

Curriculum Vitae

Damon M. Centola

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Education

Ph.D. Sociology, Cornell University, 2006
Thesis: *Simple Models of Collective Behavior*
MA Sociology, Cornell University, 2004
BA Philosophy/Logic, Marlboro College, 1997, *summa cum laude*

Appointments

2013- Associate Professor, Annenberg School for Communications, University of Pennsylvania
Director, Network Dynamics Group
Faculty, School of Engineering
Faculty, Warren Center for Network and Data Sciences
2008-13 Assistant Professor, Sloan School of Management, M.I.T.
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, Web-Based Experiments,
Online Health Policy, Collective Action, Agent Based Modeling

Awards and Honors

2017 James Coleman Award for Outstanding Article, Rationality and Society Section of the
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 RWJF Award for National Leader in American Healthcare Under 40, Runner-up
2012 Kavli Frontiers of Science Participant, National Academy of Sciences
2011 Leo Goodman Award for Outstanding Contributions to Sociological Methodology
2011 Fellow, Institute for Research in the Social Sciences, Stanford University
2011 ASA, Award for Best Publication in Mathematical Sociology
2010 Fellow, Center for the Study of Society and Organizations, Princeton University

2010	M.I.T. Prize for Research in Computers and Communications (\$50,000)
2009	ASA, Award for Best Publication in Mathematical Sociology
2006	ASA, Award for Best Publication in Mathematical Sociology
2004	Columbia University Visiting Scholar Fellowship
2004	Cornell University Russell Sage Fellowship
2004	EITM Summer Institute Fellow
2002	NSF IGERT Fellowship
2000	Santa Fe Institute Summer Fellow

Grants

- 2016-18 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" (with Joshua Becker and Natalie Herbert) (\$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), with Jingwen Zhang, Devon Brackbill, and Sijia Yang.
- 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. 2017 (expected) "How Behaviors Spread: The Science of Complex Contagions." Under advance contract with Princeton University Press.

Journal Publications

- 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.
 • 2017 James Coleman Award for Outstanding Article, Rationality and Society Section of the American Sociological Association
[Science Newline](#)

- 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](#), [Phys.org](#), [Daily Mail](#)
- 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.
 • The most downloaded articles from Preventive Medicine Reports in the last 90 days.
[NPR Newsworks](#), [University Herald](#), [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.
 • 2014 Altmetric impact score ranked in the 95th percentile by Social Science and Medicine
- 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 Best Publication 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.

Centola, Damon. & M. Macy. 2005. *The Handbook of Group Processes*, edited by Susan Whelan.

"Social Life *in Silico*: The Science of Artificial Societies." New York: Russell Sage Press.

Op-Ed and Commentary

Centola, Damon. 2015. *The Conversation*. April 07, 2015.

"Controlling public opinion: what the debate over 'The Dress' reveals".

Patents and Technologies

2014 "Establishing A Social Network" (Inventor, US Patent# 8713143)

2002 "Net Logo" Agent Based Modeling Environment (Developer, Release 1.0)

Courses

Computational Social Science: Sociology in the 21st Century

Agent Based Modeling

Designing Internet Experiments

Computational Methods: Models and Data

Artificial Societies

Networks: Theory, Data, and Policy

Social Networks and Complex Systems

System Dynamics (MBA)

Collective Action and Collective Behavior

Social Media and Social Dynamics

New Methods for Studying Population Health

Web-Based Social Research

Social Epidemiology

Invited Talks

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

"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.
- "Purposeful, 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

Graduate Student Advising

Chair	Soojong Kim	Annenberg	Current	
Member	David Larochelle	Annenberg	Current	
Member	Natalie Herbert	Annenberg	Current	
Member	Sijia Yang	Annenberg	Current	
Chair	Joshua Becker	Annenberg	Current	
Chair	Devon Brackbill	Annenberg	2016	Chief Data Scientist
Member	Jingwen Zhang	Annenberg	2016	Asst. Prof. UC Davis

Departmental and University Service

University of Pennsylvania

- 2017 Ph.D. Admissions Committee
- 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 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

- 2017- IC2S2 Program Committee Member
- 2017- Mathematic Sociology Awards Committee ASA
- 2017- Co-Organizer, Analytic Sociology Annual Symposium, Stockholm, Sweden, June 2017 (with Emily Erikson and Elizabeth Bruch)
- 2015- Section Founder, Analytical Sociology, ASA (with Emily Erikson, Peter Hedstrom, and Elizabeth Bruch)
- 2015- Series 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, PNAS, American Journal of Sociology, American Sociological Review, American Journal of Epidemiology, 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