CURRICULUM VITAE

Sheryl B. Ball

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Department of Economics Virginia Polytechnic Institute and State University Blacksburg, VA 24061

Education

- 1984 Northwestern University, B.A. with honors, Mathematical Methods in the Social Sciences and Economics.
- 1986 Northwestern University, M.S., Managerial Economics and Decision Sciences.
- 1991 Northwestern University, Ph.D. Managerial Economics and Decision Sciences, thesis: "Experimental Evidence on the Winner's Curse in Negotiation," Roger Myerson, chairman.

Fields

Behavioral Economics, Experimental Economics, Neuroeconomics

Professional Employment

Virginia Polytechnic Institute and State University, Economics, Associate Department Head, August 2007 - present.

Virginia Polytechnic Institute and State University, College of Science, Associate Dean for Curriculum, Instruction and Advising, January 2004 to August 2007.

Virginia Polytechnic Institute and State University, Assistant Professor of Economics, Fall 1992 to 1999, Associate Professor 1999-present.

Visiting Scholar, IMF Institute 8/97 and 5/98.

Babson College, Visiting Assistant Professor Finance, Fall 1995.

Indiana University School of Business, Visiting Assistant Professor, Business Economics and Public Policy, Fall 1991.

Boston University School of Management, Assistant Professor, Finance and Economics, Fall 1989 to Spring 1992.

RESEARCH ACTIVITY

Publications

a. Peer Refereed Articles:

Aimone, Jason, Sheryl Ball and Brooks King-Casas, "It's Not What You See but How You See It: Using Eye Tracking to Study the Risky Decision-Making Process." Forthcoming *Journal of Neuroscience, Psychology and Economics*.

Aimone, Jason, Sheryl Ball and Brooks King-Casas, "Nudging' Risky Decision-Making: The Causal Influence of Information Order." Forthcoming *Economic Letters*.

Aimone, Jason, Sheryl Ball, Brooks King Casas (2015). "Social and Economic Risk: Results from an Individual Level Betrayal Aversion Measure" *PLOS ONE*, 10:9: e0137491. doi:10.1371/journal.pone.0137491.

Chung, Dongil, George I. Christopoulos, Brooks King-Casas, Sheryl B. Ball, Pearl H. Chiu (2015). "Others' choices increase subjective value and explain asymmetric alignment with safety and risk." *Nature Neuroscience* 18, 791–792. doi:10.1038/nn.4031.

Yu, Ling, Sheryl Ball, Christine E. Blinn, Klaus Moeltner, Seth Peery, Valerie A. Thomas and Randolph H. Wynne (2015). "Cloud-Sourcing: Using an Online Labor Force to Detect Clouds and Cloud Shadows in Landsat Images." *Remote Sensing*, 7:3, 2334-2351; doi:10.3390/rs70302334.

Ball, Sheryl, Catherine Eckel & Maria Heracleous, (2010). "Risk aversion and physical prowess: Prediction, choice and bias," *Journal of Risk and Uncertainty*, vol. 41(3), 167-193.

Ashley, Richard, Sheryl Ball & Catherine Eckel, (2010). "Motives for Giving: A Reanalysis of Two Classic Public Goods Experiments," *Southern Economic Journal*, vol. 77(1), 15-26.

Ball, Sheryl B., Catherine C. Eckel and Christian Rojas (2006). "Technology Improves Learning in Large Principles of Economics Classes: Using Our WITS." *American Economic Review*, Papers and Proceedings, 96(2), 442-6.

Ball Sheryl, Feltenstein Andrew (2001). Bank failures and fiscal austerity: policy prescriptions for a developing country, *Journal Of Public Economics*, 82(2), 247-270.

Ball, Sheryl B., Catherine C. Eckel, Phillip Grossman and William Zame (2001). "Status in Markets," *Quarterly Journal of Economics*. 116(1), 161-188.

Ball, Sheryl B. (1999), "Pareto Optimality in Negotiation," *Journal of Education for Business*, 74(6), 341-346.

Ball, Sheryl B., and Catherine C. Eckel (1998), "The Economic Value of Status", *Journal of Socio-Economics*, 27(4), 495-514.

Ball, Sheryl B., and Andrew Feltenstein (1998). "Basic Macroeconomic Options for Bangladesh: A Numerical Analysis," *Journal of Asian Economics*, 9(2), 281-305.

Ball, Sheryl B., and Charles A. Holt (1998). "Speculation and Bubbles in an Asset Market," *Journal of Economic Perspectives*, 12(1), 207-218.

Ball, Sheryl B., and Paula-Ann Cech (1996), "Subject Pool Choice and Treatment Effects in Economic Laboratory Research", in R. Mark Isaac, ed., *Research in Experimental Economics*, vol. 6, 239-292.

Ball, Sheryl B., and Catherine C. Eckel (1996), "Buying Status: Experimental Evidence on Status in Negotiation," *Psychology and Marketing*, vol 13, 381-405.

Ball, Sheryl B., Max H. Bazerman and John S. Carroll (1991), "An Evaluation of Learning in the Bilateral Winner's Curse" *Organizational Behavior and Human Decision Processes*, vol. 48, January, 1-22.

b. Book Chapters

Ball, Sheryl B., (2008). "Entitlements in Laboratory Experiments" in *The New Palgrave Dictionary of Economics*, 2nd Edition, Steven N. Durlauf and Lawrence E. Blume, editors, Palgrave Macmillan.

Ball, Sheryl B., (2008). "Status and Economics" in *The New Palgrave Dictionary of Economics*, 2nd Edition, Steven N. Durlauf and Lawrence E. Blume, editors, Palgrave Macmillan.

Ball, Sheryl B. (1998). "Experimental Economics" in Peter E. Earl and Simon Kemp, eds, *Elgar Companion to Economic Psychology and Consumer Research*, 222-229.

c. Survey Articles

Ball, Sheryl B, and Catherine C. Eckel (2004), "Using Technology to Facilitate Active Learning Through Experiments." *Social Science Computer Review*, 22, 469-478.

Ball, Sheryl B. (1998), "Research, Teaching, and Practice in Experimental Economics: A Progress Report and Review." *Southern Economic Journal*, 64(3), 772-9.

d. Book Reviews

Ball, Sheryl B. (1998). Review of *The Bangladesh Economy in Transition* by M. G. Quibria, Oxford University Press, in *Journal of Asian Economics*, 9(1), 167-170.

Ball, Sheryl B. (1993). Review of <u>The Russian Management Revolution</u>, Sheila M. Puffer, Ed., in Slavic Review, p. 899.

e. Conference Volume Publications

Ball, Sheryl (2012). "Classroom Experiments: Playing Games Improve Student Achievement in an Intermediate Level "Hurdle" Course" 2012 Conference on Higher Education Pedagogy, online version available at: http://www.cider.vt.edu/conference/proceedings1.html.

T. W. Rondeau, C. W. Bostian, D. Maldonado, A. Ferguson, S. Ball, S. F. Midkiff, B. Le (2005), "Cognitive Radios in Public Safety and Spectrum Management," 33rd Research Conference on Communication, Information and Internet Policy, Sept. 2005 at 13, http://web.si.umich.edu/tprc/papers/2005/430/Rondeau-Cognitive_Radios in Public_Safety_and_Spectrum_Management.pdf.

Ball, Sheryl, Adam Ferguson, T.W. Rondeau, (2005) "Consumer Applications of Cognitive Radio Defined Networks," IEEE (Institute of Electrical and Electronics Engineers) Symposium on New Frontiers in Dynamic Spectrum Allocation, Papers and Proceedings.

Ball, Sheryl, George E. Morgan & Judy Hood (2004), "Entrepreneurial Skills for Engineers - An Interdisciplinary, Team Project Approach," iCEER (International Conference on Engineering Education and Research), Papers and Proceedings.

Ball, Sheryl B., and George E. Morgan, (1998), "How Valuable is Eight Times more Bandwidth: Evidence from the LMDS Auction," *Wireless Communications Conference*, Reston, Virginia: International Microelectronics And Packaging Society and Educational Foundation.

Current Work In Progress (selected)

"Anxiety, Risk, Betrayal and the Growth of Personal Trust" with Jason Aimone and Brooks King-Casas.

"Unrealistic Expectations: The Impact of Probability Bias on Adolescent Risky Decision-Making," Nina Lauharatanahirun, Sheryl Ball, Dongil Chung, Jason Aimone, Pearl H. Chiu, Jungmeen Kim-Spoon, Brooks King-Casas. Manuscript under final revision for first submission to *Nature Neuroscience*.

"Strategic Lying and Cooperative Behavior in Games" with Eric Bahel and Sudipta Sarangi. This is an ISCE Summer Scholars Program funded proposal (summer 2016). The theory portion of the paper is complete and programming is currently underway for the experimental section.

"The Value of Honesty: Neural Evidence for Honesty Preferences," with Brooks King-Casas, Pearl Chiu and Lusha Zhu, looks at the neural correlates of strategic dishonesty. Rough draft of manuscript exists.

Grants

a. Peer Reviewed Grants from National Organizations

NSF GETAR (Global Event and Trend Archive Research). Ed Fox PI, Andrea Kavanaugh, Alla Rosovskya and Donald Shoemaker. 1/17-12/19, Total award: \$446,000. I am a Domain Expert for this project and will study trust and betrayal in technology using web archive data.

NSF CRISP Type 2: Collaborative Research: Towards Resilient Smart Cities. Saad, Wallid, Sheryl Ball, Myra Blanco and Danfeng Yao. 1/1/16-12/31/19, Total Award: \$2,500,000; VT Award: \$1,100,000; my portion \$300,000. I will be conducting research on trust and betrayal in technology that drives Smart Cities.

NSF Grant "Collaborative Research: WITS: A Wireless Interactive Teaching System" (DUE-0618646). I am PI, Scott Midkiff co-PI. Collaborative grant with Catherine Eckel, University of Texas at Dallas. 9/1/2006-8/31/2010, Total Award: \$375,000, VT award: \$220,763, my portion \$209,725. This grant evaluated learning outcomes from using handheld wireless devices to facilitate active learning in "hurdle" courses in economics.

NSF Grant "ProWIN An Enabling Technology for Wireless Networks – The VT Cognitive Engine". Bostian PI, Hsiao, Mackenzie and Ball co-PI. 8/16/05-8/15-08, Total Award: \$1,409,704, my portion: \$84,582. I worked on pricing models for cognitive radio services.

NSF Doctoral Dissertation Research "The Role of Demand Information and Monitoring on Collusion: An Experimental Assessment." Student: Christian Rojas. 8/15/2005-7/31/2006. Total Award: \$5,500.

NSF Grant (DUE-0127939 and 0127449) "Classroom Experiments for Large Lecture Classes: A Wireless Solution." Eckel PI, Ball and Oliver co-PI. Total Award: \$74,632 + \$19,375 supplement, my portion \$37,603. 3/02 – 2/04. This grant funded the development of a system of wireless handheld devices to facilitate active learning.

NSF IGERT Grant "Integrative Graduate Education and Research Training in Advanced Networking" (Proposal Number 9987586) Midkiff PI, Abrams, Koelling, Morgan and

Ball co-PI. Total Award: \$2,817,933, my portion \$281,793. 8/1/2000-7/31/2006. I codesigned and taught a course called "Commercializing Technological Innovations" and supervised two economics students enrolled in the program.

Hewlett Packard "Teaching With Technology" grant. Ball PI on this grant with three colleagues as senior faculty. 7/2004-6/2006. Total Award: \$157,500 (computers and ancillary equipment for 20 students and one instructor plus \$7,500 stipend), my portion 100%. This grant evaluated learning outcomes from using tablet PCs in STEM courses.

Andrew Mellon Foundation. "Classroom Exercises in Large Lecture Courses: A Wireless Solution." 2/200I-2/2003. Total Award: \$75,000, my portion: \$30,000. Ball PI, Catherine Eckel and Kevin Oliver co-PIs. This grant funded the development of a prototype system of wireless handheld devices for conducting classroom experiemnts.

NSF Grant "Status in Economic Decision Making," Catherine Eckel PI, Ball co-PI. Total Award: \$50,000, my portion: \$25,000. This project examined whether the outcomes of economic environments such as markets or negotiations are influenced by participants' social status.

NSF Doctoral Dissertation Research: "Location Experiments." Student: Tony Dziepak, co-PI, 7/1/97-6/30/99. Total Award: \$10,579.

National Institute for Dispute Resolution Course, Ball and William Samuelson PIs. 1991. About \$5,000. This grant funded the preparation of 2 exercises that illustrated negotiations concerning environmental issues.

National Institute for Dispute Resolution grant: "The Winner's Curse in Negotiation." Ball PI. 1987. About \$5,000. This grant funded my dissertation research on the winner's curse. Money was primarily used to pay subjects in experiments.

b. Sponsored Research

"A Strategic Framework for Spectrum Auctions." I served as co-PI (15% responsible) on this contract sponsored by Hughes Telecommunications and Space, awarded to the Virginia Tech Center for Wireless Telecommunications in 1996, \$114,778.

"Bidding in Satellite Spectrum Auctions." I served as co-PI (15% responsible) on this follow up research project for Hughes Telecommunications and Space, sponsored research awarded to the Virginia Tech Center for Wireless Telecommunications in 1997, \$149,761.

c. University Level Research Grants

"What's in a Name?" Virginia Tech Small Grants Program on Diversity. Ball PI, Catherine Eckel co-PI, 2004. Total Award: \$4000.

"Implementing Participatory Exercises in Large Economics Lecture Classes via Student Interaction with Market Simulations Enabled by Wireless Technology." With C. Eckel, K. Oliver, S. Midkiff. Center for Innovation in Learning. \$56,000. This grant allowed us to begin a large scale project that resulted in a grant from the Andrew Mellon Foundation as well as two NSF grants.

"The Economics of Trading Delays," a research grant funded the Virginia Tech College of Arts and Sciences Small Grants program to study the effects of trading delays on markets. \$3,500.

"Experimental Methods in Economics Instruction," a Teaching Learning Grant awarded to Sheryl B. Ball and Catherine C. Eckel <u>from Virginia Tech Learning Resource Center</u>, September 1993 - June 1994. This grant allowed us to develop a teaching exercise on discrimination by artificially awarding some students high social status. \$1,865. This grant also facilitated collection of pilot data for an NSF grant we were awarded.

"Adaptive Behavior in a Finitely Repeated Game," a Creative Match Grant award, Virginia Tech Research and Graduate Studies Division, 1993. This grant funded experiments which were conducted to study adaptive learning processes in economic environments. \$3,000

"The Winner's Curse in Negotiation." <u>Northwestern University Dispute Resolution</u> <u>Research Center</u> Research Grant, 1986. This grant funded part of my dissertation research. About \$5,000.

Sponsored Research

"An Analysis of Tariff Reform in Pakistan." Consultant to the Asian Development Bank for a project on trade liberalization in Pakistan, 1998. Projected tariff revenues under a series of tariff reform proposals using historical data. Ph.D. students in the Economics Department acted as research assistants for this project and received summer support as well as valuable experience. Results were presented at the Ministry of Finance during a mission to Islamabad 3/98. Among the audience was the Minister of Finance of Pakistan. Sponsored by: Asian Development Bank. Results: Paper with Andrew Feltenstein - "An Analysis of Tariff Reform in Pakistan."

"Bidding in the LMDS Auction." Strategist and bidder for Virginia Tech in the FCC Local Multipoint Distribution Services auction held in February and March 1998. I helped persuade the FCC to change their auction rules so that Virginia Tech and other bidders in mountainous areas were not at a disadvantage in the auction. My role included working to design the University's bidding strategy and get it approved before the auction. During the auction I placed bids on behalf of Virginia Tech and monitored the

auction during the over 100 rounds of bidding. I had authority to spend up to \$1.1 million (note: this information is confidential) on licenses. This project was sponsored by Virginia Tech Department of Information Systems. Results: Acquisition of 4 licenses for University research on LMDS service. Also, Ball Sheryl, B. and George E. Morgan, "Diminishing Marginal Returns to Spectrum or Speculative Bubbles: The Evidence from the LMDS Auctions."

"A Strategic Framework for Spectrum Auctions." I was co-PI on a research contract on bidding for satellite spectrum auctions for Hughes Telecommunications and Space, sponsored research through Virginia Tech Center for Wireless Telecommunications awarded \$114,778 in 1996, my responsibility was 15%. Researched the FCC auction rules, the strategies which were used in Direct Broadcast Satellite(DBS) auctions and the likelihood that future DBS national and international licenses would be awarded by auction. Also mapped out a plan to create an "expert system" to test strategies against simulated opponents. This project was sponsored by Hughes telecommunications and Space. Results: Proprietary to Hughes.

"Bidding in Satellite Spectrum Auctions." Follow up research on bidding for satellite spectrum auctions for Hughes Telecommunications and Space, sponsored research through Virginia Tech Center for Wireless Telecommunications awarded \$149,761 in 1997, my responsibility was 15%. The output of this project is a computer program which simulates smart bidding opponents in a FCC style spectrum auction so that Hughes executives could try out bidding strategies. My contribution to this project was writing the strategies used by the simulated opponents and translating FCC auction rules into a programmable environment. This project was sponsored by Hughes telecommunications and Space. Results: Intellectual Property Disclosure for the software.

Intellectual Property Disclosures

"Integrated Auction Software," a software program to help individuals and companies prepare for and participate in auctions. In this software an individual can practice bidding against "smart" opponents in a sequence of single item auctions whose values depend which items are acquired. My responsibility was 15%. Disclosure filed 7/98.

"Multiplayer Auction Software," a software program to train groups of individuals in FCC auction rules and strategies. This software allows groups of up to 20 individuals to bid against each other in a set of simultaneous, multiple round auction. My responsibility was 40%.

Awards

Virginia Tech "Scholar of the Week", March 27, 2016.

Referee (with selected frequencies)

National Science Foundation proposal reviews (>25)

American Economic Review (>5)

Econometrica (>5)

Economic Journal

Economic Inquiry

Journal of Economic Behavior in Organizations (>5)

Southern Economic Journal (>5)

Journal of Economics Education

Journal of Experimental Economics (>5)

Journal of Behavioral and Experimental Economics

Journal of Comparative Economics

Journal of Feminist Economics

Journal of Institutional and Theoretical Economics

Journal of Regulatory Economics

Journal of Economic Psychology

Interfaces

Human Nature

Policy Studies Journal

Presentations

a. Presentations Abroad

"Adaptive Behavior in a Finitely Repeated Game" at the Transcoop Workshop on Game Theory in Frankfurt, Germany in November 1993.

"Stars Upon Thars: Privilege and Discrimination in Ultimatum Games" at the *Society* for the Advancement of Behavioral Economics (IAREP/SABE) conference in Rotterdam, The Netherlands, July, 1994.

"Stars Upon Thars: Privilege and Discrimination in Ultimatum Games" at the *Society* for the Advancement of Socio-Economics 6th International Conference in Paris, France, July, 1994.

"An Analysis of Tariff Reform in Pakistan" at the *Ministry of Finance* in Islamabad during an Asian Development Bank Mission to Pakistan, 3/98.

"Speculation and Bubbles in an Asset Market", presented at NSF Conference on Experiments in Teaching May 2005, Montreal, Canada.

b. Presentations at National Conferences

"Trading Mechanisms and the Winner's Curse: An Experimental Study." Presented at the *Economic Science Association* Fifth Conference on Experimental Economics in Tucson, AZ, March 1989.

"Subject Pool Choice and Treatment Effects in Economic Laboratory Research," at the *Economic Science Association* Sixth Conference on Experimental Economics in Tucson, AZ, March 1990.

"The Value of Strategic Play in the Massachusetts Megabucks Game," (with Donald J. Smith). at the *Economic Science Association* Annual Meetings in Tucson, AZ, October 1991.

"The Value of Strategic Play in the Massachusetts Megabucks Game," (with Donald J. Smith) at the *Midwest Economic Association* Annual Meetings, in Indianapolis, IN, March 1992.

"Adaptive Behavior in a Finitely Repeated Game" at *the American Social Science Association* Annual Meetings in Anaheim, California in January 1993.

"The Value of Strategic Play in the Massachusetts Megabucks Game" at the *Public Choice Society* Annual Meetings in New Orleans, Louisiana in March 1993.

"Adaptive Behavior in a Finitely Repeated Game" at *the Econometric Society* Summer Meetings in Boston, Massachusetts in June 1993.

"Stars Upon Thars: Privilege and Discrimination in Ultimatum Games" at the *Economic Science Association* Annual Meetings in Tucson, Arizona in October 1993.

"Adaptive Behavior in 3x3 Coordination Games" at *Allied Social Sciences Association* annual meetings in Boston, MA January, 1994.

"Status in Markets: An Experimental Approach" at *the Economic Science Association* Annual Meetings in Tucson, Arizona, November, 1994.

"Obtaining Credible Statistical Inferences With Experimental Data Using the Bootstrap" at the *Economic Science Association* Annual Meetings in Tucson, Arizona, November, 1994.

"Market Provision of Public Projects: Some Experimental Results" at the *Economic Science Association* annual meetings in Tucson, Arizona on October 12-14, 1996.

"Value Conflict in Games" (joint work with Sudipta Sarangi) at the 1997 annual meetings of the *Economic Science Association* held in Tucson, Arizona 10/97.

"Status in Markets" (joint work with Catherine Eckel, Phil Grossman and Bill Zame) at the 1997 annual meetings of *the Society for the Advancement of Behavioral Economics* held at Washington & Lee University, 6/97.

"Agency Theory in Negotiation" at the 1998 annual *Conference on Classroom Experiments in Economics* in Williamsburg, VA 4/98.

"Diminishing Marginal Returns to Spectrum or Speculative Bubbles: The Evidence from the LMDS Auctions," presented at *Economic Science Association* Annual Meetings, in Tucson, AZ, 10/98.

"How Valuable is Eight Times more Bandwidth: Evidence from the LMDS Auctions," presented at the *Wireless Communications Conference*, 11/98.

"Experiment in Large Lecture Courses: A Brightly Colored Wireless Solution" presented at *Economic Science Association* Annual Meetings, in Tucson, AZ, 11/01.

"What Makes Workers Work?" (Joint work with Nicole Crain, Mehrene Larudee, Melissa Osborne and Robert Rycroft), presented at *Economic Science Association* Annual Meetings, in Tucson, AZ, 11/01.

"Distributive Justice and Bargaining: Who's in Control Here?" at the *NSF Sponsored Workshop on Classroom Experiments* in Williamsburg, Virginia, May 2001.

"What Makes Workers Work?" NSF Sponsored workshop on teaching economics, William and Mary, May 2002.

Classroom Experiments for Large Lecture Classes: A Wireless Solution, Andrew Mellon Foundation Conference on Cost Effective Use of Technology in Teaching, Northwestern University, November 2002.

"WITS: A Wireless Interactive Teaching System" presented at ASSA annual meetings in Washington D.C., January 2003.

"WITS: A Wireless Interactive Teaching System" presented at NSF Conference on Experiments in Teaching, May 2003, Tucson, Arizona.

"Experiments Improve Outcomes in Large Principles of Economics Classes: Using our WITS", presented at NSF Conference on Experiments in Teaching May 2004, Williamsburg, VA.

"A Pipeline Model for Contemporary Pedagogical Practices in STEM" at the 2005 Center for the Integration of Research and Learning annual conference on Addressing the Student Learning Experience: Achieving Diversity in STEM Disciplines in Madison, Wisconsin, May 24-26, 2005.

"Consumer Applications of Cognitive Radio Defined Networks," IEEE (Institute of Electrical and Electronics Engineers) Symposium on New Frrontiers in Dynamic Spectrum Allocation, Baltimore, November 10, 2005.

"Enhancement of Classroom Instruction Using Personal Response Systems," National Science Foundation Course, Curriculum, and Laboratory Improvement Conference, August 14, 2008, Washington, D.C.

"Experiments Improve Outcomes in Large Principles of Economics Classes: Using our WITS," National Science Foundation Course, Curriculum, and Laboratory Improvement Conference, August 14, 2008, Washington, D.C.

Ball, Sheryl, Ellen Green, Landis Atkinson, and Aida Cruz-Folgar, "Responsibility and Intentionality in Economic Games", presented at 2011 Economic Science Association Meetings, Tucson, AZ, November 10-12, 2011.

Ball, Sheryl, Rachel Croson, Chetan Dave, and Stefan Dodds, "Experimental Social Choice Theory and the Battle of the Sexes", presented at 2011 Economic Science Association Meetings, Tucson, AZ, November 10-12, 2011.

Ball, Sheryl "Classroom Experiments: Playing Games Improve Student Achievement in an Intermediate Level "Hurdle" Course" accepted at the 2012 Conference on Higher Education Pedagogy, Blacksburg, VA.

Ball, Sheryl, Rachel Croson, Chetan Dave, and Stefan Dodds, "Experimental Social Choice Theory and the Battle of the Sexes", presented at 2012 Public Choice Association Meetings, New Orleans, LA, March 2013.

Others' choices increase subjective value and explain asymmetric alignment with safety and risk" presented at the Economic Science Association Annual Meetings in Fort Lauderdale, FL, October 16-18, 2014.

Presented "The Value of Honesty: Neural Evidence for Lie-Averse Preferences" at the 5th annual Interdisciplinary Symposium on Decision Neuroscience, May 15-16, 2015 at MIT.

c. Presentations at Regional Conferences

"Stars Upon Thars: Privilege and Discrimination in Ultimatum Games" at the *Southern Economic Association* Annual Meetings in New Orleans, Louisiana in November 1993.

"Status in Markets: An Experimental Approach" at the *Southern Economic Association* Annual Meetings, Orlando, Florida, November, 1994.

"Making Bubbles in the Classroom" (with Catherine McDonough, Babson College) at

the Conference on Classroom Experiments in Economics held in Charlottesville, VA, September 30, 1995.

"Making Bubbles in the Classroom" at the *Southern Economic Association Meetings* annual meetings in New Orleans, LA, 11/96.

"Pareto Optimality in Negotiation" at the Conference on Classroom Experiments Economics, in Charlottesville, VA, 3/97.

"Market Provision of Public Projects: Some Experimental Results" joint with Kyungdong Hahn, at the *Southern Economic Association* annual meetings in New Orleans, LA, 11/96.

"Bank Failures and Fiscal Austerity: Policy Prescriptions for a Developing Country", joint work with Andrew Feltenstein, at the 1998 annual *Southeast Economic Theory and International Economics Conference*, Blacksburg, VA 9/98.

"The Economics of Deterministic Transaction Costs" presented at the Southern Economics Association Annual meetings in New Orleans, LA, 11/99.

"What Makes Workers Work?" (Joint work with Nicole Crain, Mehrene Larudee, Melissa Osborne and Robert Rycroft), presented at *Southern Economic Association* Annual Meetings, in Tampa, FL, 11/01.

"Analysis of Experimental Public Goods Data Using Dynamic Panel Regression Models." Southern Economic Association, New Orleans, November 24-26, 2002.

"Regulating Banks' Risk Exposure." Southern Economic Association, New Orleans, November 24-26, 2002.

Classroom Experiments for Large Lecture Classes: A Wireless Solution, Southern Economic Association, New Orleans, November 24-26, 2002.

"Teaching About Inflation" presented at Economic Science Association annual meetings, November 2003, Tucson, Arizona.

"WITS: A Wireless Interactive Teaching System" presented at New Media Consortium Presentation in Blacksburg, Virginia, May 2003.

"What's in a Name?" presented at Southern Economic Association, New Orleans, November 221-23, 2004.

"Risk Preferences and Physical Prowess: Is the Weaker Sex More Risk Averse, or Do We Just Think So?", presented at Southern Economic Association, New Orleans, November 21-23, 2004.

"What's in a Name?" presented at the Mid Atlantic Conference on the Scholarship of Diversity, Roanoke, March, 2005.

"Classroom Experiments: Using our WITS", presented at the McGraw Hill Sponsored Conference on Teaching Economics in Memphis, Tennessee, March 2009.

"Beyond Active Learning", presented at the NSF Sponsored Conference on Classroom Experiments in Williamsburg, Virginia May 19-21, 2009.

"Risk Aversion and Tax Compliance Messages: Why Do People Pay?" presented at the Southern Association annual meetings in San Antonio, November 21-23, 2009.

"Experimental Social Choice Theory and the Battle of the Sexes" presented at the Southern Association annual meetings in San Antonio, November 21-23, 2009.

Why do Classroom Experiments? Midwest Economics Association Meetings, Evanston, IL, March 20, 2010.

Ball, Sheryl (2012). "Classroom Experiments: Playing Games Improve Student Achievement in an Intermediate Level "Hurdle" Course," Conference on Higher Education Pedagogy, February 8-12, 2012, Blacksburg, VA.

Ball, Sheryl, "Risk Aversion and Tax Compliance Messages: Why Do People Pay?" D-CIDES Regional Conference: Decision Making Across the Disciplines, May 18-19, 2012, Durham, NC.

"Anxiety and the Growth of Interpersonal Trust", Psychiatry Grand Rounds, Salem VA Medical Center, October 25, 2012. Participants in this lecture received "Continuing Education Units" for attending this event.

"Is Poor Adolescent Decision Making Driven by Preferences for Risk or Ambiguity? Some Behavioral and Neural Evidence" to be presented at the Southern Economic Association Annual Meetings, November 2016.

"Evidence for preference consistency across risky, ambiguous, and vague gambles" Presented at Economic Science Association North American Meetings, October 2017, in Richmond, VA.

d. Presentations at Other Universities

"The Evolution of Beliefs in a Finitely Repeated Game", joint with Roy Gardner at *University of Pittsburgh*, 1991.

"Adaptive Behavior in a Finitely Repeated Game," joint with Roy Gardner at *Virginia Commonwealth University*, November 1992.

"Market Provision of Public Projects: Some Experimental Results" joint with Kyungdong Hahn at the *University of Virginia* in July, 1995.

"Market Provision of Public Goods" at the Penn State Business School, 3/96.

"Market Provision of Public Projects" (joint work with Kyungdong Hahn) at William & Mary, 11/97.

"Market Provision of Public Projects" (joint work with Kyungdong Hahn) at VCU, 3/01.

"Markets for Public Projects: Some Experimental Results" (joint work with Jeffrey Edwards and Kyungdong Hahn) at JMU, 4/02.

Classroom Experiments for Teaching Principles, Wake Forest University, October 2002.

Classroom Experiments for Large Lecture Classes: A Wireless Solution, Forsythe Technical Community College, May 2003.

Classroom Experiments for Large Lecture Classes: A Wireless Solution, North Carolina A&T, April 2003.

"Risk Aversion and Tax Compliance Messages: Why Do People Pay?" Presented at Washington and Lee University, March 16, 2012.

"Nudging Risky Decision Making" at Appalachian State University, November 13, 2016.

"Behavioral and Neural Evidence on Decision Making Under Uncertainty," at Iowa State, September 25,2 2017.

Conference Panels Organized

"Government Sponsored Auctions," a panel for the *Southern Economic Association* Annual Meetings in Baltimore, MD, 11/98. The session was a collection of empirical papers on economic research on economic problems solved by establishing a new market, such as spectrum allocation, and pollution control rights.

Membership in Professional Associations

American Economic Association
Committee for the Status of Women in the Economics Profession.
Economic Science Association
Society for the Advancement of Behavior Economics
Southern Economics Association

TEACHING

Courses Taught

Undergraduate: Antitrust and Regulation

Corporate Finance

Economic Professionalism Experimental Economics Information Economics Managerial Economics Microeconomic Theory

Negotiation Neuroeconomics

Operations Management Principles of Microeconomics

MBA: Game Theory

Managerial Economics

Negotiation

Operations Management

Statistics

Graduate: Experimental Economics

Commercializing Technological Innovations

New Courses Created

NEUR/ECON/PSYC 4544 "Neuroeconomics" is a course for undergraduate students in neuroscience, economics and psychology. The topic is highly interdisciplinary and concerns the use of theories from economics and psychology along with neuroscience data as a way of understanding decision making behavior. The course was first offered as a "special study" in Spring 2014.

ECON 5984 "Commercializing Technological Innovations" was a course for Ph.D. engineering students and MBA students that used a group learning approach to teach engineers and business people to work together to get new products to market. Teams produced a commercialization plan based on the engineers' dissertation work as their term project. The course was co-taught with George Morgan (Finance) in 02 and 04 as part of an IGERT program that was not continued when the grant ended.

ECON 4984 "Economic Professionalism" was a course for seniors graduating in a particular academic year. The goals of the course were to help students to develop strong communication skills specific to using their knowledge of economics in the workplace, skills in preparing for the job market and identifying potential jobs, and developing entry level job skills including workplace ethics and making a decision to seek graduate education. This course was offered only in Fall 2001.

ECON 4434 "Experimental Economics" is a senior level undergraduate course in laboratory methods in economics. The goals of this course are to show students first, that it is possible and important to test economic theories and to demonstrate how these tests can be conducted.

ECON 5964 "Experimental Economics" is a graduate seminar in laboratory methods in economics which trains students to evaluate and conduct experimental research.

ECON 5224 "Negotiation" was an interdisciplinary masters or upper level undergraduate course in the theory behind and practice of negotiation. This course was discontinued due to changes in the structure of the MBA program.

Leadership in Teaching Economics

At the invitation of the Director, I presented 2 two-day courses to faculty at the International Monetary Fund's IMF Institute. The contracts included 3 weeks in residence where I advised IMF officials on their new distance learning program and offered faculty individual assistance with teaching concerns. The Institute conducts training for government officials in developing countries in economics and finance. The courses I taught were aimed at improving faculty skills in both classroom and distance learning teaching.

Co-organized with Charles A. Holt the "Conference on Classroom Experiments in the Teaching of Economics" at the University of Virginia, March 28-29, 1997. This conference was attended by approximately 60 economics faculty from Virginia and surrounding areas.

Additional Teaching Development Activities

"Using Our WITS: Adapting Research Experiments for Teaching Economics" (with Catherine Eckel). Diggs Teaching Scholar Roundtable, September 10, 2004.

Co-presenter for "Experiments Improve Learning in Large Principles Classes: Using Our WITS," (with Catherine Eckel) and group facilitator for participants to develop a teaching exercise, Williamsburg, VA May, 2004.

Co-presenter of "Further Progress on a Wireless Interactive Teaching System." (with Catherine Eckel) and group facilitator for participants to develop a teaching exercise. Classroom Games: NSF Sponsored Workshop on Classroom Experiments in Economics." Tucson, AZ, May 16-17, 2003.

Co-presenter of "Further Progress on a Wireless Interactive Teaching System." (with Catherine Eckel) and group facilitator for participants to develop a teaching exercise. Classroom Games: NSF Sponsored Workshop on Classroom Experiments in

Economics." Williamsburg, VA, May 17-19, 2001.

"Bidding for Spectrum: An Interactive Computer Workshop," part of the Wireless Opportunities Workshop hosted by Virginia Tech's Continuing Education Department, 10/23/97. This was a 2 hour course utilizing specialized network software written especially for the course. The audience were members of Virginia's Telecommunications industry.

Service on Graduate Committees

Kyungdong Hahn, Ph.D. Economics (co-Advisor), Assoc. Professor, Hankuk University of Foreign Studies, South Korea.

Aida Cruz-Folgar, M.A. Economics, Sr. Product Manager, Retail Banking, Capital One. Ellen Green, Ph.D. Economics, Assistant Professor, Arizona State.

Flora Li, current student, Economics

Xiaomeng Zheng, current student (co-Advisor), Economics

Ph.D. Committees (selected completed):

Sudipta Sarangi – Economics; Dave Harrison, Accounting; Robert Dawson, Agricultural and Applied Economics; Suzanne Seymore, Accounting; Maria Heracleous, Economics; Jeffrey Edwards, Economics; Tom Rondeau, Electrical and Computer Engineering; Mark McLeod, Economics; Mollie Adams, Accounting; Bin Ngyen, Economics; Alfredo Romero, Economics; Michael Ozlanski, Accounting; Syed Amaar Ahmad, Electrical and Computer Engineering.

Ph.D. Committees (selected current):

Thorsten Matje, Economics; Ling Yu, Agricultural and Applied Economics; Andrew Valdespino, Psychology; Nina Lauharatanahirun, Psychology; Mark Orloff, Translational Biology, Medicine and Health.

Teaching Awards

CIDER "Teacher of the Week," September 18, 2016.

Outstanding Graduate Instructor in Economics, 2011.

Ken Elizinga Teaching Award, awarded by the Southern Economics Association, 2006.

Diggs Teaching Scholar. This is a university level award with three awards each academic year for integrating research and teaching. 2004.

XCaliber Team Award. This is a university level award with one award each academic year for developing educational technology. This prize was one by the group of faculty and students Catherine Eckel and I direct on the WITS (wireless technology for teaching experimental economics) project. 2004.

Certificate of Teaching Excellence. This is a college level award with four awards each year. 2003.

Alumni Award for Excellence in Undergraduate Academic Advising. This is a university level award with only one award each academic year. 2000-01.

MBA Association (a student organization at Virginia Tech's College of Business) "favorite professor", 1994-1995.

MBA Association (a student organization at Virginia Tech's College of Business) Outstanding Teacher Award, 1992-1993, 1993-1994.

Textbook reviews

Mangerial Economics

Baye, 2nd Edition, for Irwin
Besanko, Dranove and Shanley, 1st and 2nd editions, for Wiley
Peterson and Lewis, for Prentice Hall
Samuelson and Marks, 1st and 2nd editions, for Dryden Press
7 textbook proposals

Intermediate Microeconomics

Tomlinson CD-ROM book.

Principles of Economics

O'Sullivan and Shefferin, $1^{\rm st}$ edition, for Prentice Hall McEachern, $3^{\rm rd}$ edition, for Southwestern 3 textbook proposals

SERVICE ACTIVITIES

Committee Service

a. Departmental Service

Chair, Internal Review Committee, 2016.

Personnel Committee 2009-2016.

Agricultural Economics/Economics Merger Committee, 2002.

Director of Undergraduate Studies 99-present.

Department Teaching and Awards Committee, Chair, 1999-03

Departmental Personnel Committee 96-97

Undergraduate Curriculum Committee 93-94, Chair, 97-04.

Undergraduate Career Advisor 96-04.

Economics Department Retreat Planning Committee

Undergraduate advisor 92-96

Peer Teaching Reviewer 94-present

b. University Service

ECON representative to the College of Science Neuroscience Hiring Committee, 2012-2016.

Member of the finance committee for the Translational Biology, Medicine and Health Ph.D. program, 2015-present.

Member of the curriculum committee for the proposed Neuroscience undergraduate degree program, 2013-2014.

Member of the curriculum committee for the Translational Biology, Medicine and Health Ph.D. program 2012-2013.

Member of the admissions committee for the Translational Biology, Medicine and Health Ph.D. program 2013-present.

College of Science Promotion and Tenure Committee 2011-13. College of Science

College of Science Cluster Committee, 2010 & 2011.

Diversity Committee, 2009-2013.

Diggs Teaching Scholars, Chair 2008.

Undergraduate Advising Academy, Chair 2007.

Academic Roundtable (Associate Deans for Academic Affairs) 2004-7.

Commission on Faculty Affairs, 2004-2007

Committee on Undergraduate Curricula, 2004-2007

Commission on Undergraduate Studies and Policies, 2004-2007

College of Science Curriculum Committee, 2003-2007

ADVANCE Pipeline Committee, 2003-2005.

Committee to choose the Virginia Tech "Outstanding Dissertation" 2002, 2003, Chair 2004.

College of Science Curriculum Committee, 2003.

College of Business Graduation Committee, 2002-2004.

College of Arts & Sciences Honorifics Committee, 2002.

Department of Finance Personnel Committee, 2000-01 and 2001-02.

Faculty Advisor for Virginia Tech Clay Target Team, 2000-2004.

Counselor for University Honor System 1997-2003. Panelist 2003-2014.

Graduate Student Honor Board Member and Facilitated Discussion Leader 2009-present University Mediation Project 1999-2000.

Computing and Communications Resources Committee (appointed by the President of the University) 1998-2000.

c. Service to the Profession

NSF NRT-IGE (Integrative Graduate Education) Panel, March 2017.

NSF CRISP (Critical Resilient Interdependent Infrastructure Systems and Processes) Panel, May 2016.

NSF NRT (Research Traineeship Program) Panel, April 2016.

NSF NRT (Research Traineeship Program) Panel, September 2014.

NSF EARS (Enhancing Access to the Radio Spectrum) panel, July 2013.

NSF GRFP (Graduate Research Fellowship) Panel Chair, February 2013.

NSF EARS (Enhancing Access to the Radio Spectrum) panel, July 2012.

NSF GRFP (Graduate Research Fellowship) Panel, January 2012.

NSF GRFP (Graduate Research Fellowship) Panel, January 2011.

NSF IGERT (Integrative Graduate Education and Research Traineeship) panel, June 2010.

NSF STC (Science and Technology Centers) panel, January 2009.

Completed a five-year department review of St. Cloud State University's economics department, December 2004.

NSF REU (research experiences for undergraduates) panel, October 2004.

NSF REU (research experiences for undergraduates) panel, October 2003.

NSF CCLI (Course, Curriculum and Laboratory Improvement) panel, July 2002.

NSF IGERT (Integrative Graduate Education and Research Traineeship) panel, October 2001.

Board Member, Aplia Corporation (run by Paul Romer) 2001-2003.

Economic Science Association Methodology Chairperson, 2000-2003.

ESA Outstanding Dissertation committee, 2001.

I reviewed the work of a faculty member from the University of Michigan-Dearborn as part of his or her promotion and tenure case.