## 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**

2019-	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

Computational Social Science, Social Epidemiology, Social Networks, Internet Experiments, Collective Action and Social Movements, Innovation Diffusion, Sustainability Policy, Cultural Evolution, Agent Based Modeling

# **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 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

#### <u>Grants</u>

- 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
  - Selected Reviews & Coverage: <u>Nature</u>, <u>New York Journal of Books</u>, <u>NPR Hidden Brain</u>, <u>Times of India</u>, <u>ABC Australia</u>
- 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
  - Selected Reviews & Coverage: <u>Science, Journal of Mathematical Sociology, Information, Communication & Society, New Scientist, MIT Sloan Management Review, Strategy + Business, The American Interest, American Journal of Sociology, Livemint, Undark</u>

#### Peer-Reviewed Articles

- Guilbeault, Doug, Andrea Baronchelli and Damon Centola. 2021. *Nature Communications*. "Experimental Evidence for Scale-Induced Category Convergence across Populations." Science Daily
- Brackbill, Devon and Damon Centola. 2020. *PlosOne*. "Impact of network structure on collective learning: An experimental study in a data science competition."
- Guilbeault, Doug and Damon Centola. 2020. *PlosOne*. "Networked Collective Intelligence Improves Dissemination of Scientific Information Regarding Smoking Risks."

  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. <a href="Science">Science</a>, <a href="PNAS">PNAS</a>, <a href="Annual Reviews Magazine">Annual Reviews Magazine</a>
- 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
- 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 "Stellar Seven" by the section on Communication, Information, 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
  - 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 Schnettler. 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 Schnettler. New York: Russell Sage Press.

## Peer-Reviewed Book Chapters

- Centola, Damon (Forthcoming). "Complex Contagions," in *Research Handbook on Analytical Sociology*, Manzo G. (Ed.), 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: 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. 2021. "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," in *2019 Annual Report of the Sabin-Aspen Vaccine Science & Policy Group.*Science, PNAS, Forbes

# **Op-Ed and Commentary**

- 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

<u>Internet Experiments Practicum (UG)</u>: In this hands-on course, students work on teams with active researchers at Penn to gain experience in experimental research. Research topics depend on student interests, with an emphasis on one or more of the following areas of faculty expertise:

collective intelligence, network dynamics of peer influence, social media technologies, political polarization, and social change in online networks.

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 (UG/Coursera): This online course condenses the last decade of research on social networks and behavior change into six modules. Each module provides an indepth 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.

<u>Social Theories and Online Data (G)</u>: 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.

<u>Seminar on Computational Social Science (G)</u>: This is an advanced graduate research seminar in which guest speakers will present cutting-edge research in Computational Social Science. The focus of the class will be on rigorously evaluating the speakers' theoretical models, empirical methods, and overall scientific contribution.

## **Invited Talks and Keynote Addresses**

(Keynote) WLA Annual Meeting, 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) AAAI & 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

- "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.

## **Graduate Student Advising**

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

## Departmental and University Service

<b>University</b>	<u>r of Pennsylvania</u>
2019-	Data-Driven Discovery Working Group
2019-	University Senate Executive Committee
2019-	Graduate Studies Committee
2018-	Social and Behavioral Science Initiative
2018-9	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)
<u>M.I.T.</u>	
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**

2020-	Editorial Board, Social Psychological Quarterly
2020-	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

<sup>&</sup>quot;Social Networks and Collective Action," Cornell University Sociology Conference, Ithaca, NY, October 2004.

<sup>&</sup>quot;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.

<sup>&</sup>quot;The Stability of Cultural Diversity on Dynamic Networks," First International Winter School on Physics of Socio-Economic Systems, University of Konstanz, February 2004

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