent Forbearance from CMRS Number Portability, Federal Communications Commission, WT Docket No. 01-184, [“Declaration of Peter Cramton.”](#) February 2002. Comments in support of wireless number portability. For Leap Wireless.
- ISO New England, Docket No. ER02, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton.”](#) February 2002. Comments on proposed changes to how the energy clearing price is calculated. For ISO New England.
- 2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services, WT Docket No. 01-14, Federal Communications Commission, [“Ex Parte Declaration of Peter Cramton.”](#) October 2001. Further comments on the CMRS spectrum cap. For Leap Wireless.
- ISO New England, Docket No. EL00-62-015, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton.”](#) June 2001. Comment on modifications to installed capability market. For ISO New England.
- 2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services, WT Docket No. 01-14, Federal Communications Commission, [“Declaration of Peter Cramton.”](#) April 2001. Comments on the CMRS spectrum cap. For Leap Wireless.
- C and F Block Broadband PCS Auction, Federal Communications Commission, [“Declaration of Peter Cramton.”](#) March 2001. Comments on the impact of fronts in the C and F Block Broadband PCS auction.

[“Lessons Learned from the UK 3G Spectrum Auction,”](#) May 2001. An expert report on the UK 3G Spectrum Auction. For UK National Audit Office.

[“Market Effectiveness Assessment,”](#) (with Jeffrey Lien) May 2001. An expert report assessing the effectiveness of the electricity restructuring plan in Ontario. For Transcanada.

First Millennium Communications, Inc. and Barbara Laurence vs. Entravision Communications Company, No. 1420009074, “Expert Report of Peter Cramton,” May 2001. Comment on the value of clearing rights for broadcast television stations 59 to 69. For First Millennium Communications and Barbara Laurence.

Pacific Communications vs. American Wireless, Superior Court of Fulton County, Georgia, No. 2000CV20099, [“Reply Declaration of Peter Cramton,”](#) April 2001. Further comments on the impact of a delayed sale of spectrum license by Pacific Communication. For American Wireless.

Pacific Communications vs. American Wireless, Superior Court of Fulton County, Georgia, No. 2000CV20099, [“Expert Affidavit of Peter Cramton,”](#) February 2001. Comments on the impact of a delayed sale of spectrum license by Pacific Communication. For American Wireless.

[“Lessons from the United States Spectrum Auctions,”](#) Prepared Testimony of Peter Cramton before the United States Senate Budget Committee, February 2000.

New England Power Pool, Docket No. EL00-83-000, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton,”](#) July 2000. Comment on deficiency charge in installed capability market. For ISO New England.

NSTAR Services Company vs. New England Power Pool, Docket No. EL00-83-000, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton,”](#) June 2000. Further comments on energy price cap as a response to design flaws. For ISO New England.

NSTAR Services Company vs. New England Power Pool, Docket No. EL00-83-000, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton,”](#) June 2000. Comments on energy price cap as a response to design flaws. For ISO New England.

New England Power Pool, Docket No. EL00-62-000; ER00-2052-000, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton,”](#) May 2000. Comments on installed capability market. For ISO New England.

New England Power Pool, Docket No. ER00-2016-000, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton,”](#) April 2000. Comments on one-part vs. three-part bidding in energy market. For ISO New England.

New England Power Pool, Docket No. ER99-4536-000, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton,”](#) October 1999. Summary of review of reserves and operable capability markets. For ISO New England.

New England Power Pool, Docket No. OA97-237-000, Federal Energy Regulatory Commission, [“Affidavit of Peter Cramton,”](#) October 1998. Reply to comments on review of rules. For ISO New England.

New England Power Pool, Docket No. OA97-237-000, Federal Energy Regulatory Commission, [“A Review of ISO New England's Proposed Market Rules,”](#) (with Robert Wilson), September 1998. For ISO New England.

Best Digital vs. U.S. West, American Arbitration Association, Denver Office, No. 77 181 00204 97, “Expert Report of Peter C. Cramton,” September 1998. Determine the value of spectrum licenses won by Best Digital in the C-block Broadband PCS auction. For Best Digital.

NextWave vs. Antigone and Devco, Petition to Deny License Proceedings, Federal Communications Commission, [“Statement on the Effect of NextWave’s Participation in the C-block Auction on Antigone and Devco,”](#) March 1997. For Antigone and Devco.

NextWave vs. Antigone and Devco, Petition to Deny License Proceedings, Federal Communications Commission, [“Reply Statement on the Effect of NextWave’s Participation in the C-block Auction on Antigone and Devco,”](#) April 1997. For Antigone and Devco.

Personal

Born on 12 November 1957

Married to [Catherine Durnell Cramton](#)