

## Damon M. Centola

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### Education

Ph.D. Sociology, Cornell University, 2006  
MA Sociology, Cornell University, 2004  
BA Philosophy/Logic, Marlboro College, 1997, *summa cum laude*

### Appointments

2021- Elihu Katz Professor of Communication, Sociology and Engineering  
University of Pennsylvania  
2019-21 Professor of Communication, Annenberg School for Communication  
Professor of Engineering (secondary), School of Engineering and Applied Sciences  
Professor of Sociology (secondary), School of Arts and Sciences  
University of Pennsylvania  
2019- Senior Fellow, Penn LDI Center for Health Incentives and Behavioral Economics  
2019- Faculty, Penn Population Studies Center  
2015- Faculty, Penn Master of Behavioral and Decision Sciences Program  
2013- Faculty, Penn Warren Center for Network and Data Sciences  
2013- Director, Network Dynamics Group  
2013-19 Associate Professor, Annenberg School for Communication & School of Engineering  
and Applied Sciences, University of Pennsylvania  
2008-13 Assistant Professor, MIT Sloan School of Management  
2006-08 Robert Wood Johnson Scholar in Health Policy, Harvard University  
2001-02 Visiting Scholar, The Brookings Institution

### Research

Social Change, Diffusion of Innovations and Ideas, Simple and Complex Contagions, Social Inequality, Medical Bias, Collective Intelligence, Social Epidemiology, Collective Action and Social Movements, Sustainability and Climate Change, Cultural Evolution and Norms, Social Networks, Online Experimental Methods, Computational Social Science, Concepts of Centrality and Influence, Formal Models of Society

### Awards and Fellowships

2019 Harrison White Outstanding Book Award, American Sociological Association  
2019 Top Paper Award in Health Communication, International Communication Association  
2018 Best Paper Award, International Conference on Computational Social Science  
2017 James Coleman Award for Outstanding Article, American Sociological Association  
2016 Wharton Mack Institute Fellow  
2014-15 Fellow, Center for Advanced Study in the Behavioral Sciences, Stanford University

- 2014-15 Fellow, Lenore Annenberg and Wallis Annenberg Endowment for Communication
- 2014 US Patent #8713143, "A Method of Creating Social Networks to Facilitate Behavior Change"
- 2012 Kavli Frontiers of Science, National Academy of Sciences
- 2011 Leo Goodman Early Career Award in Sociological Methodology, American Sociological Association
- 2011 Award for Outstanding Article in Mathematical Sociology, American Sociological Association
- 2010 MIT Faculty Prize for Research in Computers and Communications
- 2009 Award for Outstanding Article in Mathematical Sociology, American Sociological Association
- 2006 Award for Outstanding Article in Mathematical Sociology, American Sociological Association
- 2004 Columbia University Exchange Scholar Fellowship
- 2004 NSF EITM Summer Fellowship
- 2002 Cornell University Russell Sage Fellowship
- 2002 NSF IGERT Fellowship in Non-linear Dynamics and Chaos
- 2000 Santa Fe Institute Summer Fellowship

## Grants

- 2022-24 PI, Penn Medical Communication Research Institute Grant for "An Experimental Implementation Study to Evaluate the Effects of Networked Collective Intelligence on Medical Bias in a Medical Training Center" (\$50,000 direct)
- 2022-24 PI, PerBak Capital Grant for "Identifying Market Conditions for Sentiment Cascades and Crash Risk" (\$100,000 direct)
- 2022-24 Co-PI, John Templeton Foundation Grant for "The Impact of Social Norms on Virtue" (\$299,742 direct) with Liane Young.
- 2021-23 PI, Robert Wood Johnson Pioneer Grant for "Network Science to Improve Health Equity in Underserved Online Communities" (\$658,143)
- 2019-20 PI, Facebook Grant for "Networked Crowdsourcing: An Online Experiment in Content Moderation" (with Doug Guilbeault) (\$96,000 direct)
- 2017-19 PI, NIH Grant for "Using Social Networks to Improve Scientific Communication about Tobacco Use" (\$50,000, direct)
- 2016-19 PI, Robert Wood Johnson Pioneer Grant for "Improving Medical Decision Making through the Wisdom of Crowds" (\$390,041)
- 2016-19 Co-PI, Swedish Foundation Grant for "Career Development Workshops to Promote Analytical Sociology" (with Peter Hedstrom, Elizabeth Bruch, and Emily Erikson) (\$109,350 direct)
- 2016-17 PI, Penn Center for Online Learning Course Development Award for "Network Dynamics and Social Behavior" (\$17,000 direct)
- 2014-17 Co-PI (with Urmimala Sarkar, UCSF), NIH R01 Grant for "Influencing Cervical Cancer Prevention and Detection through Social Media," (\$1,885,685)
- 2014-16 Co-PI (with Christine Dehlendorf, UCSF), Hewlett Foundation Grant for "Effects of Peer Influence on Long-Acting Reversible Contraceptive Use" (\$423,500 direct)
- 2013-14 PI, Annenberg National Health Communication Study Seed Grant for "How Online Networks Impact Health Outcomes" (\$35,000, direct)
- 2009-12 PI, James S. McDonnell Foundation Complex Systems Grant for "Experimental Investigations into the Effects of Network Structure on Social Contagions" (\$259,000 direct).
- 2004-05 Co-Investigator (with Michael Macy), NSF Human and Social Dynamics Grant for "Network Topology and the Dynamics of Collective Action" (\$90,946).

## Books

Centola, Damon. 2021. *Change: How to Make Big Things Happen*. New York: Little, Brown & Co.

- Translations into Chinese, Romanian, Korean, Russian, Dutch, Thai, Japanese, Italian, Turkish, Portuguese (Brazil)
- Selected Reviews & Coverage: [Nature](#), [New York Journal of Books](#), [The New York Times](#), [NPR Hidden Brain](#), [Radio Times](#), [Inside Higher Ed](#), [Annual Reviews](#), [The Current](#), [Ottawa Writers Festival](#), [ABC Australia](#), [Times of India](#)

Centola, Damon. 2018. *How Behavior Spreads: The Science of Complex Contagions*. Princeton, NJ: Princeton University Press.

- 2019 Harrison White Outstanding Book Award, American Sociological Association
- Translations into Chinese, Arabic, Polish
- Selected Reviews & Coverage: [Science](#), [Journal of Mathematical Sociology](#), [Information, Communication & Society](#), [New Scientist](#), [MIT Sloan Management Review](#), [Strategy + Business](#), [The American Interest](#), [American Journal of Sociology](#), [Contemporary Sociology](#)

## Peer-Reviewed Articles

Centola, Damon 2022. *Trends in Cognitive Science*. "The Network Science of Collective Intelligence." <https://doi.org/10.1016/j.tics.2022.08.009>.

- Featured Review

Centola, Damon et al. 2021. *Nature Communications*. "The Reduction of Race and Gender Bias in Clinical Treatment Recommendations Using Clinician Peer Networks in an Experimental Setting." 12, 6585.

- Selected as *Nature Communications* feature article in Social Sciences  
[Kaiser Health News](#), [LATimes](#)

Guilbeault, Doug and Damon Centola. 2021. *Nature Communications*. "Topological Measures for Identifying and Predicting the Spread of Complex Contagions." 12, 4430.

- Selected as *Nature Communications* feature article in Applied Physics and Mathematics  
[FastCompany](#), [PNAS](#), [Cosmos](#), [Washington Post](#)

Guilbeault, Doug, Andrea Baronchelli and Damon Centola. 2021. *Nature Communications*. "Experimental Evidence for Scale-Induced Category Convergence across Populations." 12, 327.

- Cognitive Science Society's Computational Modeling Prize in Applied Cognition  
[Science Daily](#), [Technology Networks](#)

Brackbill, Devon and Damon Centola. 2020. *PlosOne*. "Impact of network structure on collective learning: An experimental study in a data science competition." 15(9): e0237978.

Guilbeault, Doug and Damon Centola. 2020. *PlosOne*. "Networked Collective Intelligence Improves Dissemination of Scientific Information Regarding Smoking Risks." 15(2): e0227813.  
[News Medical](#)

Dehlendorf, Christine, et al. 2020. *Contraception*. "Birth Control Connect: a randomized trial of an online group to disseminate contraceptive information."

Zhang, Jingwen and Damon Centola. 2019. *Annual Review of Sociology*. "Social Networks and Health: New Developments in Diffusion, Online and Offline." Vol. 45(1):91-109.

- [Science](#), [PNAS](#), [Annual Reviews Magazine](#)

Zhang, Jingwen et al. 2019. *Preventive Medicine*. "Facts or stories? How to use social media for cervical cancer prevention: A multi-method study of the effects of sender type and content type on increased message sharing." 126 (105751).

- 2019 Top Paper Award, Health Communication Division, International Communication Association

Le, Gem et al. 2019. *Plos One*. "Perceptions of cervical cancer prevention on Twitter uncovered by different sampling strategies." Feb 11;14(2):e0211931.

Becker, Joshua, Ethan Porter and Damon Centola. 2019. *Proceedings of the National Academy of Sciences*. "The Wisdom of Partisan Crowds." 116 (22) 10717-10722.

- [Harvard Business Review](#)

Lyson, Helena et al. 2019. *Journal of Cancer Education*. "Social media as a tool to promote health awareness: results from an online cervical cancer prevention study." 34(4):819-822.

- Guilbeault, Doug, Joshua Becker and Damon Centola. 2018. *Proceedings of the National Academy of Sciences*. "Social Learning and Partisan Bias in the Interpretation of Climate Trends." 115 (39) 9714-9719.
- Featured Cover Article
  - 2018 Best Paper Award, International Conference on Computational Social Science
- [Washington Post](#), [PBS News Hour](#), [Bloomberg](#)
- Centola, Damon, Joshua Becker, Devon Brackbill, and Andrea Baronchelli. 2018. *Science*. "Experimental Evidence for Tipping Points in Social Convention." 360: 1116-19.
- 2019 Honorable Mention for Granovetter Award for Outstanding Article, Mathematical Sociology Section, American Sociological Association
- [The Atlantic](#), [Scientific American](#), [Fast Company](#), [Wired](#)
- Fox, E., et al. 2017. *Contraception*. "Birth Control Connections: the Effect of Online Social Communication on Contraceptive Attitudes. 96(4), 290-291.
- Becker, Joshua, Devon Brackbill, and Damon Centola. 2017. *Proceedings of the National Academy of Sciences*. "Learning Is Robust to Noise in Decentralized Networks." 114:E9184.
- Becker, Joshua, Devon Brackbill, and Damon Centola. 2017. *Proceedings of the National Academy of Sciences*. "Network Dynamics of Social Influence in the Wisdom of Crowds." 114 (26): E5070-E5076.
- 2018 Honorable Mention for Outstanding Article, Mathematical Sociology Section, American Sociological Association
- [Harvard Business Review](#)
- Zhang, Jingwen et al. 2016. *Preventive Medicine Reports*. "Support or Competition? How Online Social Networks Increase Physical Activity: A Randomized Controlled Trial." (4): 453-458.
- [TIME](#), [CBS News](#), [US News & World Report](#), [The Wall Street Journal](#), [The New York Times](#)
- Centola, Damon. 2015. *American Journal of Sociology*. "The Social Origins of Networks and Diffusion." 120 (5): 1295-1338.
- Featured Lead Article
  - 2017 James Coleman Award for Outstanding Article, Rationality and Society Section, American Sociological Association
- [Science Newsline](#)
- Centola, Damon and Andrea Baronchelli. 2015. *Proceedings of the National Academy of Sciences*. "The Spontaneous Emergence of Conventions: An Experimental Study of Cultural Evolution." 112 (7): 1989-1994.
- 2015 Selected as one of the best papers of the year by the section on Communication, Information, Technologies and Media Sociology, American Sociological Association
- [Washington Post](#), [Chicago Tribune](#), [NPR Newsworks](#), [Huffington Post](#)
- Zhang, Jingwen et al. 2015. *Data In Brief*. "Identifying the effects of social media on health behavior: Data from a large-scale online experiment." (5): 453-457.
- Zhang, Jingwen et al. 2015. *Preventive Medicine Reports*. "Efficacy and causal mechanism of an online social media intervention to increase physical activity: Results of a randomized controlled trial." (2): 651-657.
- [NPR Newsworks](#), [Tech Times](#), [The Economic Times](#)
- Centola, Damon and Arnout van de Rijt. 2014. *Social Science and Medicine*. "Choosing Your Network: Social Preferences in an Online Health Community." 125: 19-31.
- Teyhen, D., et al. 2014. *Mil. Med.* "Incentives to Create and Sustain Healthy Behaviors: Technology Solutions and Research Needs." (179) 12:1419.
- Teyhen, D., et al. 2014. *JOSPT*. "Key Enablers to Facilitate Healthy Behavior Change." (44) 378-387.
- Centola, Damon. 2013. *Circulation*. "Social Media and the Science of Health Behavior." (127) 2135-2144.
- Centola, Damon. 2013. *Rationality and Society*. "Homophily, Networks, and Critical Mass: Solving the Start-up Problem in Large Group Collective Action." (25) 3-40.
- Centola, Damon. 2013. *Journal of Statistical Physics*. "A Simple Model of Stability in Critical Mass Dynamics." 151 (1) 238-253

- Centola, Damon. 2011. *Science*. "An Experimental Study of Homophily in the Adoption of Health Behavior." 334:1269-72.  
[CNN](#), [La Repubblica](#)
- Centola, Damon. 2010. *Science*. "The Spread of Behavior in an Online Social Network Experiment." 329:1194-7.  
 • 2011 Award for Outstanding Article in Mathematical Sociology, American Sociological Association  
 • 2011 Award for Outstanding Contribution to Sociological Methodology, American Sociological Association  
[The New York Times](#), [Wired](#)
- Centola, Damon. 2008. *Journal of Mathematical Sociology*. "Failure in Complex Networks." 33(1): 64-68.
- Centola, Damon and Michael Macy. 2007. *American Journal of Sociology*. "Complex Contagions and the Weakness of Long Ties." 113: 702-34.  
 • 2009 Award for Best Publication in Mathematical Sociology, American Sociological Association  
 • Reprinted 2012 in *Small Worlds Research*, by Sebastian Schneckler. New York: Russell Sage Press.
- Centola, Damon, Juan Carlos Gonzalez-Avella, Victor Eguiluz, and Maxi San Miguel. 2007. *Journal of Conflict Resolution*. "Homophily, Cultural Drift, and the Co-Evolution of Cultural Groups." 51: 905-929.  
[PC World](#)
- Centola, Damon, Victor Eguiluz, & Michael Macy. 2007. *Physica A*. "Cascade Dynamics of Complex Propagation." 374: 449-456.
- Centola, Damon, Robb Willer, and Michael Macy. 2005. *American Journal of Sociology*. "The Emperor's Dilemma: A Computational Model of Self-Enforcing Norms." 110(4):1009-40.  
 • 2006 Award for Best Publication in Mathematical Sociology, American Sociological Association  
 • Reprinted 2012 in *Small Worlds Research*, by Sebastian Schneckler. New York: Russell Sage Press.

## Peer-Reviewed Chapters

- Centola, Damon. 2022. "Complex Contagions," in *Research Handbook on Analytical Sociology*, edited by Gianluca Manzo. Cheltenham (UK): Edward Elgar (Elgar Advanced Introduction Series).
- Centola, Damon 2021. "Influencers, Backfire Effects and the Power of the Periphery," in *Personal Networks*, edited by Mario L. Small, Brea L. Perry, Bernice Pescosolido, and Edward Smith. Cambridge (UK): Cambridge University Press.
- Zhang, Jingwen and Damon Centola. 2018. "How Social Networks Shape Social Comparison," in *Social Comparison, Judgment & Behavior*, edited by Jerry Suls. New York: Oxford University Press.
- Douglas Guilbeault, Joshua Becker and Damon Centola. 2018. "Complex Contagions: A Decade in Review," in *Spreading Dynamics in Social Systems*, edited by Yong Yeol Ahn and Sune Lehmann. New York: Springer Nature.
- Centola, Damon and M. Macy. 2005. "Social Life in Silico: The Science of Artificial Societies," in *The Handbook of Group Processes*, edited by Susan Whelan. New York: Russell Sage Press.

## Policy Reports

- Constantino et al. 2022. "The Devil in the Details: Social Norm Interventions in the Context of Climate Change," *Psychological Science in the Public Interest*
- Centola, Damon. 2020. "The Complex Contagion of Doubt in the Anti-Vaccine Movement," *Annual Report of the Sabin-Aspen Vaccine Science & Policy Group*.  
[Science](#), [PNAS](#), [Forbes](#)

## Op-Ed and Commentary

- Centola, Damon. 2021. "Medical bias can be deadly. Our research found a way to curb it ." *LA Times*.
- Centola, Damon. 2021. "The Dangers of Social Media." *The Bottom Line*.
- Centola, Damon. 2021. "TikTok Stars Shouldn't Hawk Vaccines." *The Philadelphia Inquirer*.
- Centola, Damon. 2021. "How to turn the tide on vaccine hesitancy: Apply an algorithm that actually works." *The Hill*.
- Centola, Damon. 2021. "The Contagion of Doubt: Vaccines and Social Media." *Psychology Today*.
- Centola, Damon. 2020. "Considering network interventions." *Proceedings of the National Academy of Sciences*.
- Centola, Damon. 2020. "Why Social Media Makes Us More Polarized and How to Fix It." *Scientific American*
- Centola, Damon. 2019. "Physician Networks and the Complex Contagion of Clinical Treatment." *JAMA Network Open*
- Centola, Damon. 2019. "Influential Networks." *Nature Human Behavior*.
- Centola, Damon. 2019. "The 25 Percent Tipping Point for Social Change." *Psychology Today*.
- Centola, Damon. 2018. "Which is Better, Support or Competition?" *Psychology Today*.
- Centola, Damon. 2018. "The Truth About Behavioral Change." *MIT Sloan Management Review*.
- Centola, Damon. 2018. "What Can 'Alice in Wonderland' Tell Us About Life Online?" *Psychology Today*.
- Centola, Damon. 2018. "Social Learning and Political Polarization" *Psychology Today*.
- Centola, Damon. 2015. "Controlling Public Opinion: What the Debate over 'The Dress' Reveals." *The Conversation*. April 07 Issue.

## Patents and Technologies

- 2014 "Establishing A Social Network" (Inventor, US Patent# 8713143)
- 2002 "Net Logo" Agent Based Modeling Environment (Developer, Release 1.0)

## Recent Courses

Social Networks and the Spread of Behavior (UG): This course explores the nature of diffusion through social networks, the ways networks are formed and shaped by social structures, and the role they play in health behavior, public policy and innovation adoption. Topics include: the theory of social networks, the small world model of network structure; constructing models to represent society; social bases of the adoption of innovations and the spread of new ideas; the role of social networks in controlling changes in public opinion; the emergence of unexpected fashions, fads, and social movements; and the connection between social network models and the design of public policy interventions.

Network Dynamics of Social Behavior (Coursera): This online course condenses the last decade of research on social networks and behavior change into six modules. Each module provides an in-depth look at a particular research puzzle – from understanding racial segregation in residential neighborhoods to optimizing knowledge-discovery teams in data science – with a focus on agent-based models and network theories of social change. Each module in this course provides students with an interactive computational model and step-by-step tutorials for developing their own explorations.

Research Seminar on Internet Experiments (G): In the last decade, new studies have used Web-based experimentation to identify previously unobservable features of communication networks –from processes of cumulative advantage to the network dynamics of social norms. This course offers a deep-dive into the theoretical work and methodological considerations involved in the creation and execution of successful Web-based experiments.

Social Theories and Online Data (G): The focus of this course is on using complex systems modeling tools to understand social phenomena. Tools will range from differential equations, to agent based models, to network simulations and evolutionary game theory. Student will learn how to identify the key theoretical and empirical puzzles that motivate their research questions, and to think carefully about how formal/predictive models can be connected with empirical data from online sources.

## Invited Talks and Keynote Addresses

National Health Service, London, UK, December 2022  
Oslo Metropolitan University, Oslo, Norway, November 2022  
Boston College, Department of Psychology & Neuroscience, October 2022  
(Keynote) Man Group Alternative Investing Symposium, Oxford, UK, September 2022  
(Keynote) 17th Annual Social Simulation Conference, Milan, Italy, September 2022  
Eramet Executive Series on Organizational Change, Paris, France, September 2022  
(Keynote) Schusterman Family Philanthropies, Israel, June 2022  
(Keynote) The Nature Conservancy, Annual Retreat, May 2022  
(Keynote) NIH, Catalyzing Communities of Research Rigor, May 2022  
(Keynote) Inter-American Development Bank, April 2022  
Sandia National Labs, April 2022  
Stanford, Graduate School of Business, April 2022  
Penn Medicine, Family Medicine Residents Colloquium, April 2022  
Stanford Medicine, Clinical Excellence Research Center, March 2022  
Harvard Law School, March 2022  
Arthur Murray Foundation, March 2022  
(Keynote) GOED Exchange Annual Meeting, February 2022  
Hong Kong Polytechnic, February 2022  
Harvard, Shorenstein Center, January 2022  
(Keynote) Stretch Conference, December 2021  
(Keynote) KES Global Exchange Twitter Conference, December 2021  
Institute of International Finance, November 2021  
IU Medical School, Indiana Immunization Coalition, October 2021  
(Keynote) Health Progress and Equity Network National Meeting, October 2021  
Penn, Medical Communication Symposium, October 2021  
DARPA Symposium, October 2021  
(Keynote) Asia Forum on Enterprise for Society, September 2021  
(Keynote) System Dynamics Conference, July 2021  
RWJ Foundation, July 2021  
(Keynote) KES Global Exchange, June 2021  
Nudgestock, June 2021  
Ottawa Writers Festival, June 2021  
US Embassy New Delhi, June 2021  
(Keynote) WLA Annual Meeting, May 2021  
UNC Charlotte, Computer Science Department, May 2021  
Moore Foundation, May 2021  
Columbia Club of NYC, March 2021  
Wharton Club of NYC, March 2021  
Penn Club of NYC, March 2021  
University of Toronto, March 2021  
Moore Foundation, March 2021  
Harvard Club NYC, March 2021  
Harvard, GSE-LILA, February 2021

McGill University, November 2020  
European Research Council, November 2020  
Brown University, November 2020  
University of Cambridge, July 2020  
Cornell, Department of Natural Resources, April 2020  
Annual Reviews, Shot of Science, April 2020  
Penn, LDI Fellow Retreat, January 2020  
Princeton, Woodrow Wilson School, October 2019  
Northwestern, Kellogg School of Management, September 2019  
(Keynote) Greater Philadelphia Economy League Annual Meeting, September 2019  
Aspen Institute, Vaccine Science & Policy Group, September 2019  
(Keynote) Climate Land Use Alliance Annual Meeting, September 2019  
Penn Sociology, September 2019  
Yale Sociology, September 2019  
Harvard Club of New York, May 2019  
Princeton, Workshop on Vaccination, May 2019  
(Keynote) University of Utrecht, International Meeting on Experimental and Behavioral Social Science Conference, May 2019  
Wharton Club of New York, April 2019  
Carnegie Mellon, Complex Social Systems Seminar Series, April 2019  
National Institute for Mathematical and Biological Synthesis, Tennessee, April 2019  
Cornell Tech Graduate Center, March 2019  
CUNY Graduate Center, March 2019  
Penn, Regional Alumni Club in Jacksonville, January 2019  
UCSF, PRISM Health Symposium, December 2018  
Stanford, EE Computer Systems Colloquium, November 2018  
Penn, Social and Behavioral Science Workshop, November 2018  
Penn, Social Norms and Informal Institutions Lecture, November 2018  
Penn, Penndemic 2018, October 2018  
Smithsonian Institution, October 2018  
Microsoft, Workplace Analytics Workshop, October 2018  
Amazon Headquarters, Seattle, Washington, October 2018  
Penn, Workshop on Norms and Behavior Change, October 2018  
NSF, Distinguished Lecture Series, September 2018  
Penn Medicine, Neurosurgery Grand Rounds, September 2018  
NIH, Meeting on Misinformation and Social Media, August 2018  
Princeton, Woodrow Wilson School, August 2018  
(Keynote), ICCS, Network Interventions for Social Good, Cambridge, MA, July 2018  
(Keynote), IC2S2, Kellogg School of Management, July 2018  
Academy of Behavioral Medicine, Hilton Head, June 2018  
HB Sports and Entertainment STTAR Summit, June 2018  
(Keynote) American Heart Association, June 2018  
Penn, IT Symposium, May 2018  
(Keynote), Washington University in St. Louis Medical School Symposium, Missouri, April 2018  
Stanford, Social Media and Democracy Workshop, California, April 2018  
Santa Fe Institute, New Mexico, April 2018  
Mailman School of Public Health, Columbia University, April 2018  
The National Academies of Sciences, Engineering, Medicine, Washington, D.C., March 2018  
Knowledge Teach-In, Penn, March 2018  
UCSF, PRISM Conference, December 2017  
NYU, Center for Data Science, December 2017  
University of Chicago, Computational Social Science Workshop, November 2017  
Penn-CMU, Roybal Center on Behavioral Economics and Health Annual Meeting, October 2017



(Keynote) cSCAN, Glasgow, Scotland, October 2017  
Santa Fe Institute, New York, July 2017  
Analytical Sociology Workshop, Stockholm, Sweden, June 2017  
UC Davis, Re-computing Social Sciences Workshop, May 2017  
(Keynote) Society for Adolescent Health and Medicine, New Orleans, March 2017  
UCLA, California Center for Population Research, February 2017  
Harvard, GSE, February 2017  
Drexel, Department of Psychology, January 2017  
Penn, Behavioral Economics and Health Symposium, December 2016  
UCSF, Center for Vulnerable Populations, December 2016  
(Keynote) American Heart Association Annual Innovation Forum, Chicago, November 2016  
(Keynote) Social Informatics 2016, Seattle, November 2016  
Penn-CMU, Roybal Center on Behavioral Economics Annual Meeting, October 2016  
Penn, Psychology and Evolutionary Biology, October 2016  
Princeton, Department of Sociology, October 2016  
Yale, YINS Workshop, September 2016  
Stanford, Department of Psychology, July 2016  
(Keynote) Norms, Actions and Games Conference, Toulouse, June 2016  
WZB Berlin Science Center, Berlin, June 2016  
Sorbonne, Paris, June 2016  
Institute for Advanced Study, Sweden, June 2016  
Cornell, Department of Communications, April 2016  
Duke, Department of Sociology, April 2016  
(Keynote) Center for Mathematical Sciences Annual Symposium, Auckland, NZ, February 2016  
(Keynote) AAI & World Wide Web and Population Health (W3PHI), February 2016  
Northwestern, Kellogg, January 2016  
Microsoft Research, Redmond, WA, January 2016  
Penn, Language and Cultural Evolution Workshop, December 2015  
Penn, Health Communication Speaker Series, December 2015  
Penn, Perelman School of Medicine, December 2015  
Penn, Elihu Katz Symposium, November 2015  
Penn, Warren Center for Network and Data Sciences, October 2015  
Colby, Sociology Seminar, October 2015  
Rutgers, Center for Cognitive Science, September 2015  
ICA Panel on Computational Social Science, Puerto Rico, May 2015  
Northwestern, Institute on Complex Systems, May 2015  
USC, Gould School of Law, April 2015  
Stanford, Psychology Department, April 2015  
Stanford, Media X, March 2015  
Stanford, Center for Advanced Study in the Behavioral Sciences, February 2015  
Northeastern, Network Science Seminar, February 2015  
(Keynote) Center for Mathematical Sciences Annual Symposium, Auckland, NZ, December 2014  
Columbia, Department of Sociology, Columbia University, November 2014  
NIH, National Cancer Institute, Shady Grove, MD, November 2014  
Berkeley, Department of Sociology, October 2014  
(Keynote) Johns Hopkins, Bloomberg School of Public Health Symposium, October 2014  
Cornell, Computational Social Science Seminar, September 2014  
Stanford, Symposium on Computational Social Science, August 2014  
Penn, Wharton School, August 2014  
Microsoft, New York City, June 2014  
McDonnell Foundation, Complex Systems Scholars Symposium, May 2014  
Penn, Department of Sociology, April 2014  
Stony Brook, Institute for Advanced Computational Science, April 2014

UCLA, Institute for Pure and Applied Mathematics, January 2014  
Berkeley, Simons Center for the Theory of Computing, November 2013  
Harvard, U.S.-China Health Summit, October 2013  
Penn, Behavioral Ethics Seminar, Philosophy Department, October 2013  
Penn, Decision Process Seminar, Wharton School, October 2013  
(Keynote) R.I.T. Big Data Conference, October 2013  
Princeton, NIH RAPIDD Workshop, Epidemiology and Networks, October 2013  
ASA, Web-Based Social Science Forum, August 2013  
Apple, Cupertino, CA, June 2013  
UCSF, Center for Vulnerable Populations, UCSF, May 2013  
Scott & White Healthcare, Austin, TX, May 2013  
Harvard, Causal Inference Conference, May 2013  
U.S. Surgeon General's Office, Program for Health Innovation, April 2013  
M.I.T., Future ICT Conference, February 2013  
M.I.T., Plenary Speaker, Future of Health and Wellness, February 2013  
Yale, School of Public Health, January 2013  
National Academy of Sciences, Kavli Frontiers of Science Symposium, December 2012  
Penn, Annenberg School of Communications, December 2012  
Northeastern, Complex Systems Seminar Series, October 2012  
Duke Medical School, October 2012  
Johns Hopkins Medical School, October 2012  
Yale, Sociology Department, September 2012  
Boston U., Health Policy Institute, September 2012  
Boston U., School of Management, May 2012  
M.I.T., Learning Information Decision Sciences Seminar, May 2012  
Santa Fe Institute, Science Board Symposium, May 2012  
Stanford, Demography and Population Biology, August 2011  
Stanford, Research on Algorithms and Incentives in Networks Seminar, June 2011  
Columbia, ISERP Seminar, May 2011  
Stanford, Economic Networks Seminar, May 2011  
Stanford, IRISS Board of Trustees, May 2011  
M.I.T., Europe Conference, Vienna, Austria, March 2011  
U. of Chicago, Graduate School of Business, March 2011  
Princeton, Department of Sociology, November 2010  
M.I.T., Industrial Liaison Program, October 2010  
ISI Foundation, Complex Systems Lab, Torino, Italy, June 2010  
ESCP Europe Business School, May 2010  
U. of Maryland, Center for Scientific Computation & Mathematical Modeling, April 2010  
(Keynote) Warwick Medical School, Health Sciences Research Institute, March 2010  
Warwick Center for Complex Systems, March 2010  
Harvard Business School, February 2010  
Northeastern, Department of Physics, February 2010  
John Snow, Inc., December 2009  
NYU Stern, September 2009  
Microsoft Research, July 2009  
Institute for Cross-Disciplinary Physics and Complex Systems, July 2009  
M.I.T., Media Lab, June 2009  
M.I.T., Engineering Systems Design Group, May 2009  
Stanford, Department of Sociology, April 2009  
Princeton, Woodrow Wilson School, April 2009  
Berkeley, Department of Sociology, April 2009  
Harvard, Kennedy School of Government, April 2009  
M.I.T., Organization Studies Group, April 2009

Harvard, Berkman Center / Harvard Law School, April 2009  
 M.I.T., Sloan School of Management, February 2009  
 M.I.T., Industrial Liaison Program, December 2008  
 Princeton, Economic Sociology Workshop, November 2008  
 Stanford, Networks Seminar, October 2008  
 M.I.T., Laboratory for Information and Decision Sciences, October 2008  
 Harvard, Graduate School of Education, May 2008  
 Harvard, Graduate School of Education, February 2008  
 Stanford, Graduate School of Business, January 2008  
 M.I.T., Sloan School of Management, January 2008  
 Northwestern, Department of Sociology, December 2007  
 NYU, Department of Sociology, December 2007  
 U. of Wisconsin, Department of Sociology, Madison, December 2007  
 Harvard, Workshop on Applied Statistics, October 2007  
 Harvard, Culture and Social Analysis Workshop, October 2007  
 Mediterranean Institute for Advanced Studies, August 2007  
 M.I.T., Economic Sociology Seminar, September 2006  
 Santa Fe Institute, July 2006  
 Princeton, Complex Systems Workshop, May 2006  
 Columbia, Collective Dynamics Group, September 2005  
 European Science Foundation International Meeting on Physics of Risk, November 2004

## Selected Conference and Working Group Presentations

- "Social tipping points for unprecedented change," EU Learn, Knowledge Talks on Tipping Points, threats and opportunities, June 2022.
- "Reduction of race and gender bias in recommendations for clinical treatment using a clinician peer network based intervention in experimental setting," Annual ICA Conference, May 2022.
- "Influencers and Misinformation," DARPA Studying Long-Tailed Influencer-Enabled Crowd Extremism, October 2021
- "Facts or Stories? How to Use Social Media for Cervical Cancer Prevention: A Multi-Method Study and Randomized Controlled Trial of the Effects of Sender Type and Content Type on Message Shares," International Communication Association Conference, May 2019
- "Experimental Studies of Critical Mass Dynamics in the Emergence of Social Norms", American Sociological Association, August 2018
- "Collective Intelligence in Medical Decision Making", IGNITE Talk, RWJF Pioneer Gathering, NYC, October 2016
- "Hacking the System of Networked Social Influence," Wharton School, University of Pennsylvania, December 2015
- "Spontaneous Social Conventions," Analytical Sociology Conference, Cambridge, MA, June 2015.
- "Emergent Social Networks," ASA Mathematical Sociology Regular Session, Denver, August 2012.
- "Dynamics of Emergent Social Structure," INAS, Columbia University, June 2012.
- "New Experiments on Social Behavior," Economic Sociology Working Group, M.I.T. November 2009.
- "Free Riding and The Stability of Collective Action" ASA Invited Session on Future Directions in Mathematical Sociology, San Francisco August 2009.
- "Dynamics of Diffusion on Social Networks," ASA Invited Session on Networks, San Francisco August 2009.
- "Diffusion and Network Dynamics," BCNet Workshop: Trends and Perspective in Complex Networks, Barcelona, Spain December 2008.
- "New Theory and Experiments on the Diffusion of Behavior," DIMACS Working Group on Social and Biological Contagion, Rutgers, NJ November 2008.

- "Diffusion of Health Behavior: A Social Network Experiment," Robert Wood Johnson Annual Meeting, Aspen, May 2008.
- "New Theory and Experiments in Diffusion Studies," American Sociological Association Annual Meeting, New York City, August 2007.
- "An Experimental Study of Social Diffusion," Robert Wood Johnson Annual Meeting, Aspen, May 2007
- "New Approaches to Diffusion on Social Networks," Robert Wood Johnson Seminar Series, Harvard School of Public Health, March 2007
- "Empirical Implications of Mathematical Models in Sociology," Research Group on Social Epidemiology, Harvard School of Public Health, November 2006.
- "Free Riding and the Strength of Weak Incentives," Inter-Ivy Sociology Conference, Cornell University, March 2006.
- "Complex Contagions and the Weakness of Long Ties," First International Workshop on Games, Networks, and Cascades, New York City, October 2005.
- "Social Networks and Collective Action," Cornell University Sociology Conference, Ithaca, NY, October 2004.
- "Purposive, Solidary, and Instrumental Incentives in the Mobilization of American Social Groups" (w/Matt Grossman), Empirical Implications of Theoretical Models (EITM), NSF Workshop, Duke University, July 2004.
- "The Stability of Cultural Diversity on Dynamic Networks," First International Winter School on Physics of Socio-Economic Systems, University of Konstanz, February 2004

## Graduated Ph.D. Advisees

Calvin Isch	Annenberg		Current
Doug Guilbeault	Annenberg	2020	Asst. Prof. UC Berkeley
Sijia Yang	Annenberg	2019	Asst. Prof. UW Madison
Joshua Becker	Annenberg	2018	Asst. Prof. Univ. London
Devon Brackbill	Annenberg	2016	Senior Data Scientist, Amazon
Jingwen Zhang	Annenberg	2016	Asst. Prof. UC Davis

## Departmental and University Service

### University of Pennsylvania

- 2019- Data-Driven Discovery Working Group
- 2019- University Senate Executive Committee
- 2019- Graduate Studies Committee
- 2018- Social and Behavioral Science Initiative
- 2018-19 Digital Media and Technology Committee
- 2018 Tenure Review Committee
- 2017 Ph.D. Admissions Committee
- 2017- Affiliated Faculty, Penn LDI, Center for Health Incentives and Behavioral Economics
- 2016- Mentoring Faculty, Master of Behavioral and Decision Sciences Program
- 2015- Tenure Review Committee
- 2015 Speakers Series Committee
- 2014 Co-Organizer (with Shawndra Hill), Warren Center Symposium
- 2013 Co-Organizer, Warren Center Distinguished Lecture Series
- 2013 Faculty Member, Warren Center for Network and Data Sciences
- 2013 University Committee on Research (Alternate)

### M.I.T.

- 2012-13 Member, M.I.T. Committee on Curriculum Design

- 2012-13 Co-Organizer (with Ozge Karanfil), System Dynamics Society Colloquium
- 2011-12 Member, M.I.T. Faculty Reappointment Subcommittee
- 2011-12 Scientific Advisory Committee, Workshop on Information and Decision in Social Networks
- 2008-12 Organizer, Social Dynamics Seminar, M.I.T./Harvard University
- 2009-12 System Dynamics and Economic Sociology Ph.D. Recruitment Committees

## Professional Service

- 2021- Scientific Advisory Board, Starling Trust
- 2020- Editorial Board, Social Psychological Quarterly
- 2020-22 James S. McDonnell Foundation Advisory Panel
- 2018 Rationality and Society Awards Committee, ASA
- 2018 Organizer, ASA Pre-Conference on Computational Sociology
- 2017-19 IC2S2 Program Committee Member
- 2017 Mathematical Sociology Awards Committee, ASA
- 2017 Co-Organizer, Analytic Sociology Faculty Mentoring Symposium, Stockholm, Sweden, June 2017 (with Peter Hedstrom, Emily Erikson and Elizabeth Bruch)
- 2015- ASA Section Proposal, Analytical Sociology Section, (with Emily Erikson, Peter Hedstrom, and Elizabeth Bruch)
- 2015- Series Co-Editor, Princeton University Press Series in Analytical Sociology
- 2014 Program Committee, International Conference on Social Informatics (DYAD)
- 2013-15 Elected Council Member, Mathematical Sociology Section, American Sociological Association
- 2012- Editorial Board, *Journal of Mathematical Sociology*
- 2012 Scientific Advisory Committee, ECCS'12 Data-Driven Modeling of Contagion Processes
- 2012 ASA Mathematical Sociology Section Award Committee Member
- 2011-13 Consulting Editor, *American Journal of Sociology*
- 2011 Organizer, Regular Sessions on Social Networks:
  - Session on Homophily and Tie Dynamics
  - Session on New Theoretical and Empirical Approaches
  - Session on Norms and Networks
  - Session on Organizational and Economic Networks
 ASA Annual Meeting, Las Vegas, NV
- 2007 Organizer, Robert Wood Johnson Brown Bag Seminar Series, Harvard University
- 2005 Co-Organizer, International Workshop on "Games, Networks, and Cascades," New York City (with Michael Macy and Vincent Buskens)
- 2003 Organizer, Interdisciplinary Seminar on Network Dynamics, Cornell University

## Reviewer

*Science, Nature, Nature Communications, Nature Human Behaviour, PNAS, Physical Review Letters, American Journal of Sociology, American Sociological Review, American Journal of Epidemiology, Annual Review of Sociology, American Political Science Review, Management Science, Journal of Communication, Computational Management and Organization Theory, Organization Science, Social Forces, Rationality & Society, Journal of the European Physical Society, JASSS, Journal of Mathematical Sociology, PLoS One, National Science Foundation, The Lancet, The National Academies Institute of Medicine, and others*

## Selected Consulting & Advisory Clients

Amazon, Apple, Ben & Jerry's, Cigna, General Motors, Microsoft, the NBA, the U.S. Army, and many philanthropic organizations