

Peter Sheridan Dodds—Curriculum Vitae

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December 23, 2011



Positions held	2010–: University of Vermont Associate Professor, Department of Mathematics & Statistics.	Burlington, VT
	2011–: University of Vermont Director, Complex Systems Center.	Burlington, VT
	2007–: University of Vermont Member of Complex Systems Center, University of Vermont.	Burlington, VT
	2007–: University of Vermont Visiting Fellow, Vermont Advanced Computing Center.	Burlington, VT
	2006–2010: University of Vermont Assistant Professor, Department of Mathematics & Statistics.	Burlington, VT
	2003–2006: Columbia University Associate Research Scientist, Institute for Social & Economic Research & Policy. Assistant Director, Collective Dynamics Group.	New York, NY
	2002–2003: Columbia University Postdoctoral Research Scientist, Institute for Social & Economic Research & Policy.	New York, NY
	2000–2002: Columbia University Postdoctoral Research Scientist, Columbia Earth Institute.	New York, NY
Education	1994–2000: Massachusetts Institute of Technology PhD in Mathematics, June 2000. Supervisor: Prof. D. H. Rothman, Department of Earth, Atmospheric and Planetary Sciences. Thesis title: "Geometry of River Networks."	Cambridge, MA
	1995: University of Melbourne M. Sc. Departments of Mathematics and Physics. Supervisor: Dr. T. Prellberg. Thesis title: "On the Thermodynamic Formalism for the Farey Map."	Melbourne, Australia

1988–93: University of Melbourne

Melbourne, Australia

Bachelor of Science (double major in Mathematics and Physics) and Bachelor of Electrical Engineering, both with First Class Honors.

Awards

Housman award for excellence in teaching, Department of Mathematics, Massachusetts Institute of Technology, 1999.

Fulbright Postgraduate Scholarship to support PhD at the Massachusetts Institute of Technology, 1994–1999.

Nominated for the Massachusetts Institute of Technology’s Baker Teaching Award, 1994–1995.

Commonwealth Scholarship to fund PhD at Trinity College, Cambridge University, 1994 (declined).

Siemens Class Prize, top student in Honors year of Electrical Engineering, University of Melbourne, 1992.

Charles Abbott Scholarship, Trinity College, University of Melbourne, 1991, (awarded for academic performance, leadership qualities and athletic ability).

Papers in review

C. A. Bliss, I. M. Kloumann, K. D. Harris, C. M. Danforth, and P. S. Dodds. “Twitter reciprocal reply networks exhibit assortativity with respect to happiness.” In review at *Journal of Computational Science*.

P. S. Dodds, K. D. Harris, and J. L. Payne. “Direct, physically motivated derivation of triggering probabilities for spreading processes on generalized random networks.” In review at *Physica D*.

Papers in press

I. M. Kloumann, C. M. Danforth, K. D. Harris, C. A. Bliss, and P. S. Dodds. “Positivity of the English Language.” To appear in *PLoS ONE*.

Papers in print (refereed)

Notes:

- 2703 total citations (112.6 per paper) according to [Google Scholar Citations](#), as of August 31, 2011.
- 1227 total citations (51.1 per paper) according to the [ISI Web of Knowledge](#), as of August 31, 2011.
- Google’s and ISI’s [h-index](#): 17 and 13.
- Formal fields include: Physics, Applied Mathematics, Geomorphology, Geophysics, Biology, Economics, Sociology, Psychology, and Marketing.
- Journals include: Science Magazine, Proceedings of the National Academy of Sciences, Physical Review Letters, Physical Review E, Journal of Theoretical Biology, Annual Review of Earth & Planetary Sciences, Journal of Happiness Studies, Journal of Consumer Research, Management Science, Marketing Letters, and PLoS ONE.

25. P. S. Dodds, K. D. Harris, I. M. Kloumann, C. A. Bliss, and C. M. Danforth.
“Temporal patterns of happiness and information in a global social network: Hedonometrics and Twitter.” *PLoS ONE*, 6, e26752, 2011.
24. J. L. Payne, K. D. Harris, and P. S. Dodds.
“Exact solutions for social and biological contagion models on mixed directed and undirected, degree-correlated random networks” *Phys. Rev. E*, 84, 016110, 2011.
23. P. S. Dodds, K. D. Harris, and J. L. Payne.
“Direct, physically motivated derivation of the contagion condition for spreading processes on generalized random networks.” *Phys. Rev. E*, 83, 056122, 2011.
22. P. S. Dodds.
“Optimal form of branching supply and collection networks.” *Phys. Rev. Lett.*, 104, 048702, 2010.
21. J. L. Payne, P. S. Dodds, and M. J. Eppstein.
“Information cascades on degree-correlated random networks.” *Phys. Rev. E*, 80, 026125, 2009.
20. P. S. Dodds and C. M. Danforth.
“Measuring the Happiness of Large-Scale Written Expression: Songs, Blogs, and Presidents.” *Journal of Happiness Studies*, DOI: 10.1007/s10902-009-9150-9, Published online July 20, 2009. Print version: **11**, 444–456, 2010.
19. P. S. Dodds and J. L. Payne.
“Analysis of a threshold model of social contagion on degree-correlated networks.” *Phys. Rev. E*, 79, 066115, 2009.
18. W. R. Hartmann, P. Manchanda, H. Nair, M. Bothner, P. S. Dodds, D. Godes, K. Hosanagar, and C. Tucker.
“Modeling Social Interactions: Identification, Empirical Methods and Policy Implications.” *Marketing Letters*, **19**: 287–304, 2008.
17. D. J. Watts and P. S. Dodds.
“Influentials, Networks, and Public Opinion Formation.” *Journal of Consumer Research*, **34**, 441–458, 2007.
16. N. Hanaki, A. Peterhansl, P. S. Dodds and D. J. Watts.
“Cooperation in Evolving Social Networks.” *Management Science*, **53**: 1036–1050, 2007.
15. M. J. Salganik, P. S. Dodds, and D. J. Watts.
“Experimental study of inequality and unpredictability in an artificial cultural market.” *Science*, **311**:854–856, 2006.

14. D. J. Watts, R. Muhamad, D. C. Medina, and P. S. Dodds.
"Multiscale, resurgent epidemics in a hierarchical metapopulation model."
Proc. Natl. Acad. Sci., **102**:11157–11162, 2005.
13. P. S. Dodds and D. J. Watts.
"A generalized model of social and biological contagion."
J. Theor. Biol., **232**:587–604, 2005.
12. P. S. Dodds and D. J. Watts.
"Universal behavior in a generalized model of contagion."
Phys. Rev. Lett., **92**:218701, 2004.
11. P. S. Dodds, C. F. Sabel, and D. J. Watts.
"Information exchange and the robustness of organizational networks."
Proc. Natl. Acad. Sci., **100**:12516–12521, 2003.
10. P. S. Dodds, R. Muhamad, and D. J. Watts.
"An experimental study of social search in global social networks."
Science, **301**:827–829, 2003.
9. P. S. Dodds and J. S. Weitz.
"Packing-limited growth of irregular objects."
Phys. Rev. E, **67**:016117, 2003.
8. D. J. Watts, P. S. Dodds, and M. E. J. Newman,
"Identity and search in social networks."
Science, **296**:1302–1305, 2002.
7. P. S. Dodds and J. S. Weitz.
"Packing-limited growth."
Phys. Rev. E, **65**:056108, 2002.
6. P. S. Dodds, D. H. Rothman, J. S. Weitz.
"Re-examination of the '3/4-law' of Metabolism."
J. Theor. Biol., **209**:9–27, 2001.
5. P. S. Dodds and D. H. Rothman.
"Geometry of River Networks III: Characterization of Component Connectivity."
Phys. Rev. E **63**:016117, 2001.
4. P. S. Dodds and D. H. Rothman.
"Geometry of River Networks II: Distributions of Component Size and Number."
Phys. Rev. E **63**:016116, 2001.

3. P. S. Dodds and D. H. Rothman.
[“Geometry of River Networks I: Scaling, Fluctuations, and Deviations.”](#)
Phys. Rev. E **63**:016115, 2001.
2. P. S. Dodds and D. H. Rothman.
[“Scaling, Universality, and Geomorphology.”](#)
Annu. Rev. Earth Planet. Sci., **28**:571–610, 2000.
1. P. S. Dodds and D. H. Rothman.
[“Unified View of Scaling Laws for River Networks.”](#)
Phys. Rev. E **59**:(5) 4865–4877, 1999.

Book chapters (refereed) D. J. Watts and P. S. Dodds. “Threshold models of social influence” in [The Oxford Handbook of Analytic Sociology](#), Peter Hedström and Peter Bearman, eds. Oxford University Press, 2009.

Contributions P. S. Dodds.
 “Branching network metrics”
 in [The Algorithmic Beauty of Seaweeds, Sponges and Corals](#), J. A. Kaandorp And J. E. Kubler, eds., Springer-Verlag, 2001.

Funding *CAREER: Explorations of Complex Social and Psychological Phenomena through Multiscale Online Sociological Experiments, Empirical Studies, and Theoretical Models.*, NSF Career award, 2009–2014; PI. \$667,000.

Theoretical investigation and analysis of complex networks: social contagion and structure detection. Vermont EPSCoR Graduate Student Research grant, 2009; PI. \$27,000.

Investigations of Complex Social Phenomena through Large-Scale Online Experiments: Explorations of Collective Creativity and Problem Solving, Vermont EPSCoR Pilot Research grant, 2007; PI. \$25,000.

Office of Naval Research, *Efficient Collective Search in Social Networks with Partial and Ambiguous Knowledge*, 2004; PI.

National Science Foundation, Human and Social Dynamics, *The Structure, Evolution, and Function of Large-Scale Social Networks: Theory, Data, and Experiment*, 2004–2006; Co-PI.

Office of Naval Research, *Decentralized Search, Robustness, and Recovery in Organizational Networks*, 2002-2003; Co-PI.

Consulting MITRE Corporation, McClean, VA; 2009–.

Press highlights

Notes:

- Four global press coverage events for research on Happiness, Taste Contagion (Musiclab experiment), and the Small-World Phenomenon (twice).
- Work on scaling in biology, river networks, and influence also covered by international media.
- Extensive record of press coverage at end of C.V.

U.S. News and World Report: [Twitter: World Is Getting More Miserable](#) by Meg Handley (December 20, 2011)

wired.com: [The Design of Science: 10 Great Research Graphics](#), Brandon Keim (December 13, 2011).

New York Times: [Twitter Study Tracks When We Are :\)](#), Benedict Carey (September 29, 2011).

Science Magazine: [Social Scientists Wade Into the Tweet Stream](#), Greg Miller (September, 2011).

wired.com: [Happy Words Trump Negativity in the English Language](#), Brandon Keim (August 31, 2011).

The Economist: [Tree and Leaf](#) (February 11, 2010).

Scientific Blogging : [Peter Sheridan Dodds, Theoretical Biology's Buzzkill](#) by Mark Changizi (February 9, 2010).

New York Times: [Does a Nation's Mood Lurk in its Songs and Blogs?](#), Benedict Carey (August, 2009).

Science Magazine: [Blogs: Happiness Barometers?](#) (August, 2009).

San Francisco Chronicle: [Web Offering More Gauges about Happiness](#) (August, 2009).

Reuters: [Jackson's Death was Blogosphere's Saddest Day: Study](#) (July 29, 2009).

New York Times: [Using Twitter as a Collective Mood Ring](#) (August, 2009).

ScienceNOW: [How Happy is the Internet?](#) (August, 2009).

Discover Magazine: [Pop Music & Blogs as Indicators of Gross National Happiness](#) (August, 2009).

CNN: [How do we Find Life's Benchmark?](#) (August, 2009).

Chronicle of Higher Education: [Think You're Happy? Song Lyrics May Have the Answer](#) (July, 2009).

Scientific American: [Measuring Emotion in Cyberspace](#), (July, 2009).

The View: [It's Complex](#) by Joshua Brown, (November 12, 2008).

New York Times: [In Music, Others' Tastes May Help Shape Your Own](#), Benedict Carey (February 14, 2006).

Wall Street Journal: [Look at This Article. It's One of Our Most Popular](#) by Carl Bialik (May 20, 2009).

The New Yorker: [The Science of Success](#) by James Surowiecki (July 9, 2007).

Scientific American: ["Hit" Songs Unpredictable, Thanks to Peer Pressure](#) by David Biello (February 10, 2006).

National Geographic Online: [Attention "American Idol": Hits Are Tough to Predict](#) by Mason Inman (February 13, 2006).

New York Times: [Degrees of Separation Are Likely More Than 6, Especially in E-Mail Age](#), Kenneth Chang (August 12, 2003).

Reuters: [Six Degrees Experiment Proves It's a Small World](#) (August 8, 2003).

Associate Press: [Study: Strangers on Web Just Clicks Away](#) (August 8, 2003).

Bloomberg News: ["E-mail test shows 'six degrees' connection can work,"](#) John Lauerman (August 8, 2003).

Financial Times: [Send an e-mail to anyone in six steps](#), Clive Cookson (August 8, 2003).

BBC: [E-mail shrinks the world](#), BBC (August 7, 2003).

New York Times: [Using E-Mail to Count Connections](#), Sarah Milstein (December, 2001)

wired.com: [Kevin Bacon: You've Got Mail](#), Kendra Mayfield (January 15, 2002).

New Scientist [Emails to test "six degrees of separation"](#), Robert Matthews (January 23, 2002).

The Guardian: [Six emails of separation](#), Sarah Left (February 1, 2002).

Science Magazine: [Net News: Pass It On](#). (February 8, 2002).

Washington Post: [Keeping Our Distance](#), Linton Weeks (February 28, 2002).

[Nature](#): All creatures great and small (Sep 27, 2001).

[New York Times](#): [Physicists invading geologists' turf](#) (November 23, 1999).

[Science Magazine](#): New clues to why size equals destiny (Jun 4, 1999).

Teaching

Assistant Professor at University of Vermont teaching undergraduate and graduate students, 2006–2009. Classes taught:

- [Principles of Complex Systems](#), CSYS/MATH 300, Fall 2011
- [Linear Algebra](#), Math 124A, Fall 2011
- [Complex Networks](#), Math/CSYS 303, University of Vermont, Spring 2010
- [Principles of Complex Systems](#), CSYS/MATH 300, Fall 2009
- [Linear Algebra](#), Math 124A, Fall 2009
- [Complex Networks](#), Math/CSYS 303, University of Vermont, Spring 2009
- [Linear Algebra](#), Math 124C, University of Vermont, Spring 2009
- [Principles of Complex Systems](#), Math/CSYS 300, University Vermont, Fall 2008
- [Linear Algebra](#), Math 124B, University Vermont, Fall 2008
- [Complex Networks](#), Math 295A, University of Vermont, Spring 2008
- [Basics of Complex Systems](#), Math 295C, University of Vermont, Fall 2007
- [Linear Algebra](#), Math 124A, University of Vermont, Fall 2007
- [Complex Networks](#), Math 295B, University of Vermont, Spring 2007
- [Linear Algebra](#), Math 124B, University of Vermont, Fall 2006

Lecturer at the Santa Fe Institute's Summer School. Classes taught:

- 2009: [Networks](#), one week course.
- 2010: [Networks](#), one week course.

Lecturer for the Governor's Institute in the Mathematical Sciences, University of Vermont, Summer 2008. Classes taught:

- The Form and Function of Complex Networks, one week course.

Recitation instructor at the Massachusetts Institute of Technology for first and second year Mathematics classes for six semesters, 1994–97. Taught calculus, differential equations, and linear algebra.

Lecturer in the Massachusetts Institute of Technology's Experimental Study Group for three semesters, 1995–96. Designed and taught complete courses for small groups of students with diverse needs.

Tutor in Mathematics and Physics at Trinity College and the University of Melbourne, 1990–94.

**Meetings
organized**

SIAM Conference on Discrete Mathematics (2008). Organized and chaired minisymposium on "Structure, Evolution, and Processes of Biological and Social Networks."

Interdisciplinary Workshop on Network Contagion and Failure (2002), co-sponsored by the Columbia Earth Institute and the Santa Fe Institute. Co-organized with Duncan Watts and Murray Gell-Mann.

Co-created and ran Simple Person's Applied Math (SPAM) seminar (1997–1999) for graduate students in Applied Mathematics at the Massachusetts Institute of Technology; the SPAM seminar has continued through 2009.

**Invited
Lectures**

"Measuring Happiness." *DPG Spring Meeting, Physics of Socio-Economic Systems Division*, Dresden, March 2011.

"Measuring Happiness." *Text as Data*, Northwestern University, March 2011.

"Measuring and understanding sociotechnical phenomena." *Workshop on 'The Role of Computer Science in Civilian Casualty Recording and Estimation'*, Carnegie Mellon University, Pittsburgh, PA, October 2010.

"Measuring Happiness the Big Data Way." , Champlain College, Burlington, VT, May 2010.

"Online game-based sociological and psychological experiments." *Centola Group, Sloan School*, Massachusetts Institute of Technology 2010.

Online game-based sociological and psychological experiments "Measuring Happiness." *Centola Group, Sloan School*, Massachusetts Institute of Technology 2010.

“Preliminary investigations of attack characteristics.” *Mathematics of Terrorism*, Santa Fe Institute, Santa Fe, NM, August 2009.

“An Overview of Complexity: Systems and Networks.” *DOE-ERSP Workshop*, Washington, DC, August 2009.

“Measuring happiness.” *Colloquium*, Santa Fe Institute, Santa Fe, NM, June 2009.

“Online game-based sociological and psychological experiments.” *EPSCoR Stakeholders’ meeting*, University of Vermont, Burlington, VT, February, 2009.

“The emotional content of large-scale texts: The happiness of bloggers, song lyrics, and presidents.” *Math Colloquium*, Dartmouth University, Hanover, NH, 2009.

“The emotional content of large-scale texts: The happiness of bloggers, song lyrics, and presidents.” *Laszlo Barabasi’s Lab*, Northeastern University, Boston, MA, December, 2008.

“The emotional content of large-scale texts: The happiness of bloggers, song lyrics, and presidents.” *Applied Mathematics Seminar*, University of Vermont, Burlington, VT, October, 2008.

“Social and Biological Contagion: Models and Experiments” *EMERGENeering conference*, Burlington, VT, October, 2008.

“Complexity: Systems and Networks.” *EMERGENeering conference*, Burlington, VT, October, 2008.

“The emotional content of large-scale texts: The happiness of bloggers, song lyrics, and presidents.” *Workshop on Challenges and Visions in the Social Sciences*, ETH Zurich, Switzerland, August, 2008

“Optimal Distribution Networks.” Session on *Structure, Evolution, and Processes of Biological and Social Networks*, SIAM Conference on Discrete Mathematics, University of Vermont, Burlington, VT, June, 2008.

“Social and Biological Contagion: Models and Experiments” *Colloquium—Selected Challenges in the Social Sciences: Modeling and Simulation Approaches*, ETH, Zurich, Switzerland, May 2008.

“The scaling of optimal supply networks: implications for biological and geophysical systems.” *Workshop on Transport Systems Geography, Geosciences, and Networks*. Institute for Pure and Applied Mathematics, UCLA, Los Angeles, CA, May, 2008.

“Social and Biological Contagion: Models and Experiments.” *Harvard Business School Marketing Seminar*, Cambridge, MA, 2008.

"Influence and Social Contagion: Models and Experiments." *Stanford Graduate School of Business Marketing Seminar*, Stanford, CA, 2008.

"Contagion in social and biological systems." *European Conference on Complex Systems*, Dresden, 2007.

"Contagion in social and biological systems." *Santa Fe Institute Business Network Topical Meeting: Dynamics of Flows on Networks*, Seattle, 2007.

"Contagion: Models and Experiments." *7th Triennial Choice Symposium*, Wharton School, University of Pennsylvania, 2007.

"Social contagion on networks: groups and chaos." *Understanding Complex Systems*, University of Illinois at Urbana-Champaign, 2007.

"Quarterology: A closer look at some curious 'big picture' scaling laws of biology." *University of Vermont Mathematics Colloquium*, 2007.

"Complex networks: Network Search and the Small World Phenomenon." *Applied Mathematics Seminar*, University of Vermont, 2006.

"Social Contagion on Networks: Groups and Chaos." *New England Complex Systems Institute Conference*, 2006.

"How big will an epidemic be? Illuminations from a simple model." *DIMACS Influenza Workshop*, 2006.

"Models of Social and Biological Contagion." *Physics Colloquium*, Rensselaer Polytech. Inst., NY, 2005.

"Social Search and the Small World Phenomenon: Experiment and Theory and Other Things." *Workshop on Network Science, Nonlinear Science and Infrastructure Systems*, Penn. State University, PA, 2005.

"Social Search and the Small World Phenomenon: Experiment and Theory." *Netcentricity Conference, Robert H. Smith School of Business*, U. Maryland., MD, 2005.

"Social Networks and Collective Behavior—Questions (Search, Contagion, Evolution, Influence, & Robustness)." *Social Norms & Social Networks meeting (Santa Fe Institute)*, Boston University, MA, 2005.

"Models of Social and Biological Contagion." *Center for the Statistics and the Social Sciences Seminar*, U. of Washington, 2005.

"Models of Social and Biological Contagion." *Mathematical Biology Group Seminar*, U. of Utah, 2005.

"Models of Social and Biological Contagion." *Applied Mathematics Seminar*, U. C. Irvine, 2005.

"A Generalized Model of Biological and Social Contagion." *Department of Industrial Engineering and Operations Research*, Columbia University, NY, November 2004.

"A Generalized Model of Biological and Social Contagion." *Applied Mathematics Colloquium*, Cornell University, NY, 2004.

"Social and Organizational Networks: Search, Robustness, and Contagion." *Social Networking Planning Meeting*, NRC/ONR, Washington DC, 2004.

"It's catching: a generalized model of biological and social contagion." *J. S. McDonnell Foundation Annual Meeting*, IBM Palisades, 2004.

"Social Search and the Small World Phenomenon: Experiment and Theory." *Web Structures and Algorithms*, Carnegie Mellon University, Pittsburgh PA, 2004.

"Information Exchange and the Robustness of Organization Networks." *Chief of Naval Operations Strategic Study Group*, Naval War College, Newport, RI, 2003.

"Generalized Contagion." *Applied Mathematics Colloquium*, Columbia University, NY, 2003.

"Social and Organizational Search." *3rd Workshop on New Horizons in Search Theory*, Newport, RI, 2003.

"Social Interaction." *Advanced Computation Inspired by Biological Processes Conference*, Arlington, VA, 2003.

"Ultra-robust and scalable organizational networks." *Interface 2003*, Salt Lake City, UT, 2003.

"Geometry of River Networks." *Woods Hole Oceanographic Institution*, MA, 2002.

"Quarterology: A closer look at some curious 'laws of biology.'" *Woods Hole Oceanographic Institution*, MA, 2002.

"Organizational Growth Under Conditions of Ambiguity." *Sixth SIAM Conference on Applications of Dynamical Systems*, Snowbird, UT, 2001.

"Branching network metrics and so on." *Fractals in Biology Workshop*, Santa Fe Institute, Santa Fe, NM, 2000.

"River Network Geometry: Fluctuations and Deviations in Scaling Laws." *23rd International Conference on Mathematical Geophysics*, Nice, France, 2000.

“River Network Scaling Laws: Deviations and Fluctuations.” *Interface 2000*, New Orleans, LA, 2000.

“Scaling in geomorphology and biology.” *Condensed Matter & Statistical Physics Seminar*, Syracuse University, Syracuse, NY, 1999.

“Scaling, Universality, and Natural Pattern Formation.” *Workshop on Modeling Growth and Form of Sessile Marine Organisms*, NCEAS, Santa Barbara, CA, 1999.

“A Unification of Scaling Laws for River Networks.” *22nd International Conference on Mathematical Geophysics*, Cambridge, UK, 1998.

Other Presentations

“Fluctuations and Scaling in River Network Geometry.” *Fall Meeting of the American Geophysical Union*, San Francisco, CA, 2000.

“Deviations from scaling in river networks.” *Fall Meeting of the American Geophysical Union*, San Francisco, CA, 1999.

“Packing Limited Growth.” SIAM Life Sciences conference, Boston, 2002 (poster).

“As Goes Horton, so Goes Hack: the Informational Content in River Network Scaling Laws.” *Spring meeting of the American Geophysical Union*, Boston, MA, 1998 (poster).

“Basin Morphology and Hack’s Law.” *Localization Phenomena and Dynamics of Brittle and Granular Systems Symposium*, Columbia Earth Institute, Columbia University, New York, NY, August, 1997 (poster).

“Data Collapses in Height-Height Correlation Functions for Eroding Landscapes.” *21st International Conference on Mathematical Geophysics*, Santa Fe, NM, June 1996 (poster).

Professional activities

[The Mathematics of Terrorism](#), Santa Fe Institute, Santa Fe, NM, 2009.

Honors College Faculty Seminar on Food Systems, University of Vermont, Burlington, VT, 2009.

DIMACS Influenza Workshop, Rutgers University, NJ, 2006.

NSF Workshop on Network Science, Nonlinear Science, and Infrastructure Systems, Penn. State University, PA, 2005.

MIDAS Consultation on Social Networks, Brookings Institute, Washington, DC.

NSF Advanced Computation Inspired by Biological Processes Conference, Arlington, VA, 2003.

Complex Interactive Networks Workshop, Santa Fe Institute, Santa Fe, NM, 2000.

Fractals in Biology Workshop, Santa Fe Institute, Santa Fe, NM, 2000.

Workshop on Modeling Growth and Form of Sessile Marine Organisms, NCEAS, Santa Barbara, CA, 1999.

NATO-Advanced Study Institute, *Physics of Dry Granular Media*, Cargèse, Corsica, 1997.

9th annual Complex Systems Summer School, Santa Fe, NM, June 1996.

Students supervised

Catherine Bliss, PhD in Mathematics (2009–), co-supervised with Chris Danforth.

Eitan Pechenick, PhD in Mathematics (2009–).

Assisted D. J. Watts at Columbia University in supervising Gueorgi Kossinets (Sociology), Matthew Salganik (Sociology), and Roby Muhamad (Sociology), Nobuyuki Hanaki (Economics), and Alexander Peterhansl (Economics).

Computation skills

Installation and maintenance of Unix-based computing networks and systems (linux, Mac OS X). Expertise in C, Matlab scripting and C interface, Perl.

Service

Search committees: College of Engineering and Mathematical Sciences, Department of Mathematics and Statistics.

Member of graduate and undergraduate thesis committees: Joshua Payne (Computer Science, PhD, 2009), Kodwo Annan (Mathematics, PhD, 2009), Kerry Alley (Planty Biology, PhD, 2009–), James Sullivan (Transportation Center, Masters, 2009), Benjamin Schwartz (Medical School, Masters, 2009), Eduardo Sanchez (Engineering, Masters, 2009), Kara Cummings (UG, Honors, 2009), Kameron Decker Harris (UG, Honors, 2009).

Department of Mathematics and Statistics committees: graduate program, computing, curriculum, oral exams.

Adviser to graduates and undergraduates; regular writing of reference letters for students.

Refereeing

Nature; Science; Proceedings of the National Academy of Sciences; Physical Review Letters; Physical Review E; Europhysics Letters; Physica A: Statistical Physics and its Applications; Journal of Theoretical Biology; The National Science Foundation; The Royal Society; Journal of Experimental Biology; Water Resources Research; Journal of Fluid Mechanics; Geochemistry, Geophysics, Geosystems (G^3); Geophysical Research Letters; Political Analysis; American Sociological Review; Journal of Mathematical Sociology; MIT Press; Oikos; Ecography.

**Press
(in detail)**

U.S. News and World Report: [Twitter: World Is Getting More Miserable](#) by Meg Handley (December 20, 2011)

Village Voice Blog: [Tweet and Sour: Happiness Is on the Decline, at Least According to What We Tweet](#) by Jen Dell (December 19, 2011)

UVM Press Release: [Study: Happiness Down](#) by Joshua Brown (December 16, 2011); See also [GDP up, happiness down](#) on EurekaAlert!

Seven Days Vermont: [If You're Happy and You Know It, Tweet It](#) by Tyler Machado (November 16, 2011)

Primetime on tbs eFM, Seoul, South Korea; Radio interview with Henry Shinn (November 7, 2011)

Science Magazine: [Social Science for Pennies](#), John Bohannon (October 21, 2011)

New York Times: [Twitter Study Tracks When We Are :\)](#), Benedict Carey (September 29).

Science Magazine: [Social Scientists Wade Into the Tweet Stream](#), Greg Miller (September 30, 2011)

alltagsforschung.de, Psychologie in beruf und privatleben: [Glückliche Sprache Englisch enthält mehr Lebensfreude](#) (August 31, 2011).

wired.com: [Happy Words Trump Negativity in the English Language](#) (August 31, 2011).

Scaling of supply: cardiovascular and river networks:

The Economist: [Tree and Leaf](#) (February 11, 2010).

Scientific Blogging : [Peter Sheridan Dodds, Theoretical Biology's Buzzkill](#) by Mark Changizi (February 9, 2010).

Physical Review Focus: [Why leaves aren't trees](#) by Don Monroe (February 4, 2010).

University of Vermont Press Release: [Spherical cows help to dump metabolism law](#) by Joshua Brown (February 2, 2010).

Science News: [Studies of human social networks go high-tech](#) by Lisa Grossman (January 16, 2010).

Measuring happiness:

New York Times: [Does a Nation's Mood Lurk in its Songs and Blogs?](#) by Benedict Carey (August 4, 2009).

Science Magazine: [Blogs: Happiness Barometers?](#) (August 7, 2009).

London Times Online: [Twittering Your Way to Happiness](#), Anjana Ahuja (August 3, 2009).

San Francisco Chronicle: [Web Offering More Gauges about Happiness](#) (August 17, 2009).

Slashdot: [Measuring Real Time Public Opinion With Twitter](#) (August 15, 2009).

UK Observer: [Tweeters and Bloggers Show we Do Like Mondays After All](#) (August, 2009).

Time Magazine: [Lexicon: Hedonometer](#) (August, 2009).

UVM Press Release: [Happiness Study Featured](#) (August, 2009).

NY Daily News: [Scientists Analyze Twitter, Blogs, to Learn How Happy People Are](#) (August, 2009).

[Can a Glance at the 'Hedonometer' Determine How Happy We Are?](#) Keene Sentinel (August, 2009).

Montpelier Times Argus: [Finding a Measure of Happiness](#) (August, 2009).

Discovery News: ['Happiness Meter' Analyzes Blogs, Tweets](#) (July, 2009).

Reuters: [Jackson's Death was Blogosphere's Saddest Day: Study](#) (July, 2009).
Translated into Spanish and picked up throughout South America.

Burlington Free Press: [UVM Researchers Seek Key to Happiness](#) (July, 2009).

UVM Press Release: [If You're Happy, Then We Know It](#) (July, 2009).

Vermont Quarterly cover story: [It's Complex](#) (April, 2009).

New York Times: [Using Twitter as a Collective Mood Ring](#) (August, 2009).

ScienceNOW: [How Happy is the Internet?](#) (August, 2009).

Schott's Vocab Blog, New York Times: [Hedonometer](#) (August, 2009).

Discover Magazine: [Pop Music & Blogs as Indicators of Gross National Happiness](#) (August, 2009).

CNN: [How do we Find Life's Benchmark?](#) (August, 2009).

[Soundcheck](#): Radio Interview, WNYC, New York (August 6, 2009).

Australian Broadcasting Commission, [Sunday Show, 774 ABC](#): Radio interview (August 9, 2009).

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