

May 1, 2021

## **Scott Edward Page**

### **EDUCATION**

B.A. Mathematics, University of Michigan–Ann Arbor 1985.

M.A. Mathematics, University of Wisconsin–Madison 1988.

M.A. Managerial Economics, Kellogg Graduate School of Management Northwestern University 1990.

Ph.D. Managerial Economics and Decision Sciences, Kellogg Graduate School of Management, Northwestern University 1993. Committee: Stanley Reiter (advisor), Roger Myerson (advisor), Mark Satterthwaite, and Matthew Jackson.

### **CURRENT POSITIONS**

John Seely Brown Distinguished University Professor of Complex Systems, Social Science, and Management, University of Michigan - Ann Arbor

Williamson Family Professor of Management, Ross School of Business, University of Michigan- Ann Arbor

Professor Political Science, Complex Systems, and Economics College of Literature Science and the Arts (Courtesy) University of Michigan - Ann Arbor

External Faculty Member, Santa Fe Institute 1999–2005, 2007–Present.

### **PAST POSITIONS**

Leonid Hurwicz Collegiate Professor Political Science, Complex Systems, and Economics, University of Michigan, 2011–2019

Senior Associate Research Scientist, CPS-ISR, University of Michigan, 2000–2018.

Visiting Research Professor, INSEAD Sept 2013–June 2014.

Visiting Professor, University of Bologna, 2010.

Director, Center for the Study of Complex Systems, 2010–2015.

Associate Director, Center for the Study of Complex Systems, 2002–2009.

Fellow, Center for Advanced Studies in Behavioral Sciences, 2007–2008.

Visiting Professor, Ross School of Business, University of Michigan, 2007.

Professor of Economics (Courtesy), University of Michigan, 2005–2008.

Professor Political Science and Complex Systems University of Michigan, 2004–2008.

Associate Professor of Economics (Courtesy), University of Michigan, 2000–2004.

Associate Professor of Political Science and Complex Systems, University of Michigan, 2000–2003.

Associate Professor of Economics, University of Iowa, 1997–1999.

Assistant Professor of Economics, Division of Humanities and Social Sciences, California Institute of Technology, 1993–1997.

Visiting Assistant Professor of Economics, Department of Economics, University of California–Los Angeles, Fall 1994.

## **HONORS and AWARDS**

Guggenheim Fellowship, 2013.

American Academy of Arts and Sciences, Fellow, elected 2011.

University of Michigan Society of Fellows, Senior Fellow 2007–2011

University of Michigan NCID, Distinguished Diversity Scholarship and Engagement Award, 2009

University of Michigan, Faculty Achievement Award, 2007.

University of Iowa Teaching Award Nominee, 1999.

Graduate Student Association Faculty Teaching Award, California Institute of Technology, 1994.

Outstanding Graduate Student Teaching Award, J.L. Kellogg Graduate School of Management, 1993.

J.L. Kellogg Faculty Honor Roll, 1990,1991,1992,1993.

University of Wisconsin–Madison, Mathematics Department Teaching Award, 1988.

## **RESEARCH GRANTS**

### INSTITUTION BUILDING GRANTS:

National Science Foundation, IGERT Award: 2002–present (PI; \$3.1 million).

National Science Foundation, Biocomplexity Award: Project SLUCE 2001–2006 (Co-PI with Dan Brown and Joan Nassauer; \$1.3 million).

### MULTI-YEAR PROJECTS:

NSF Computer Science and Economics Grant with Michael Wellman and Lu Hong, 2011–2013.

Army Office of Research Grant with Jenna Bednar, 2010–2012.

NSF Computational Organization Grant with Lu Hong, 2010–2011.

NSF Grant for Teaching Modeling with Oberlin College 2009–2011.

Provost’s Interdisciplinary Teaching Grant 2007–2008.

NSF Human and Social Dynamics Grant Modeling Culture 2005 (Jenna Bednar, PI; Co-PI with Yan Chen; \$125,000).

AFOSR-MURI Grant Computational Modeling of Culture 2005 (Whitman Richards, MIT, PI; UM Sub-Award Co-PI with Jenna Bednar; \$490,000 renewable to \$850,00).

James S. McDonnell Award for Project Diversity, 2001–2006 (PI; \$450,000).

National Science Foundation, Political Science Program Grant, 1997–1998 (Co-PI with John Miller and Ken Kollman).

National Science Foundation, Political Science Program Grant for 1994–1996 (with John Miller and Ken Kollman).

SMALLER PROJECTS: (less than \$100,000)

NSF Grant Collective Intelligence Conference 2015.

MacArthur Foundation Initiative on Inequality and Poverty Research Grant for 1995–2005.

PriceWaterhouseCoopers grant for summer workshop in computational economics at the Santa Fe Institute 1996–1998.

Walker Foundation, grant for summer workshop in computational economics at the Santa Fe Institute 1999–2000.

Center for Learning and Research on Teaching grant for Project Diversity, 2002.

## BOOKS

- *Computational Models of Political Economy*, (Editor) MIT Press, 2002. (with Ken Kollman and John Miller).
- *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*, Princeton University Press, 2007.
  - Translated to Japanese 2008.
- *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*, Princeton University Press, 2007. (with John Miller).
  - Translated to Chinese 2008.
- *Diversity and Complexity*. Princeton University Press, 2010.
- *The Diversity Bonus*. Princeton University Press and Andrew W. Mellon Foundation, 2017
- *The Model Thinker: What You Need to Know to Make Data Work for You*. Basic Books, 2018

## OTHER MANUSCRIPTS

- *A Decision Making Guide to the Michigan Civil Rights Initiative*. 2006. (with Elizabeth Suhay).
  - Circulation: 10,000+
- *Behavioral Modeling and Simulation: From Individuals to Societies*. Greg Zacharias, Jean MacMillan, and Susan B Van Hemel eds. National Research Council, of the National Academies, the National Academies Press. 2008.
- "Complexity in Social Political and Economic Systems." National Science Foundation White Paper. 2010.
- "Applying Complex Systems Theory When Scoping a System." Rand Corporation White Paper. 2018.

## VIDEO COURSES /MOOCs

- *Understanding Complexity*, (12 Lectures) The Great Courses,.2009.
- *The Hidden Factor*, (24 Lectures) The Great Courses,2012.
- *Model Thinking* Coursera 2012.
  - Students: 1,000,000+

## PUBLISHED AND FORTHCOMING PAPERS

- "Adaptive Parties in Spatial Elections." *American Political Science Review*, 86:929–37, 1992. (with Ken Kollman and John Miller).
- "Walsh Functions, Schema Variance, and Deception" *Complex Systems*, pp 125–135, 1992. (with Dave Richardson).
- "Adaptive Parties and Spatial Voting Theory." in *Information, Participation, & Choice*, University of Michigan Press, Ann Arbor, B. Grofman ed. 161–173, 1993. (with Ken Kollman and John Miller).
- "Reducing Informational Costs in Endowment Mechanisms." *Economic Design*, 1(1):103–117, 1994. (with Lu Hong).
- "Covers: A Theory of Boolean Function Decomposition." *Complex Systems*1: 1–24, 1994.

- "Two Measures of Difficulty." *Economic Theory*, 8: 321–346, 1996.
- "Computational Political Economy." in *The Economy as a Complex Evolving System II*, Addison–Wesley, B. Arthur, S. Durlauf, and D. Lane eds. 461–491, 1997. (with Ken Kollman and John Miller).
- "An Appending Efficient Algorithm for Allocating Public Projects with Complementarities." *Journal of Public Economics*, 64(3): 291–322, 1997.
- "On Incentives and Updating in Agent Based Models." *Computational Economics*, 10:67–87, 1997.
- "Political Institutions and Sorting in a Tiebout Model." *American Economic Review*. 87(5): 977–992, December 1997. (with Ken Kollman and John Miller).
- "Landscape Formation in a Spatial Voting Model." *Economic Letters*. 55: 121–131, 1997. (with Ken Kollman and John Miller).
- "Political Parties and Electoral Landscapes." *British Journal of Political Science*. 28: 139–158, 1998. (with Ken Kollman and John Miller).
- "Does Strategy Need Computer Experimentation?" in *Advances in Strategic Management*, ed. Joel A. C. Baum, no. 15 Greenwich: JAI Press Inc., 1998. (with Mike Ryall).
- "On the Emergence of Cities." *Journal of Urban Economics*. 45: 184–208, 1998.
- "Let's Make a Deal." *Economic Letters*, 175–180, 1998.
- "A Day at the Beach: Human Agents Self-Organizing on the Sand Pile." in *Advances in Complex Systems*. 1: 37–65, 1999. (with Niniane Wang and Hiroshi Ishii).

-Revised Version printed in *Modeling Complexity in Economic and Social Systems*, World Scientific 2003.

- "Computational Models from A to Z." *Complexity*, 5(1): 35–41, 1999.
- "Decentralization and the Search for Policy Solutions." *Journal of Law Economics and Organization*, 16: 102–28, 2000. (with Ken Kollman and John Miller).
- "Consequences of Nonlinear Preferences in a Federal Political System." in Diana Richards, ed. *Political Complexity: Nonlinear Models of Politics*. University of Michigan Press, Ann Arbor, MI. 2000. (with Ken Kollman and John Miller).

- "Problem Solving by Heterogeneous Agents." *Journal of Economic Theory*, 97: 123–163, 2001. (with Lu Hong).
- "Self Organization and Coordination." *Computational Economics*, 18: 25–48, 2001.
- "Modeling the Effects of Greenbelts at the Urban Rural Fringe." in *Proceedings of the International Modeling and Software Society*, Lugano, Switzerland, June 27,1: 190–195, 2002. (with Dan Brown, Rick Riolo, and William Rand).
- "The Interplay of Difference." in *Proceedings of AGENT 2002 University of Chicago and Argonne National Laboratories 2002*.
- "The Complex Interaction of Agents and Environments: An Example in Urban Sprawl." *Proceedings of AGENT 2002 University of Chicago and Argonne National Laboratories*, 2002. (with Dan Brown, Rick Riolo, Luis E Fernandez, and Moira Zellner).
- "Statistical Validation of Spatial Patterns in Agent-Based Models." in *Proceedings of ABS*, 2003. (with Dan Brown, Rick Riolo, Luis E Fernandez, and Moira Zellner).
- "The interaction between zoning regulations and residential preferences as a driver of urban form." *2003 UTEP Distinguished Faculty and Student Symposium, Urban and Regional Planning Program*, University of Michigan. April, 2003. (with M. L., Riolo, R., Rand, W. Brown, D. G., Fernandez, L. E.)
- "The Standing Ovation Problem." *Complexity* 9(5): 8–16, 2004. (with John Miller).
- "Agent Based and Analytical Modeling to Evaluate the Effectiveness of Greenbelts." *Environmental Modeling and Software*,19(12): 1097–1109 2004. (with Dan Brown, Rick Riolo, William Rand, and Moira Zellner).
- "Computational Public Economics." *Journal of Public Economic Theory*, 6(2): 259–267 2004. (with Ken Judd).
- "On the Existence and Stability of Groves Ledyard Equilibria." *Journal of Public Economic Theory*, 6(2): 311–335, 2004. (with Troy Tassier).
- "Groups of diverse problem solvers can outperform groups of high-ability problem solvers." *Proceedings of the National Academy of Sciences*. 101(46): 16385–16389, 2004. (with Lu Hong).

- "Can statistical methods on land-use change patterns calibrate agent- based models?" *Proceedings, Geocomputation 2005 Conference*, Ann Arbor, MI, August 2005. (with An, L., Brown, D.G., Rand, W.)
- "Path dependence and the validation of agent-based spatial models of land use." *International Journal of Geographical Information Science*, Special Issue on Land Use Dynamics, 19(2): 153–174, 2005. (with Dan Brown, Rick Riolo, William Rand, and Moira Zellner).
- "Are We Collapsing." *Journal of Economic Literature*.43(4):1049–1062, 2005.  
- Reprinted in *Complexity, Institutions, and Economic Activity*, Thomas Dalton (ed.) Kendall Hunt, Dubuque, IA.
- "Computational Political Economy." in *Handbook of Computational Economics*, Leigh Tesfatsion and Ken Judd (eds) North Holland, 2005 (with Ken Kollman).
- "Essay: Path Dependence." *Quarterly Journal of Political Science*. 1: 87–115, 2006.
- "Agent Based Models." *Oxford Handbook of Law and Economics*. 2006.
- "Type Interactions and The Rule of Six." *Economic Theory*, 30(2): 223–241, 2007.
- "Can Game(s) Theory Explain Culture? The Emergence of Cultural Behavior Within Multiple Games." *Rationality and Society*, 19(1):65–97, 2007. (with Jenna Bednar).
- "Exurbia from the bottom-up: Confronting empirical challenges to characterizing complex systems" *GeoForum*. 39(2):805–818, 2008 (with Brown, D.G., Robinson, D.T., An, L., Nassauer, J.I., Zellner, M., Rand, W., Riolo, R. and Low, B.)
- "Conformity and dissonance in generalized voter models." *Journal of Statistical Physics*. 128:1279–1297, 2007. (with Len M. Sander and Casey Schneider-Mizell).
- "An Ecological Model of Firm Entry and Exit: Why Chains Beget Chains." *Journal of Economic Dynamics and Control*. 31(10): 3427–3458, 2007. (with Troy Tassier).
- "Agent Based Models." in Lawrence E. Blume and Steven N. Durlauf, eds. *The New Palgrave Dictionary of Economics 2nd ed.*, Basingstoke, UK: Palgrave Macmillan, 2008.

- "Agent Based Models." *Oxford Handbook of Political Science Methodology*, 2009. (with Scott de Marchi).
- "Uncertainty, Difficulty, and Complexity." *Journal of Theoretical Politics*. 20:115–149, 2008.
- "Making the Difference: Applying a Logic of Diversity." *Academy of Management: Perspectives*, October 2007.
- "Embracing Chaos and Complexity: A Quantum Case for Public Health." *American Journal of Public Health*. (with Ken Resnicow and Roger Vaughan) 98(8): 1382-1389, 2008.
- "The Difference From New Ways of Seeing and Thinking." *Immigrants Joining the Mainstream: E-Journal USA*. US Department of State Bureau of International Information Programs. 13(2):13–18, 2008.
- "A Logic of Diversity." *Association for Women in Science*.1: 28-29, 2008.
- "The Power of Diversity" *The School Administrator* 65(9): 35-41, 2008.
- "General Blotto: Games of Allocative Strategic Mismatch" *Public Choice*. 138: 279–310, 2009. (with Russell Golman).
- "The emergence of zoning policy games in exurban jurisdictions: Informing collective action theory." *Land Use Policy*, 26(2): 256–367. 2009. (with Zellner, M.L., Rand, W., Brown, D.G., Robinson, D.T., Nassauer, J., and Low, B).
- "Interpreted and Generated Signals" *Journal of Economic Theory* 144: 2174–2196, 2009. (with Lu Hong).
- "Basins of Attraction and Equilibrium Selection Under Different Learning Rules" *Evolutionary Economics* 20: 49–72, 2009 (with Russell Golman).
- "Basins of Attraction and Equilibrium Selection Under Different Learning Rules (addendum)" *Evolutionary Economics* 20: 72–75, 2009. (with Russell Golman).
- "Individual and Cultural Learning in Stag Hunt Games With Multiple Actions" *Journal of Economic Behavior and Organizations* 73(3): 359–376, 2010. (with Russell Golman).
- "The problem with zoning: Nonlinear effects of interactions between location preferences and externalities on land use and utility" *Environment and Planning B*, 37: 408–42, 2010 . (with Zellner, M.L., Riolo, R.L., Rand, W., Brown, D.G., and Fernandez, L.E.)



- “Building a Science of Economics for the Real World”, presentation to the House Committee on Science and Technology Subcommittee on Investigations and Oversight, July 20, 2010.
- “The Complexities of Global Systems History” *Journal of the Historical Society* 10(3): 345–365, 2010. (with Andrea Jones-Rooy).
- “Emergent cultural signatures and persistent diversity: A model of conformity and consistency” *Rationality and Society* 22(4): 407–444, 2010 (with Jenna Bednar, Aaron Bramson, Andrea Jones-Rooy).
- “A Characterization of Equilibria in the Groves Ledyard Mechanism” *Journal of Mathematical Economics*. 46(6): 1229–1242, 2010 (with Troy Tassier).
- “Predicting Cellular Automata” *Complex Systems* 19(4): 343–362. 2011. (with Jameson Toole).
- “Optimal Forecasting Groups” *Management Science* 58: 791–804, 2011 (with PJ Lamberson).
- “The Structure of Signals: Causal Interdependence Models for Games of Incomplete Information” *27th Conference on Uncertainty in Artificial Intelligence*. 727–735, 2011. (with Michael P. Wellman and Lu Hong)
- “Behavioral spillovers and cognitive load in multiple games: An experimental study.” *Games and Economic Behavior* 74(1):12–31,2012 :(with Jenna Bednar, Yan Chen, and Xiao Liu).
- “Revised Path Dependence” *Political Analysis*. 20(2):146–156, 2012. (with Jenna Bednar and Jameson Toole).
- “Tipping Points” *Quarterly Journal of Political Science*. 7(2):175–208, 2012 (with P. J. Lamberson )
- “A Complexity Perspective on Institutional Design.” *Politics, Philosophy and Economics*.11: 5–25, 2012.
- “Aggregation in Agent Based Models of Economies.” *Knowledge Engineering Review*. 27:151–162, 2012
- “The Effect of Feedback Variability on Success in Markets with Positive Feedbacks.” *Economics Letters*.114: 259–261, 2012 (with PJ Lamberson)
- “Incentives, Information, and Emergent Collective Accuracy.” *Managerial and Decision Economics*. 33(5): 323–334, 2012. (with Lu Hong and Maria Riolo)

- “The Foundations of Collective Wisdom” in *Collective Wisdom*. Helene Landemore and Jon Elster eds, Cambridge University Press. 2012. (with Lu Hong).
- “The Complexity of Systems Effects.” *Critical Review*. 23(4):313–342, 2012. (with Andrea Jones-Rooy).
- “Inequality and Innovation” *Economics Bulletin* 33:(1) A59, 2013 (with John Vandermeer)
- “Agent Based Models” *Annual Review of Political Science*, Vol 17 pp 1-20. 2014. (with Scott de Marchi)
- “Where Diversity Comes From and Why it Matters?” *European Journal of Social Psychology* 44(4) pp 267- 279, 2014.
- “Signal Structure and Strategic Information Acquisition: Deliberative Auctions with Interdependent Values” *International Conference on Autonomous Agents and Multiagent Systems* May 2014. (with Erik Brinkman and Michael P Wellman)
- “Diversity Without Silos: The Confluence of the Social and Scientific Teaching of Diversity” *Independent School*. Summer 2014.
- “Deliberation and Disagreement: Problem solving, Prediction, and Positive Dissensus.” *Politics, Philosophy, and Economics*. 14(3): 229–254, 2015. (with Helene Landemore).
- “Exploration versus Exploitation in Space, Mind, and Society.” *Trends in Cognitive Science*. 19(1): 46-54, 2015. (with Hills, T., Todd, P., Lazer, D., Redish, A., Couzin, I., Bateson, M., Cools, R., Dukas, R., Giraldeau, L., Macy, M.W., Page, S.E., Shiffrin, R.M., Stephens, D.W., Uzzi, B., Wolfe, J.W.)
- “What Should Sociologists Know About Complexity.” *Annual Review of Sociology*. 41: 21–41, 2016.
- “Choosing a Future based on the Past: Institutions, Behavior, and Path Dependence.” *European Journal of Political Economy*. 40: 312–332, 2016. (with Jenna Bednar and Andrea Jones-Rooy).
- “Cognitive Ecologies, Social Structure, and Collective Wisdom.” *Journal of Economic Behavior and Organizations*.125: 212–231, 2016. (with Lu Hong and Evan Economo)
- “Not Half Bad: A Modest Criterion for Inclusion.” In *Complexity and Evolution: A New Synthesis for Economics*, ed. D.S. Wilson and A. Kirman. Strungmann Forum Reports, vol. 19, J. Lupp, editor. MIT Press, 2016.

- “Complex Adaptive Systems and Comparative Politics: Modeling the Interaction between Institutions and Culture” *Chinese Political Science Review*. 1(3): 448–471 2016. (with Jenna Bednar)
- “When diversity delivers-and when it doesn’t.” *IEEE Spectrum*. 54(9): 22–23, 2017.
- “Response to the ASA’s statement on p-values: context, process, and purpose.” *The American Statistician* 7: 88-89. 2017. (with E. Ionides, L.A. Giessing, and Ritov).
- “The Imperative of Complexity.” *Cosmos + Taxis*. 5(2):4–12, 2018.
- “The Match Game.” *CIO Review*. March 3, 2018.
- “First Mover or Higher Quality? Optimal Product Strategy in Markets with Positive Feedbacks.” *Journal of Economics and Management Strategy*. 27(1):40–52, 2018. (with PJ Lamberson).
- “When Order Affects Performance: Culture, Behavioral Spillovers, and Institutional Path Dependence.” *American Political Science Review*. 112(1):82–98, 2018. (with Jenna Bednar).
- “Directional behavioral spillover and cognitive load effects in multiple repeated games.” *Experimental Economics*. 22: 705-734, 2019. (with Tracy Liu, Jenna Bednar, and Yan Chen)
- “Optimal Team Composition for Tool Based Problem Solving” *Journal of Economics and Management Strategy* 28(4) 734-764, 2019. (with Jon Bendor).
- “The Power of Many” *The Smart Manager*, September 12, 2019.
- “Representation in models of epistemic democracy” *Episteme* 17 (4), 498-518, 2020. (with P Grim, A Bramson, DJ Singer, WJ Berger, and J Jung)
- “Reopening the Office? Here’s How to Stymie Transmission of Covid-19.” *Harvard Business Review*. July 28, 2020
- “Population Health as a Complex Adaptive System of Systems.” *Complex Systems and Population Health*. 2020.
- “Cultural Drift, Indirect Minority Influence, Network Structure and Their Impacts on Cultural Change and Diversity.” *American Psychologist* forthcoming (with Jin Jung and John Miller)

- "The Equilibrist and Complexologist Can Be Friends" in *Complexity Economics: Dialogues of The Applied Complexity Network*, Brian Arthur, Eric Beinhocker, and Allison Stanger eds. The Santa Fe Institute Press. Santa Fe, NM.
- "The Many Model Approach." *Research Handbook on Analytical Sociology* Gianluca Manzo (ed). Wiley.
- "Cultural Capital and Opportunities for Exceptionalism: Bias in University Admissions." *The Journal of Higher Education* forthcoming. (with Uma Jayakumar)
- "The Simulation Manifesto: A Comment on Lustick and Tetlock." *Futures & Foresight Science* 2021 DOI:10.1002/ffo2.92

## FORWARDS

- *Simulating Society*, by Richard Gaylord and Louis D'Andria, Springer-Verlag, New York, 1998.
- *The Shift Index*, by John Hagel, John Seeley Brown, and Lang Davison, Deloitte Consulting Group 2009
- *Agent-based Modeling of Tax Evasion: Theoretical Aspects and Computational Simulations* Sascha Hokamp , Laszlo Gulyas, Matthew Koehler, Sanith Wijesinghe editors, Wiley 2018.
- *Ranking*, by Peter Erdi, Oxford University Press, 2019.

## BOOK REVIEWS

- "Barriers and Bounds to Rationality Essays on Economic Complexity and Dynamics in Interactive Systems." by Peter S. Albin. *Discrete Dynamics in Nature and Society*. 2001.
- "Teaching Complexity in Economics." by David Colander *Journal of Economic Behavior and Organization*. 2002.
- "System Effects: Complexity in Political and Social Life." Robert Jervis Princeton University Press in *Journal of Artificial Societies and Social Simulation* , Volume 2: 1: 1998.
- "Expert Political Judgement." by Philip Tetlock, Princeton University Press in *American Political Science Review Comparative Politics Newsletter*. 2006.

- “Social Simulation Technologies, Advances, and New Discoveries.” by Edmunds, Bruce, Cesaro Hernandez and Klaus G Troitzsch in *Journal of Artificial Societies and Social Simulation*. May 2008.
- “Why Humans Cooperate.” by Joe and Natalie Henrich, *Journal of Economic Literature*. 2010.
- “The Emergence of Organizations.” by John Padgett and Woody Powell *Administrative Science Quarterly*. 2013.
- “Computational Social Science: Discovery and Prediction.” By R. Michael Alvarez, *Perspectives on Politics*. 2016.
- “Campus Diversity: The Hidden Consensus.” By John M. Carey, Katherine Clayton, and Yusaku Horiuchi. New York City: Cambridge. *Perspectives on Politics* 18 (4), 1217-1219 2020.

### **Papers Under Submission**

- “Analytic and Statistical Aggregation.” at *Journal of Economic Theory* (with Lu Hong)
- “On the Possibility of Hiring Criterion.” at *JEBO* (with Lu Hong).
- “The Predictive Synergy of Code and Craft.” at *Osiris* (with Lu Hong and PJ Lamberson)
- “How Supplier-Selection Practices Can Encourage the Emergence of Robust Global Supply Chain Networks: A Simulation of the Global Auto Industry” at *California Management Review* (with Maxim Sytch and Yong Kim)

### **GRADUATE STUDENTS**

CURRENT: (\*Indicates Primary Advisor) Matthew Nelson\* (Engineering), Sam Baltz (Political Science), Constance Hsuing (Sociology).

PREVIOUS:

Yan Chen (Caltech–Economics), Olga Shvetsova (Caltech–Political Science), Gretchen Kalsow (Caltech– Economics), Troy Tassier\* (Iowa–Economics), Matt Jones (UM–Psychology), Laura Malaguzzi Zaleri (UM–Economics), Gregory Lewis (UM–Economics), William Rand (UM–EECS), Daniel Reeves (UM–EECS), Ross Hammond (UM–Political Science), Kan Takeuchi (UM–Economics), Erik Johnston (UM–Information), David Robalino (Rand–Economics), G. Jiyun Kim (UM–Political Science), Andreas Pape\*

(Economics), Aaron Bronfman (Philosophy), Kevin Lochner (EECS), Russell Golman\* (Applied Math), Igor Nikolic (TU-Delft, Engineering) Veronica Reyna\* (Political Science), Kate Anderson\* (Economics), Derek Robinson (SNRE), Maggie Zhou (Ross School of Business), Jim Leady\* (Economics), Casey Schneider-Mizel (Physics), Andrew Bell (SNRE), Andrea Jones-Rooy\* (Political Science), Aaron Bramson\* (Complex Systems), Daniel Katz (Political Science), Nathan Seegart (Economics), Jun Wang (SNRE), Tracy Liu (School of Information), John Chen (Ross), Douglas Rigterink (Naval Engineering), Karsten Donnay (Social Science - ETH Zurich), Seungjun Ahn (Civil and Environmental Engineering), Jessica Steinberg (Political Science), Elizabeth Romero (Yale Sociology) Jean Clipperton (Political Science), Johannes Castner (Sustainability-Columbia), Qìngggong Wu (Economics), Colin Shields (Naval Engineering), Cassandra Aceves (Ross), Ryan McDonough (Accounting), Erik Brinkman (Electrical Engineering), Constance Hsiung (Sociology), Kirill Orlach (Stockholm University) Uriah Israel\* (Applied Physics), Sareom Lee (Ross), Ed Platt (Information), Julia Kamin (Political Science), Albana Shehaj (Political Science).

## **UNDERGRADUATE STUDENT THESES**

Aubrey O'Neal (Information). Madeline Hibbs-Macgruder\* (Political Science), Jonathan Hochberg (Ross)

## **PUBLIC, KEYNOTE, AND DISTINGUISHED LECTURES**

1998: SWARMFEST (Keynote)

2002: Argonne National Lab (Keynote).

2006: Ann Arbor Public Library (Public Lecture).

2007: The Ohio State University (Public Lecture), Western Michigan University (MLK Speaker), Santa Fe Institute (Public Lecture Series), The Aspen Ideas Festival.

2008: Association of Independent Schools (Keynote), Northwestern University-Kellogg School (Public Lecture), The Robert F. Toigo Foundation (Keynote), Pittsburgh Chamber of Commerce (Keynote), Michigan Civil Rights Summit (Public Lecture), Eastern Michigan University (Public Lecture), Oakland Community College (Public Lecture), Roper School, Birmingham, MI. (Public Lecture), University of Vermont: (President's Distinguished Lecture).

2009: Bloomsburg College (Public Lecture), Pittsburgh Consortium for Public Education (Keynote), Cranbrook Schools (Public Lecture), World Diversity Leadership Summit held at World Bank (Keynote), Grand Rapids Chamber of Commerce (Public Lecture), Renaissance Weekend.

2010: NSF ADVANCE (Keynote), Iowa State (Public Lecture), XP Trondheim Norway (Keynote), Vermont Oxford Network (Keynote), National Minority Supplier Conference (Keynote), University of Michigan—Gerald R. Ford School of Public Policy

(Public Lecture), Michigan Diversity Council (Keynote), Middlebury College (Public Lecture).

2011: Southwestern Association of Independent Schools (Keynote), University of Virginia-Dardeb (Public Lecture) Queen Mary College (Distinguished Lecture), League Of Black Women (Keynote), Greenhills School (Public Lecture), Minnesota Association of Independent Schools (Keynote), Michigan Tech (Public Lecture), Yahoo! (Big Think Distinguished Lecture), Arizona State University (Public Lecture), University of Illinois-Chicago (President's Distinguished Lecture), American Association of Medical Colleges (Keynote), United States Airforce Retreat (Keynote), National Science Foundation (Distinguished Lecture), TedX University of Michigan (Public Lecture).

2012: World Economic Forum Davos: Young Global Leaders, World Economic Forum Davos, Council of Graduate Schools (Keynote), University of Michigan Health Care System (Keynote), College Board: Southwestern Meeting (Keynote), UCLA Beyond Numbers (Keynote), West Virginia University (Public Lecture), American University Faculty Retreat (Keynote), Princeton University Diversity Summit (Keynote), Drexel University (Public Lecture), North Dakota State University (Public Lecture), Louisiana Tech University (Public Lecture), Brown University (Public Lecture), University of Wisconsin-Madison Future of the University (Public Lecture), University of Wisconsin School of Engineering (Public Lecture).

2013: College Board: Midwest (Keynote) College Board: Western (Keynote), University of California-San Diego (Public Lecture), Universidad Autonoma Metropolitana Unidad Xochimilco (Public Lecture), American Association of Medical Schools (Keynote).

2014: United States Office of Personnel (Keynote), Stevens University (Public Lecture) United States Department of Justice, University of Nebraska

2015: Cornell University (Public Lecture), Purdue University (Public Lecture).

2016: Wageningen University (Distinguished Lecture), University of Delaware (Public Lecture), UCLA Health System (Public Lecture), American Association of Colleges and Universities (Keynote). University of Michigan Health Care System (Keynote), American Gynecological and Obstetrical Society (Distinguished Lecture), INFORMS: Winter Simulation Conference 2016 (Plenary Speaker).

2017: American Association of Medical Colleges - Puerto Rico (Keynote Speaker) Missouri State University (Public Lecture), Skidmore College (Public Lecture), University of Illinois (Distinguished Lecture), The Chapin School (Public Lecture), Peking University (Public Lecture) , Ohio State University (Keynote) , University of Nevada Reno (Public Lecture), Society of Actuaries-Boston (Keynote), Computational Social Science Society of America (Keynote).

2018: Stanford University (Public Lecture), University of Mississippi (Public Lecture), Society of Gynecological Oncology (Keynote), University of Michigan - Rackham (Public Lecture). AAMCU (Keynote), American Hepato-Pancreato-Biliary Associ-

ation (Keynote), MD Anderson Cancer Center (Public Lecture), Oakland University (Keynote), Wayne State University College of Pharmacy (Public Lecture). University of Michigan-Saturday Morning Physics, University of Michigan CRLT Annual Teaching Conference (Keynote), ICGG-Flint (Keynote).

2019: Canada Medical School Admissions Summit, California Association of Independent Schools (Keynote), Fathauer Lecture - University of Arizona, IC2S2 - Amsterdam, IPG-NYC, American Veterinary Medical Colleges, Tipping Point Conference - Palanga, National Security Agency, Hotelling Lecture - Lawrence Technical University.

2020: Olli-Ann Arbor, University of Michigan - Detroit Center, Rand Corporation, Stanford University, Rand Corporations, University of Michigan Materials Science,

2021: INSEAD, Toulouse - Center for Collective Intelligence, Columbia University, Project Hope, University of Michigan Medical School, Cincinnati Children's Hospital, Columbus State University, University of Texas Southwest Medical Center

### **ACADEMIC SEMINARS AND INVITED TALKS**

1993: University of Maryland-College Park, University of Michigan-Ann Arbor, University of California-San Diego, Johns Hopkins University, and University of California-Los Angeles.

1994: University of California-Irvine, Syracuse University, Bellcore, University of Western Ontario.

1995: Stanford University, Northwestern University, University of California-Irvine, University of Alabama, Santa Fe Institute, University of Wisconsin-Madison, University of Michigan-Ann Arbor, University of California-Los Angeles.

1996: Rand Corporation, MacArthur Foundation, University of Iowa, University of Chicago, University of Illinois, Columbia University.

1997: University of Iowa, Carnegie Mellon University.

1998: Stanford University, Bradley University, Santa Fe Institute, University of Rochester.

1999: Iowa State, North Carolina, Princeton.

2000: Motorola University (Japan), University of Michigan.

2001: University of California- Los Angeles, Columbia, Washington University-St Louis.

2002: Santa Fe Institute, Harvard University, Northwestern University, NIH-NIGMH.

2003: Caltech, Credit-Suisse First Boston, FCC, Rand, Northwestern University, United States Office of Naval Research, University of Michigan AI lab.

2004: Bank of the West, University of Trento, Kalamazoo College, Sandia Labs, New York University, MacArthur Foundation (at Stanford), University of Michigan Architecture and Urban Planning, University of California-Irvine, University of Michigan - Bioterrorism Preparedness Center.



2005: Ford Motor Company, Argonne National Labs, CNA Corporation, Nebraska Expo, Pioneer Hi-Bred International, National Science Foundation, University of Michigan–Business School.

2006: University of California Berkeley, Higher School of Economics - Moscow, Purdue University, Ross School of Business–University of Michigan, International Monetary Fund (Catalyst), University of Michigan Medical School, National Science Foundation, Diversity Roundtable, Detroit MI, Greenhills School, University of Michigan Diversity Summit. The Core Club, New York City. The Standard Club, Chicago, IL

2007: University of Michigan–ICOS Seminar, Ross School of Business–University of Michigan, The Ohio State University, National Science Foundation, Stryker Corporation, Ford Motor Company, Oxford University, Federal Deposit Insurance Corporation, Kleiner Perkins, Google, Yahoo!, The Wasatch Group, University of Southern California, Caltech, Legg Mason.

2008: Oxford University, Stanford University - Comparative Politics, EURO - RSCG, Stanford University GSB - Political Economy, Stanford University GSB - Organizational Behavior, Stanford University - Methods, Stanford University - Public Policy, UCLA, UCSB, TotalSAP, University of Wisconsin, Columbia University, Northwestern University, Harrah's, America On Line, University of Illinois-Chicago, Black Board of Directors Conference, MFS, Harvard-MIT, Northern Trust, Novartis, SYFR, Genentech All-Hands, World Bank, Genentech-Finance, Oakland Community College, Santa Fe Institute Summer School, University of Michigan–NCID.

2009: United States Department of the Interior, Harvard Law School, UCSD, Stryker Corporation, University of Michigan–Applied Math, University of Vermont, Michigan Tech, TotalSAP, Penn State University, TYCO Corporation, Opus 5 Race and the Law, Santa Fe Institute Summer School, Executive Leadership Council, TU Delft, ING, SMART Resilient Transportation Conference, National Conference Women in Technology.

2010: Miller-Coors, Middlebury College, Allied Corporation, United States Department of Education, Boeing Corporation, Microsoft Corporation, University of Michigan–Complex Systems, University of Michigan Transportation Research Institute, Marsh McCluen, Arvin-Meritor, The Ohio State University, Columbia University, United States Air Force, DARPA, Harvard - Kennedy School, Bristol University, Educational Testing Service.

2011: Mercedes-Benz, Johnson Controls, Michigan Department of Transportation, University of Illinois-Chicago, Blue Cross Blue Shield Chicago, Blue Cross Blue Shield Washington, Michigan State University, Chrysler Corporation, Freddie Mac Corporation.

2012: West Virginia University, Bloomberg, Johnson Controls Corporation, National Security Agency, Baxter Health Care, Bank of Montreal, University of Michigan Cancer Center, Belmont University, Kellogg Graduate School of Management CEO Forum,

Third Point LLC, Conference Board of Canada (webinar), Massachusetts General Hospital, Caterpillar Corporation, City of Hope, Beaumont Health Center, American Association of Medical Colleges, Microsoft, Johnson Controls, Nissan, Molex, MIT-Collective Intelligence Conference, Federal Reserve Bank of Chicago, Santa Fe Institute Summer School, University of Michigan - Robert Wood Johnson Fellows.

2013: University of Maryland, University of Southern California, New York University, TOM Conference. University of Warsaw, ESSEC, INSEAD, National University of Singapore, Federal Reserve Chicago, PIMCO, UCLA.

2014: United States Office of Personnel, Boeing, Bloomberg, University of Nebraska, Sandvik Corporation, BillerudKorsnas, ETH-Zurich, Graduate Institute of International Studies - Geneva, United States Department of Justice, University of Michigan Interdisciplinary Quantitative Reasoning Seminar, Inter American Development Bank, Kresge Foundation, Women in Engineering ProActive Network, Chicago Federal Reserve, New York Federal Reserve, United States Department of Justice.

2015: US Attorney's Office Detroit, Northrop Grumman, United States Treasury, Cornell University, Royal Bank of Canada, Wisconsin Retirement Benefits.

2016: University Of Utah Hospital System, Northrup Grumman, NASA, New York Federal Reserve, NASA, United States Office of Personnel, University of Cincinnati Children's Hospital, Oakland University, University of Buffalo-Law, NYU Law, International Monetary Fund, US Navy, US Cellular, AB InBev, Women Certified Financial Analysts, Northwestern-Chicago CEO Perspectives, Gilead, MIT,

2017: BlackRock, Bell Canada, Gilead, VMWare, Northrup Grumman, AB InBev, Ohio State University, University of Illinois, Princeton University, European Central Bank, University of Michigan Department of Surgery, VMWare, CEO Perspectives, Los Angeles County Museum of Art, Edward Jones, NOAA, Dartmouth University Trustees, University of Michigan School of Engineering, Parliament /SAP NYC, Santa Fe Institute -NYC.

2018: University of Michigan Department of Internal Medicine, University of Michigan Department of Surgery Carter Center Atlanta, Principal, Princeton University, William Blair, Santa Fe Institute - SF, Northwestern-Kellogg, Office of the Director of National Intelligence - National Academy Panel, CIA-RAND Corporation, Frankel Cardiovascular Center, University of Michigan Office of University Development.

2019: Harvard Business School, University of Arizona, Roper School, US Pharmacopeia, NARIET, International Monetary Fund, The Seminar, Warburg Pincus, Mercy Health, National Society of Black Engineers, University of Michigan College of Engineering, University of Michigan Medical School, University of Michigan-Internal Medicine, Intel, Exxon-Mobil, Apollo, Brown Foreman (virtual)

2020: Netflix, Novartis (virtual), Ann Arbor Chamber of Commerce, Virtual Wolverine Caucus. Warburg Pincus, Apollo, European House, University of Michigan Musical Society, National Association of Schools of Music, FCA Corporation, VM Ware, BIA,

Advent International, Bristol Myers Squibb, Abrosetti,  
2021: Morgan Stanley, Nutanix, ICI, Facebook, Army Corp of Engineers

## **ORGANIZATIONAL TRAINING**

2016: CEO Perspectives

2017: CEO Perspectives

2018: BlackRock, CEO Perspectives

2019: Metlase, CEO Perspectives, Expedia, Exxon-Mobil, Toyota, Genus

2021: Jackson National, Saudi Telecom, Wabash National

## **CONFERENCE PRESENTATIONS**

American Political Science Association: 1991-2006.

Public Choice Society 1991-1996, 1998.

NSF Decentralization Conference, Evanston IL, 1992 (rapporteur).

National Center for Supercomputing Applications: Economics Conference 1993

NSF–NBER Decentralization Conference, Toronto, Canada 1994.

Midwest Political Science Association 1994, 1998-2001,2005, 2006, 2007.

Multiple Equilibria and Evolutionary Processes Conference, University of California Los Angeles, 1994. (discussant).

Evolving Complexity, University of Texas–Dallas, 1994.

RGF Conference on Computational Economics, Austin TX, 1995.

The Economy as a Complex Evolving System II, Santa Fe Institute 1995.

Santa Fe Institute Business Network, Santa Fe Institute, 1995.

American Economic Association 1996, 2007.

UCLA–Bionomics Institute Computable Economics meeting, Los Angeles, 1996.

Stanford Institute for Theoretical Economics, August 1997.

UCLA–Bounded Rationality and Beyond, November 1997.

University of Chicago-Argonne National Labs: Agent Based Modeling 1997.

Santa Fe Institute, Summer School 1998.

Santa Fe Institute, Integrative Themes Workshop 2001.

Northwestern Kellogg Complexity Conference. 2003.

Legg Mason Thought Leader Forum. 2004.

Legg Mason and Santa Fe Institute, Complexity and Sports. 2004.

Handbook of Mathematical Economics Conference, University of Michigan. 2005.

ICER, Torino IT 2005.  
Diversity and Complexity Conference, University of Michigan. 2005.  
Diversity and Robustness Conference, University of Michigan. 2006.  
SIAM - INFORMS Conference. 2007.  
Institutions, Torino IT. 2007.  
Complexity and Epidemiology, Ann Arbor. 2007.  
Santa Fe Institute: Robustness Conference. 2007.  
Santa Fe Institute Diversity and Collapse. 2007.  
Santa Fe Institute Summer School. 2007.  
Oxford Internet Institute. 2007.  
Collective Wisdom Conference, College de France. 2008.  
Stanford Institute for Economic Policy Research. 2008.  
New Initiatives School Fund, Aspen Institute. 2008  
American Political Science Association, Boston. 2008  
MacArthur Foundation, New Technologies Working Group. 2008  
Ecology FOC Meeting, Bozeman. 2008  
American Political Science Association, Toronto. 2009  
Complexity and Philosophy, Tulane University. 2010  
Conference on New Macroeconomics, Oxford University. 2012.  
Big Ten Engineering Conference. 2012  
MIT, Collective Intelligence Conference, 2012.  
CES - Venice. 2104  
Networks and Sociology. UCLA, 2016.  
Collective Intelligence Conference - NYU. 2016.  
Decisions Consortium - Lake Victoria. 2016.  
Santa Fe Institute. Women on Boards. 2016.  
Santa Fe Institute. Collective Intelligence. 2018.  
Deliberation, Belief Aggregation, and Epistemic Democracy .Paris, France. 2018.  
ASSA Meetings, San Diego, CA

## **EDITORIAL BOARDS**

Editorial Board, *American Political Science Review* 2007–2011.  
Associate Editor, *Journal of Public Economic Theory*, 1998–2002.  
Associate Editor, *Advances in Complex Systems*, 1997–2003.

## **REFEREE RESPONSIBILITIES**

Referee for Science, Econometrica, Academy of Management Review, Complexity, American Economic Review, the American Political Science Review, Journal of Urban Economics, Journal of Theoretical Politics, American Journal of Political Science, Proceedings of the National Academy, Nature, Complexity, Journal of Economic Dynamics and Control, Journal of Economic Theory, Games and Economic Behavior, Social Choice and Welfare, Quarterly Journal of Political Science, Sociological Methods and Research, the National Science Foundation, the Social Science and Humanities Research Council of Canada, Princeton University Press, University of California Press, University of Michigan Press, Cambridge University Press, Guest Editor - Proceedings of the National Academy of Sciences, Mathematical and Computer Modeling, National Research Council, Management Science, Harvard University Press.

## **OTHER ACTIVITIES**

National Academies of Science, working group on survey research 2021.

Santa Fe Institute Graduate Workshop in Computational Economics, 1995–Present (organizer and director).

Organizer: The Choice - Ross School of Business 2019, 2020

Organizer NSF-NBER Decentralization Meeting 2011-Present.

Testified before U.S. House Science and Technology Committee. 2010.

Kalamazoo College Center for Complex Systems, Advisory Board

Greenwich Village School, External Advisory Board

Center for Scientific Progress Advisory Board: 2007–2012.

Kellogg Foundation, Consultant 2007– 2008.

Yahoo! Corporation, External Consultant, 2007–2008.

Santa Fe Institute Faculty Hiring Committee (Chair), 2006–2013.

National Research Council Panel on Computational Modeling 2005–2007.

Decentralization Conference 2007 (organizer).

Handbook of Computational Economics Conference 2006 (organizer).

Diversity and Complexity Conference 2005 (organizer).

Section Coordinator: Culture, Midwest Political Science Association 2006.

EITM Instructor, Michigan 2003, 2006, Washington University 2003, Duke University 2004.

MacArthur Foundation, Working Group on Inequality and Peer Effects 1995-2005.

Santa Fe Institute Fellows Program, 1999–2001 (organizer).

ICPSR, instructor 2000–2006.

Center for Computable Economics 1997 Conference (assistant organizer).  
NSF-NBER Decentralization Conference Fall 1995 (co-organizer).  
Hebrew University Summer School in Information Economics, 1992 (attendee).  
Santa Fe Institute Summer School in Complex Systems, 1991 (attendee).  
Mellon Foundation: Our Compelling Interest Advisory Board 2015–Present

## **INSTITUTE AND UNIVERSITY SERVICE**

LSA Executive Committee 2015-present.  
Political Science Admissions Committee 2011.  
Michigan Meetings, Selection Committee 2009–2015.  
Political Science Search Committee 2009.  
Honor Program Advisory Board, 2009–2010.  
Campus Day Presenter 2008,2010.  
Michigan Meetings, Selection Committee 2009–2009.  
Future of Social Science Committee, 2009–2010.  
University of Michigan Accreditation Committee 2009–2010.  
Social Science DEC Committee, 2007,2009.  
National Center for Institutional Diversity Steering Committee, 2006 - 2007.  
Futuring Diversity Steering Committee 2004–2006.  
SACUA Multicultural University Committee Chair 2004–2005.  
SACUA Multicultural University Committee 2003–2006.  
UM Faculty Senate 2001–2004.  
American Institutions Search Committee 2003.  
ISR Policy Committee 2001–2002.  
Admissions Committee Chair, 2001–2005.  
Admissions Committee, 2000.  
UROP Student Adviser, 2001–2002.  
Admissions Committee, University of Iowa 1997.  
Speakers committee member, University of Iowa 1997.  
Search committee member, University of Iowa 1997.  
Faculty Representative, Caltech Multicultural Task Force 1994–1996  
Economic Theory Seminar Coordinator, 1994–1995, Winter 1996.  
Graduate Student Admissions, 1994–1996.  
Graduate Student Admissions, Chairperson 1996.

Director, Race Politics and Region Program 1994–1995.  
Presenter, UC Minority Education Forum, Long Beach 1995.  
BRIDGE Program: Visiting Speaker 1994,1995.  
SURF Program: Visiting Speaker 1995.  
SURF Program adviser, 1994, 1995 (2 students), 1996.  
Faculty Representative, Admissions Office Southern California Recruitment Meeting.  
Faculty Adviser, Freshman Camp, 1993, 1994.  
Affirmative Action Coordinator, Political Science Search 1994,  
Economics Search 1996.

## **PUBLIC AND COMMUNITY SERVICE**

A Leader's Toolkit for Reopening (website) 2020  
Models of Covid (website and videos) 2020  
Speaker, Wolverine Caucus 2012.  
Speaker, Regents Meeting 2012  
Speaker, Expect Respect Forum on MCRI, University of Michigan, 2006.  
Speaker, Fraternity Forum on MCRI, University of Michigan, 2006.  
Moderator, LSA Forum on MCRI, University of Michigan, 2006.  
Radio Panelist on MCRI on radio stations WAAM, WJR, WUOM, 2006.  
Speaker, Economics Forum. "Peer Effects in Economics" University of Iowa, February 12, 1998.  
Pasadena Chamber of Commerce, keynote speaker "A Rose By Any Other Name: The Economic Impact of the New Bowl Alliance." (with Eric Ball), December 1996.  
KPCC Airtalk, "Income Inequality" May 1996.  
Pasadena Rotary, speaker, "Economic Impact of the World Cup, the Rose Bowl, and the Super Bowl." May 1996.  
Pasadena Chamber of Commerce Legislative Affairs Committee, speaker "Thoughts on Raising the Minimum Wage and on U.S. Income Inequality", April 1996.  
Pasadena Chamber of Commerce annual meeting, keynote speaker "The Greening of the Rose Bowl: the economic impact of the Tournament of Roses." (with Eric Ball), December 1995.  
Report to the Pasadena City Council on the Rose Bowl and the World Cup's economic impact on the city, (with Eric Ball) December 1995.  
Organizer, Public Forum on Proposition 187 (with City of Pasadena and Pasadena Unified School District), Fall 1994.