

# JOHN DUFFY

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## EDUCATION

Ph.D. in Economics, University of California, Los Angeles, 1992.

M.A. in Economics, University of California, Los Angeles, 1988.

A.B. in Economics with High Honors, University of California, Berkeley, 1986,  $\Phi$ BK.

## POSITIONS

University of Pittsburgh  
Professor of Economics 2004-Present.  
Associate Professor of Economics 1999-2004.  
Assistant Professor of Economics 1992-1999.

Carnegie-Mellon University  
Visiting Professor, Social and Decision Sciences, Fall 2007.

Federal Reserve Bank of St. Louis  
Visiting Scholar, Research Department, Spring 1998.

## PUBLICATIONS

### A. Journal Articles

1. "Correlated Equilibria, Good and Bad: An Experimental Study," with Nick Feltovich, forthcoming in *International Economic Review*.
2. "Decentralized Organizational Learning: An Experimental Investigation," with Andreas Blume and April Franco, forthcoming in *American Economic Review*.
3. "Cooperative Behavior and the Frequency of Social Interaction," with Jack Ochs, forthcoming in *Games and Economic Behavior*.
4. "Experiments with Network Formation," with Dean Corbae, *Games and Economic Behavior* 64, 2008, 81-120.
5. "Beliefs and Voting Decisions: A Test of the Pivotal Voter Model," with Margit Tavits, *American Journal of Political Science* 52, 2008, 603-618.
6. "Internet Auctions with Artificial Adaptive Agents: A Study on Market Design," with M. Utku Ünver, *Journal of Economic Behavior and Organization* 67, 2008, 394-417.

7. "Giving Little by Little: Dynamic Voluntary Contribution Games," with Jack Ochs and Lise Vesterlund, *Journal of Public Economics* 91, 2007, 1708-1730.
8. "Instability of Sunspot Equilibria in Real Business Cycle Models Under Adaptive Learning," with Wei Xiao, *Journal of Monetary Economics* 54, 2007, 879-903.
9. "The Value of Interest Rate Stabilization Policies When Agents are Learning," with Wei Xiao, *Journal of Money, Credit, and Banking* 39, 2007, 2041-2056.
10. "The Value of Central Bank Transparency When Agents are Learning," with Michele Berardi, *European Journal of Political Economy* 23, 2007, 9-29.
11. "Words, Deeds, and Lies: Strategic Behaviour in Games with Multiple Signals," with Nick Feltovich, *Review of Economic Studies* 73, 2006, 669-688.
12. "Dollarization Traps," with Maxim Niktin and R. Todd Smith *Journal of Money, Credit, and Banking* 38, 2006, 2073-2098.
13. "Multiple Regimes in U.S. Monetary Policy? A Nonparametric Approach," with Jim Engle-Warnick, *Journal of Money, Credit, and Banking* 38, 2006, 1363-1377.
14. "Asset Price Bubbles and Crashes with Near-Zero Intelligence Traders," with M. Utku Ünver, *Economic Theory* 27, 2006, 537-563.
15. "Sunspots in the Laboratory," with Eric O'N. Fisher, *American Economic Review* 95, 2005, 510-529.
16. "Anarchy in the Laboratory (and the Role of the State)," with Minseong Kim, *Journal of Economic Behavior and Organization* 56, 2005, 297-329.
17. "Learning, Information and Sorting in Market Entry Games: Theory and Evidence," with Ed Hopkins, *Games and Economic Behavior* 51, 2005, 31-62.
18. "Trust Among Strangers," with Cristina Bicchieri and Gil Tolle, *Philosophy of Science* 71, 2004, 286-319.
19. "Capital-Skill Complementarity? Evidence from a Panel of Countries," with Chris Papageorgiou and Fidel Pérez-Sebastián, *The Review of Economics and Statistics* 86, 2004, 327-344.
20. "Comment on Adaptive Learning and Monetary Policy Design," *Journal of Money, Credit, and Banking* 35, 2003, 1073-1080.
21. "Intrinsically Worthless Objects as Media of Exchange: Experimental Evidence," with Jack Ochs, *International Economic Review* 43, 2002, 637-673.
22. "Do Actions Speak Louder Than Words? An Experimental Comparison of Observation and Cheap Talk," with Nick Feltovich, *Games and Economic Behavior* 39, 2002, 1-27.
23. "Approximating and Simulating the Stochastic Growth Model: Parameterized Expectations, Neural Networks and the Genetic Algorithm," with Paul D. McNelis, *Journal of Economic Dynamics and Control* 25, 2001, 1273-1303.
24. "Learning and Excess Volatility," with James Bullard, *Macroeconomic Dynamics* 5, 2001, 272-302.

25. "Learning to Speculate: Experiments with Artificial and Real Agents," *Journal of Economic Dynamics and Control* 25, 2001, 295–319.
26. "A Cross–Country Empirical Investigation of the Aggregate Production Function Specification," with Chris Papageorgiou, *Journal of Economic Growth* 5, 2000, 87–120.
27. "Emergence of Money as a Medium of Exchange: An Experimental Study," with Jack Ochs, *American Economic Review* 89, 1999, 847–877.  
Reprinted in: E. Carbone and C. Starmer, (Eds.), *New Developments in Experimental Economics*, Edward Elgar Publishing, 2007.
28. "Does Observation of Others Affect Learning in Strategic Environments?," with Nick Felto-  
vich, *International Journal of Game Theory* 28, 1999, 131–152.
29. "Using Genetic Algorithms to Model the Evolution of Heterogeneous Beliefs," with James  
Bullard, *Computational Economics* 13, 1999, 41–60.
30. "Monetary Theory in the Laboratory," *Federal Reserve Bank of St. Louis Review*, Septem-  
ber/October 1998, 9–26.
31. "Learning and the Stability of Cycles," with James Bullard, *Macroeconomic Dynamics* 2,  
1998, 22–48.
32. "A Model of Learning and Emulation with Artificial Adaptive Agents," with James Bullard,  
*Journal of Economic Dynamics and Control* 22, 1998, 179–207.
33. "Corruption Cycles," with Cristina Bicchieri, *Political Studies* 45, 1997, 477–495.
34. "On the Robustness of Behavior in Experimental 'Beauty Contest' Games," with Rosemarie  
Nagel, *Economic Journal* 107, 1997, 1684–1700.
35. "The Transition from Stagnation to Growth: An Adaptive Learning Approach," with Jasmina  
Arifovic and James Bullard, *Journal of Economic Growth* 2, 1997, 185–209.
36. "On Learning and the Nonuniqueness of Equilibrium in an Overlapping Generations Model  
with Fiat Money," *Journal of Economic Theory* 64, 1994, 541–553.

## **B. Chapters in Books**

37. "Experimental Macroeconomics," in L. Blume and S. Durlauf, (Eds.) *The New Palgrave  
Dictionary of Economics*, 2nd ed., New York: Palgrave Macmillan, 2008.
38. "Agent–Based Models and Human Subject Experiments," in L. Tesfatsion and K.L. Judd  
(Eds.), *Handbook of Computational Economics* Vol. 2, (Handbooks in Economics Series)  
Amsterdam: North-Holland, 2006, 949–1011.
39. "Using Symbolic Regression to Infer Strategies From Experimental Data," with Jim Engle–  
Warnick, in S.H. Chen, (Ed.), *Evolutionary Computation in Economics and Finance (Studies  
in Fuzziness and Soft Computing, vol. 100)* New York: Physica–Verlag, 2002, 61–82.

## **C. Book Reviews**

40. Review of *Learning and Expectations in Macroeconomics* by George W. Evans and Seppo Honkapohja and published by Princeton University Press, 2001, in *Journal of Economic Literature* 40, 2002, 168–169.
41. Review of *Discovering Artificial Economics: How Agents Learn and Economies Evolve* by David F. Batten and published by Westview Press, 2000, in *Artificial Life* 7, 2001, 321–323.
42. Review of *Growing Artificial Societies: Social Science from the Bottom Up* by Joshua M. Epstein and Robert Axtell and published by Brookings/MIT Press, 1996, in *Southern Economic Journal* 64, 1998, 791–794.

#### **D. Working Papers/Work in Progress**

“Competitive Behavior in Market Games: Evidence and Theory,” with Alexander Matros and Ted Temzelides, November 2008.

“Does Competition Affect Giving? An Experimental Study,” with Tatiana Kornienko, revise-and-resubmit, *Journal of Economic Behavior and Organization*.

“Equilibrium Selection in Entry Games,” with Jack Ochs, January 2009.

“Investment and Monetary Policy: Learning and Determinacy of Equilibrium” with Wei Xiao, August 2008.

“Learning and Dynamic Inefficiency” with S. Cem Karaman, March 2007.

“Learning and Structural Change in Macroeconomic Data,” with James Bullard, revise-and-resubmit, *Federal Reserve Bank of St. Louis Review*.

“Experimental Analysis of Asset Pricing Models,” with Sean Crockett, in progress.

“Macroeconomics: A Survey of Laboratory Research,” March 2008 (Chapter prepared for volume 2 of the *Handbook of Experimental Economics*).

“Maternal Certainty, Paternal Uncertainty and Holiday Gift-Giving,” October 2006.

“Patience or Fairness? Analyzing Social Preferences in Repeated Games,” with Felix Munoz-Garcia, July 2008.

“Self-Organized Criticality in a Dynamic Game,” with Andreas Blume and Ted Temzelides, revise-and-resubmit, *Journal of Economic Dynamics and Control*.

“Social Norms, Information, and Trust Among Strangers,” with Yong-Ju Lee and Huan Xie, October 2008.

#### **RESEARCH GRANTS**

University of Pittsburgh, Graduate School of Public Health, “Using a Lottery-Choice Decision Game to Model Risk Aversion in Vaccine Behavior,” Co-Principal Investigator with Steven Albert, February 2008-March 2009, \$20,000.

National Science Foundation, “MRI: Acquisition of Equipment to Upgrade the Pittsburgh Experimental Economics Laboratory,” September 2007-August 2008, \$156,835.

National Science Foundation, “Equilibrium Selection in Entry Games: An Experimental Study,” Co-Principal Investigator with Jack Ochs, February 2006–January 2008, \$69,688.

University of Pittsburgh FAS Faculty Research and Scholarship Program grant in support of the International Conference of the Economic Science Association held at Pitt in 2003, \$10,000.

National Science Foundation, “Cooperative Behavior and the Frequency of Social Interaction,” Co-Principal Investigator with Jack Ochs, August 2002–January 2004, \$65,187.

National Science Foundation, “Sunspots in the Laboratory,” Principal Investigator, August 2001–June 2003, \$49,542.

National Science Foundation, “Experiments with Network Economies,” Co-Principal Investigator with Dean Corbae, March 2001–February 2003, \$144,016.

University of Pittsburgh Central Research Development Fund, “Anarchy in the Laboratory,” 1999, \$3,436.40

National Science Foundation, “Do Actions Speak Louder than Words? Observation of Others versus Cheap Talk as Coordination Devices,” Principal Investigator, August 1998 – July 1999, \$21,270.

National Science Foundation, “Emergence of Money as a Medium of Exchange: An Experimental Analysis,” Co-Principal Investigator with Jack Ochs, September 1995–February 1998, \$109,254.

University of Pittsburgh Central Research Development Fund, “The Effect of Additional Information on Learning in Strategic Environments,” 1994, \$3,673.

## **PRESENTATIONS (Last 5 Years)**

2008

American Economic Association Meetings, New Orleans, January. Plenary Speaker, 19th Annual Teaching Economics Conference, Robert Morris University, February. Universitat Pompeu Fabra, June. North American Summer Meetings of the Econometric Society, Carnegie-Mellon, June. West Virginia University, September. University of Illinois, Urbana-Champaign, September. University of Copenhagen, October. University of Aberdeen, October. Harvard University, December.

2007

American Economic Association Meetings, Chicago, January. New York University, March. University of Edinburgh, June. Barcelona LeeX Experimental Economics Summer School in Macroeconomics, June. SUNY-Stony Brook International Summer Festival on Game Theory, July. Learning Week Summer Workshop, Federal Reserve Bank of St. Louis, July. Texas A&M University, September. Lorentz Center Conference, “Complexity in Economics and Finance,” Leiden, The Netherlands, October. UCLA, November. George Mason University, November.

2006

Pennsylvania State University, February. Coordination Success Conference in Honor of Ray Battalio, Texas A&M University, March–April. Economic Science Association International Meeting, Atlanta, June. Learning Week Summer Workshop, Federal Reserve Bank of St.

Louis, July. Guest Lecturer, CEEL Summer School in Adaptive Economic Dynamics, Trento, Italy, July. University of Arizona, September. University of Oregon, October. SUNY Binghamton, December.

2005

American Economic Association Meetings, Philadelphia, January. Dynamics of Social Structures Conference, Santa Fe Institute, April. Carnegie-Mellon University, May. Plenary speaker, International Workshop on Agent-Based Models for Economic Policy Design, ZiF, Bielefeld Germany, June-July. Econometric Society World Congress, London, August. University of Texas, Austin, October. Plenary speaker, International Meeting on Experimental and Behavioral Economics, Valencia Spain, December.

2004

American Economic Association Meetings, San Diego, January. University of California, Irvine, January. Carnegie-Mellon University, February. Evolutionary Game Theory and Learning Conference, UC Irvine, March. Handbook of Computational Economics Conference, University of Michigan, May. North American Meetings of the Econometric Society, Brown University, June. New and Alternative Directions for Learning Workshop, Carnegie Mellon University, August. Harvard University, October.

## PROFESSIONAL ACTIVITIES

Director, Pittsburgh Experimental Economics Laboratory (PEEL) 1999-present.

Associate Editor: *European Economic Review*, 2005-present; *Experimental Economics* 2007-present; *Games and Economic Behavior* 2008-present; *Journal of Economic Dynamics and Control*, 2000-present.

Co-Founder and Instructor, Barcelona LeeX Experimental Economics Summer School in Macroeconomics (BLEESM), June 2007 and June 2008, at Universitat Pompeu Fabra.

Referee for journal articles and books in Economics, Computer Science, Philosophy, Political Science, and Sociology. Reviewer of grant proposals for the National Science Foundation and other agencies.

Panel Member, National Science Foundation, Human and Social Dynamics Program, 2007.

Conference Organizer, International Meetings of the Economic Science Association, Pittsburgh June 2003.

Conference Program Committee Member: 2008 North American Summer Meeting of the Econometric Society; Midwest Macroeconomics Conference, April 1999; Society for Computational Economics, Summer Meetings, 1995, 1996, 1997; Society for Economic Dynamics and Control Summer Meetings, 1994.

## DEPARTMENT SERVICE (Last 5 Years)

Director of Graduate Studies and Chair, Admissions Committee 2002-2007; Member, Recruitment Committee; Member, Macroeconomics Comprehensive Examination Committee; Faculty of Arts and Sciences Tenure Review Committees.

## COURSES TAUGHT

Undergraduate:

Introduction to Microeconomics, Introduction to Game Theory, Introduction to Macroeconomics, Macroeconomics for B.S. Majors, Intermediate Macroeconomics, Money and Banking.

Graduate:

Macroeconomic Theory (Core Course), Topics in Macroeconomics, Monetary Theory, Macroeconomics Workshop, Topics in Experimental Economics, Experimental Economics Workshop.

**DISSERTATIONS SUPERVISED (14):**

Jim Engle-Warnick, McGill University; Cesar Fuentes, Wharton Econometric Forecasting; Iulia Igescu, Global Insight ; S. Cem Karaman, Portland State University; Matejka Kavcic, Central Bank of Slovenia; Tatiana Kornienko, University of Edinburgh; Claudia M. Landeo, University of Alberta and Heinz School, Carnegie Mellon; Yong-Ju Lee, Samsung Research Institute of Finance; Felix Muñoz-García, Washington State University; Maxim Nikitin, University of Alberta; Chris Papageorgiou, Louisiana State University and IMF; M. Utku Ünver, University of Pittsburgh; Ayla Yilmaz, Indiana University-Purdue University; Katherine Wick, Allegheny College. I have served as a committee member on numerous other dissertations.