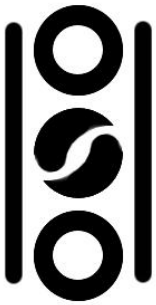


Prof. Peter Sheridan Dodds
Curriculum Vitae

store front: http://petersheridandodds.org
contact: andrea.elledge@uvm.edu
September 2, 2025

Positions

2024–: University of Vermont Burlington, VT
Director, Vermont Complex Systems Institute.

2022–: Santa Fe Institute Santa Fe, New Mexico
External Professor.

2021–: University of Vermont Burlington, VT
Full Professor, Department of Computer Science.

2025–: University of Vermont Burlington, VT
Graduate program Director, Complex Systems and Data Science.

2019–: University of Vermont Burlington, VT
Flint Professorship of Mathematics, Natural, or Technic Science.

2011–2024: University of Vermont Burlington, VT
Director, Vermont Complex Systems Center.

2019–2020: University of Vermont Burlington, VT
University Scholar.

2013–2020: University of Vermont Burlington, VT
Full Professor, Department of Mathematics & Statistics.

2010–2013: University of Vermont Burlington, VT
Associate Professor, Department of Mathematics & Statistics.

2007–2011: University of Vermont Burlington, VT
Member of Complex Systems Center.

2007–: University of Vermont Burlington, VT
Visiting Fellow, Vermont Advanced Computing Core.

2006–2010: University of Vermont Burlington, VT
Assistant Professor, Department of Mathematics & Statistics.

2003–2006: Columbia University New York, NY
Associate Research Scientist, Institute for Social & Economic Research & Policy.
Assistant Director, Collective Dynamics Group.

2002–2003: Columbia University New York, NY
Postdoctoral Research Scientist, Institute for Social & Economic Research & Policy.

2000–2002: Columbia University New York, NY
Postdoctoral Research Scientist, Columbia Earth Institute.

Education

1994–2000: Massachusetts Institute of Technology Cambridge, MA
PhD in Mathematics, June 2000.
Supervisor: Prof. D. H. Rothman, Department of Earth, Atmospheric and Planetary Sciences.
Thesis title: "Geometry of River Networks."

1995: University of Melbourne Melbourne, Australia
M. Sc. Departments of Mathematics and Physics. Supervisor: Dr. T. Prellberg.
Thesis title: "On the Thermodynamic Formalism for the Farey Map."

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 Honours.

Citizenship

Australia, United States of America

Awards

Fellow of the Network Science Society (NetSci), 2021.

Excellence in Research Award, College of Engineering and Mathematical Sciences, University of Vermont, 2021.

Flint Professorship of Mathematics, Natural, or Technic Science, University of Vermont, 2021.

Distinguished Visiting Professor, Institute for Data Engineering and Science, Georgia Tech, (Host: Prof. J. S. Weitz), 2019.

University Scholar, University of Vermont, 2019–2020.

Outstanding Overall Faculty Performance, College of Engineering and Mathematical Sciences, University of Vermont, 2014.

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

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

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

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

Finalist, Rhodes Scholarship, Victoria, Australia, 1994.

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

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

Funding

Anonymous philanthropic gift, 2025–2028. **$1,000,000.**

Award from UVM OVPR for the Vermont Complex Systems Institute, 2025–2026. **$170,000.**

MassMutual Center of Excellence in Complex Systems and Data Science, Vermont Complex Systems Center, 2024–2029 (renewal). **$4,250,000.**

National Science Foundation, Harnessing the Data Revolution for Vermont: The Science of Online Corpora, Knowledge, and Stories (SOCKS), 2023–2028. Total Award Amount: **$20,000,000**

MassMutual: Lived Experience Measured Using Ring Study (LEMURS), Vermont Complex Systems Center, 2023–2024 (renewal). **$1,000,000.**

MassMutual: Lived Experience Measured Using Ring Study (LEMURS), Vermont Complex Systems Center, 2022–2023. **$2,000,000.**

Google Open-Source Complex Ecosystems and Networks (OCEAN) project, Vermont Complex Systems Center, 2019–2022. Total Award Amount: **$1,000,000**

MassMutual Center of Excellence in Complex Systems and Data Science, Vermont Complex Systems Center, 2019–2023. **$5,000,000.**

National Institutes of Health T32 "Training in Complex Systems and Data Science Approaches Applied to the Neurobiology of Drug Use" Computer Associates 2018–2023. Joint PI with Hugh Garavan, Pyschiatry, University of Vermont. Approximately **$1,250,000.**

Support for graduate students in Complex Systems, Computer Associates, 2018–. **$300,000.**

Support for the Vermont Complex Systems Center, Pilot program supporting faculty and graduate students, Mass Mutual, 2017–2018. **$500,000.**

Support for the Vermont Complex Systems Center, Computer Associates, 2016–2017. **$300,000.**

"BIGDATA—Hunch & Crunch: Iterative Crowdsourced Hypothesis Generation." National Science Foundation, September 1, 2014–August 31, 2018. Co-PI. **$600,000.**

"The Impact of Hi-Frequency Trading on Financial Market Instability." The MITRE Corporation, January 1, 2014–September 30, 2014. Joint PI with C. Danforth. **$20,000.**

"Construction of hedonometer.org: An Instrument for Measuring Population-Level Sentiment in Real Time." The MITRE Corporation, 2013; Approximately **$380,000**.

"Uncovering connections between social media stories and food systems." Vermont Advanced Computing Core, 2013; Joint PI with C. Danforth. Approximately **$25,000**.

"Construction of hedonometer.org: An Instrument for Measuring Population-Level Sentiment in Real Time." The MITRE Corporation, 2012; Joint PI with C. Danforth. **$150,000**.

"UVM Complex Systems Center for Informed Decision-Making and Design." NASA, August 1, 2010–July 31, 2013; PI, 2011–2013. **$500,000**.

"CAREER: Explorations of Complex Social and Psychological Phenomena through Multiscale Online Sociological Experiments, Empirical Studies, and Theoretical Models." National Science Foundation CAREER award, Program for Innovation & Organizational Sciences, Division of Social and Economic Sciences, 2009–2015; 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**.

"Integrated Land-use, Transportation and Environmental Modeling: Complex Systems Approaches and Advanced Policy Applications." University of Vermont, University Transportation Center grant, 2007–2010; Co-PI. **$275,259**.

"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**.

"Efficient Collective Search in Social Networks with Partial and Ambiguous Knowledge." Office of Naval Research, 2004; PI. **$85,000**.

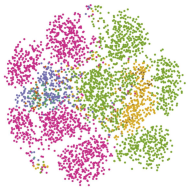
"The Structure, Evolution, and Function of Large-Scale Social Networks: Theory, Data, and Experiment." National Science Foundation, Human and Social Dynamics, 2004–2006; Co-PI. **$211,842**.

"Decentralized Search, Robustness, and Recovery in Organizational Networks." Office of Naval Research, 2002–2003; Co-PI. **$121,657**.

Papers

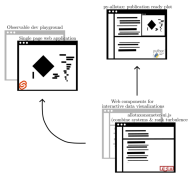
Notes:

• 21,958 total citations for 136 papers (161.5 per paper; includes arXiv preprints) according to Google Scholar, as of September 2, 2025.
• Google Scholar's h-index: 49.
• ¡10-index (# papers with at least 10 citations): 90.
• ¡100-index (# papers with at least 100 citations): 36.
• ¡1000-index (# papers with at least 1000 citations): 5.
• Formal fields include: Physics, Applied Mathematics, Geomorphology, Geophysics, Biology, Ecology, Economics, Marketing, Sociology, Psychology, and Language.
• Journals include: Science Magazine, Proceedings of the National Academy of Sciences, Physical Review Letters, Science Advances, Physical Review E, Journal of Theoretical Biology, Annual Review of Earth & Planetary Sciences, Journal of Happiness Studies, International Journal of Bifurcation and Chaos, Journal of Consumer Research, Management Science, Marketing Letters, PLOS ONE, Nature Scientific Reports, Ecology Letters, People and Nature, and EPJ Data Science.



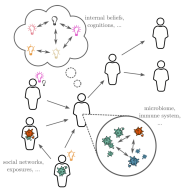
136. M. Ghasemizade, J. Lovato, C. M. Danforth, P. S. Dodds, L. S. P. Bloomfield, M. Price, Team LEMURS, J. P. Near.
"AIM high, stay private: Differentially private synthetic data enables public release of behavioral health information with high utility."
https://arxiv.org/abs/2507.02971

#Times cited: 0, r=139



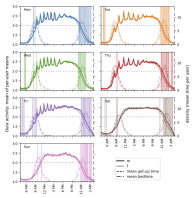
135. J. St.-Onge, A. M. A. Fehr, C. Ward, C. G. Beauregard, M. V. Arnold, S. F. Rosenblatt, B. Cooley, C. M. Danforth, P. S. Dodds.
"A suite of allotaxonometric tools for the comparison of complex systems using rank-turbulence divergence."
https://arxiv.org/abs/2506.21808

#Times cited: 0, r=140



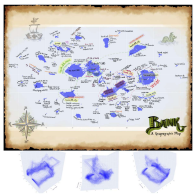
134. L. Hébert-Dufresne, Y.-Y. Ahn, A. Allard, J. W. Crothers, P. S. Dodds, M. Galesic, F. Ghanbarnejad, D. Gravel, R. A. Hammond, K. Lerman, J. Lovato, J. J. Openshaw, S. Redner, S. V. Scarpino, G. St-Onge, T. R. Tangherlini, J.-G. Young.
"One pathogen does not an epidemic make: A review of interacting contagions, diseases, beliefs, and stories."
https://arxiv.org/abs/2504.15053

#Times cited: 0, r=142



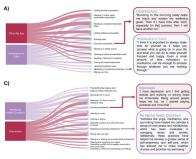
133. M. I. Fudolig, L. S. P. Bloomfield, M. Price, Y. M. Bird, J. E. Hidalgo, J. Kim, J. Llorin, J. Lovato, E. W. McGinnis, R. S. McGinnis, T. Ricketts, K. Stanton, P. S. Dodds, C. M. Danforth.
"Collective sleep and activity patterns of college students from wearable devices."
https://arxiv.org/abs/2412.17969

#Times cited: 2, r=121



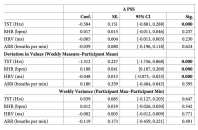
132. J. W. Zimmerman, D. Hudon, K. Cramer, A. J. Ruiz, C. Beauregard, A. Fehr, M. I. Fudolig, B. Demarest, Y. M. Bird, M. Z. Trujillo, C. M. Danforth, P. S. Dodds.
"Tokens, the oft-overlooked appetizer: Large language models, the distributional hypothesis, and meaning."
https://arxiv.org/abs/2412.10924

#Times cited: 2, r=122



131. J. E. Hidalgo, J. Kim, J. Llorin, K. Stanton, J. Cherian, L. Bloomfield, M. Fudolig, M. Price, J. Ha, N. Noble, C. M. Danforth, P. S. Dodds, J. Fanning, R. S. McGinnis, and E. W. McGinnis.
"Meeting people where they are: Crowdsourcing goal-specific personalized wellness practices."
PLOS Digital Health, 2024.

#Times cited: 0, r=136

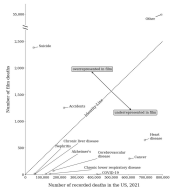


130. J. E. Hidalgo, J. Kim, J. Llorin, K. Stanton, J. Cherian, L. Bloomfield, M. Fudolig, M. Price, J. Ha, N. Noble, C. M. Danforth, P. S. Dodds, J. Fanning, R. S. McGinnis, and E. W. McGinnis.
"Predicting stress in first-year college students using sleep data from wearable devices."
PLOS Digital Health, **3**, 1–16, 2024.

#Times cited: 17, r=76

129. Y. M. Bird, A. Fehr, J. W. Zimmerman, M. I. Fudolig, S. E. Grobe, M. V. Arnold, C. M. Danforth, P. S. Dodds.
"A quantitative analysis of the affirmative furtherance of fair housing in the Housing Choice Voucher program."
https://osf.io/preprints/socarxiv/reh75_v1

#Times cited: 0, r=138

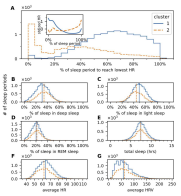


128. C. Beauregard, C. M. Danforth, P. S. Dodds.
"Hollywood's misrepresentation of death: A comparison of overall and by-gender mortality causes in film and the real world."
https://arxiv.org/abs/2411.10040

#Times cited: 0, r=137

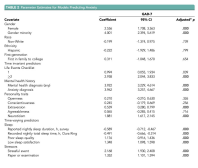
127. J. Lovato, J. Zimmerman, I. Smith, P. S. Dodds, J. Karson.
"Foregrounding artist opinions: A survey study on transparency, ownership, and fairness in AI generative art."
https://arxiv.org/abs/2401.15497

#Times cited: 30, r=61



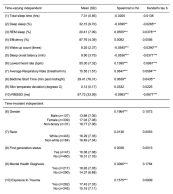
126. M. I. Fudolig, L. S. Bloomfield, M. Price, Y. M. Bird, J. E. Hidalgo, J. Kim, J. Llorin, J. Lovato, E. McGinnis, R. McGinnis, T. Ricketts, K. Stanton, P. S. Dodds, and C. M. Danforth.
"The two fundamental shapes of sleep heart rate dynamics and their connection to mental health."
https://psyarxiv.com/3cqdn

#Times cited: 7, r=102



125. L. S. P. Bloomfield, M. Fudolig, P. S. Dodds, J. Kim, J. Llorin, J. Lovato, E. McGinnis, R. McGinnis, M. Price, T. Ricketts, K. Stanton, C. M. Danforth.
"Predictors of anxiety trajectories in cohort of first-year college students."
https://psyarxiv.com/278ey/
JAACAP Open, 2024.

#Times cited: 6, r=106



124. L. S. P. Bloomfield, M. Fudolig, P. S. Dodds, J. L., J. L. Lovato, J. Kim, E. W. McGinnis, R. S. McGinnis, M. Price, T. H. Ricketts, K. Stanton, and C. M. Danforth.
"Detecting stress in college freshman from wearable sleep data."
https://psyarxiv.com/eu896/

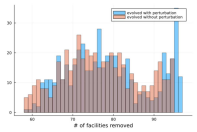
#Times cited: 2, r=119

123. M. Price, J. E. Hidalgo, Y. Bird, L. S. P. Bloomfield, C. Buck, J. Cerutti, P. S. Dodds, M. I. Fudolig, R. Gehman, M. Hickok, J. Kim, J. Llorin, J. Lovato, E. McGinnis, R. S. McGinnis, R. Norton, V. Ramirez, K. Stanton, T. H. Ricketts, C. M Danforth.
"A large clinical trial to improve well-being during the transition to college using wearables: The lived experiences measured using rings study."
https://psyarxiv.com/3cqdn

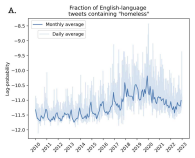
#Times cited: 13, r=83

122. J. W. Zimmerman, D. Hudon, K. Cramer, J. St. Onge, M. Fudolig, M. Z. Trujillo, C. M. Danforth, P. S. Dodds.
"A blind spot for large language models: Supradiegetic linguistic information."
https://arxiv.org/abs/2306.06794

#Times cited: 4, r=114

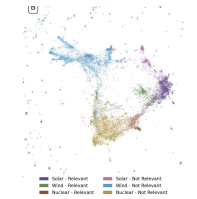


121. W. Thompson, A. Freidrichsen, C. M. Danforth, P. S. Dodds, N. Cheney.
"Evolving robust facility placements."
Proceedings of the Companion Conference on Genetic and Evolutionary Computation, **GECCO '23 Companion**, 775—778, . #Times cited: 0, r=135



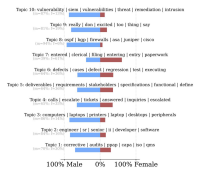
120. Y. M. Bird, S. E. Grobe, M. V. Arnold, S. P. Rogers, M. I. Fudolig, J. W. Zimmerman, C. M. Danforth, and P. S. Dodds.
"An assessment of measuring local levels of homelessness through proxy social media signals."
https://arxiv.org/abs/2305.08978

#Times cited: 1, r=130



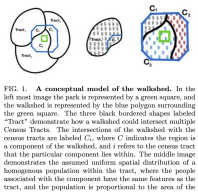
119. M. V. Arnold, P. S. Dodds, and C. M. Danforth.
"Curating corpora with classifiers: A case study of clean energy sentiment online."
https://arxiv.org/abs/2305.03092

#Times cited: 2, r=120



118. J. R. Minot, M. Maier, B. Demarest, N. Cheney, C. M. Danforth, P. S. Dodds, and M. R. Frank.
"The resume paradox: Greater language differences, smaller pay gaps."
https://arxiv.org/abs/2307.08580

#Times cited: 0, r=134

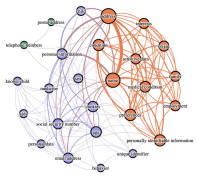


117. K. Linnell, M. Fudolig, L. Bloomfield, T. McAndrew, T. H. Ricketts, J. P. M. O'Neil-Dunne, P. S. Dodds, and C. M. Danforth.
"Park visitation and walkshed demographics in the United States."
https://arxiv.org/abs/2305.12160

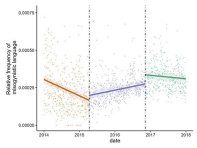
#Times cited: 1, r=129

116. E. W. McGinnis, S. Lunna, I. Berman, S. Bagdon, G. Lewis, M. V. Arnold, C. M. Danforth, P. S. Dodds, M. Price, W. E. Copeland, R. S. McGinnis.
"Expecting the unexpected: Predicting panic attacks from mood, Twitter, and Apple Watch data."
https://www.medrxiv.org/content/10.1101/2023.01.26.23285057

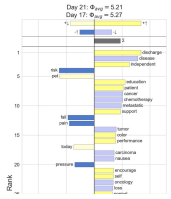
#Times cited: 10, r=90



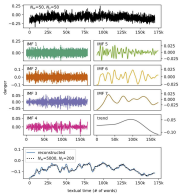
115. J. Lovato, P. Mueller, P. Suchdev, and P. S. Dodds.
"More data types more problems: A temporal analysis of complexity, stability, and sensitivity in privacy policies."
https://arxiv.org/abs/2302.08936
Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency, **FAccT '23**, 1088–1100, 2023. #Times cited: 7, r=100



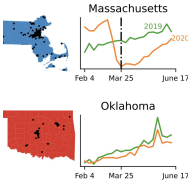
114. M. Weaving, T. Alshaabi, M. V. Arnold, K. Blake, C. M. Danforth, P. S. Dodds, N. Haslam, and C. Fine.
"Twitter misogyny associated with Hillary Clinton increased throughout the 2016 U.S. election campaign."
Scientific Reports, **13**, Article number: 5266, 2023. #Times cited: 18, r=72



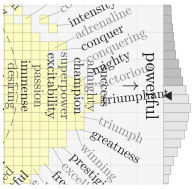
113. D. Elbers, J. La, J. R Minot, R. E. Gramling, M. T. Brophy, N. V. Do, N. Fillmore, P. S. Dodds, C. M. Danforth.
"Sentiment analysis of medical record notes for lung cancer patients at the Department of Veterans Affairs."
PLOS ONE, **18**, e0280931, 2023. #Times cited: 5, r=109



112. M. I. Fudolig, T. Alshaabi, K. Cramer, C. M. Danforth, and P. S. Dodds.
"A decomposition of book structure through ousiometric fluctuations in cumulative word-time."
https://arxiv.org/abs/2208.09496
Nature Humanities and Social Sciences Communications, **10**, 187, 2023.
#Times cited: 7, r=101



111. K. Linnell, M. I. Fudolig, A. Schwartz, T. H. Ricketts, J. P. M. O'Neill-Dunne, P. S. Dodds, and C. M. Danforth.
"Spatial changes in park visitation at the onset of the pandemic."
https://arxiv.org/abs/2205.15937
#Times cited: 4, r=113



110. P. S. Dodds, T. Alshaabi, M. I. Fudolig, J. W. Zimmerman, J. Lovato, S. Beaulieu, J. R. Minot, M. V. Arnold, A. J. Reagan, and C. M. Danforth.
"Ousiometrics and Telegnomics: The essence of meaning conforms to a two-dimensional powerful-weak and dangerous-safe framework with diverse corpora presenting a safety bias."
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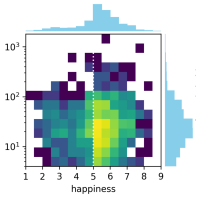

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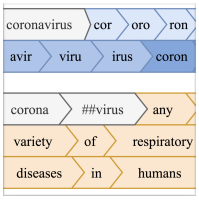

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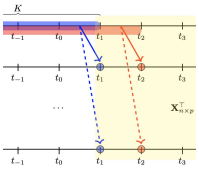

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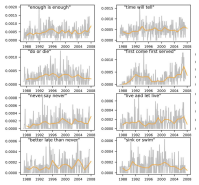

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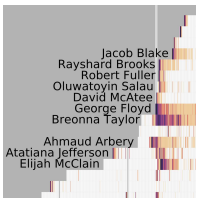

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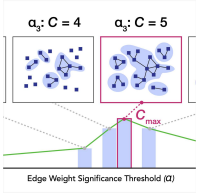

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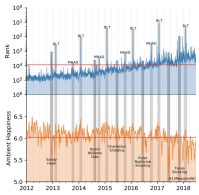

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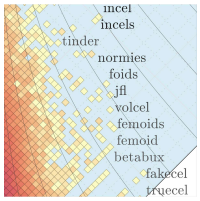

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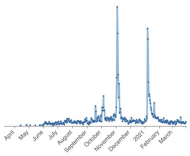

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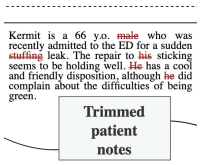

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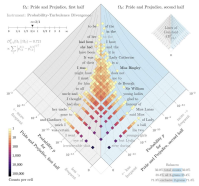

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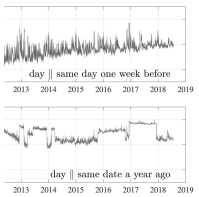

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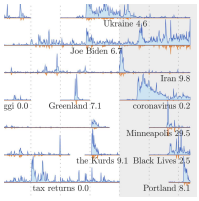

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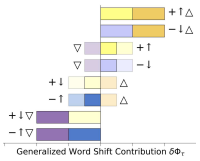

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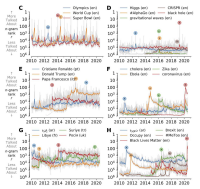

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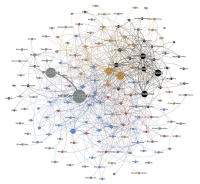

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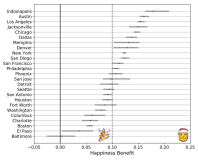

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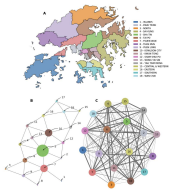

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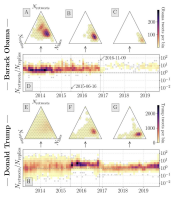

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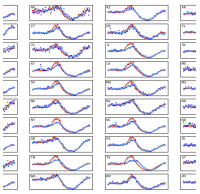

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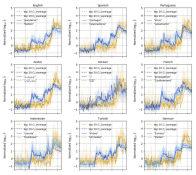

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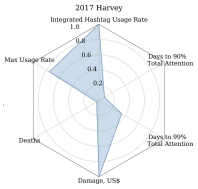

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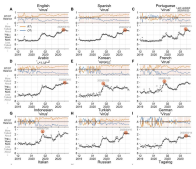

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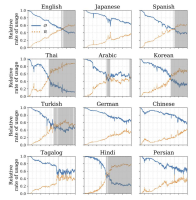

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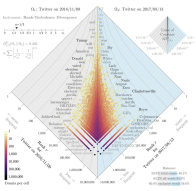

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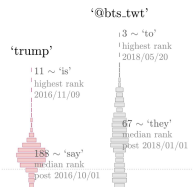

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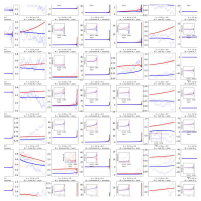

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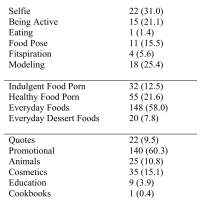

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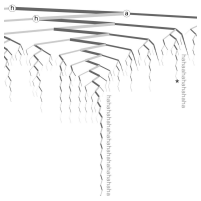

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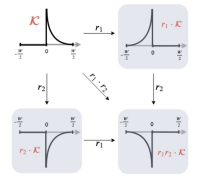

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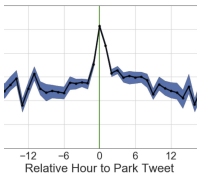

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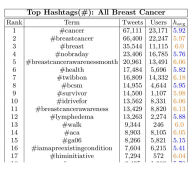

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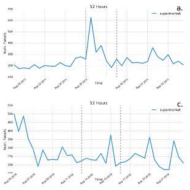

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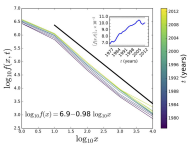

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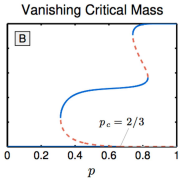

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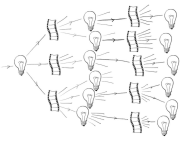

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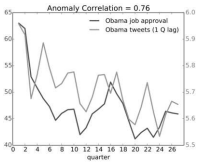

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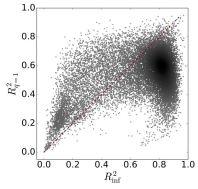

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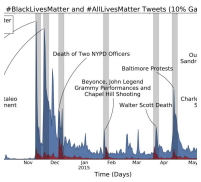

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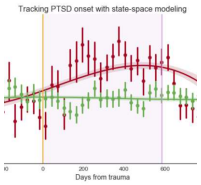

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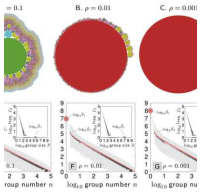

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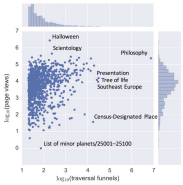

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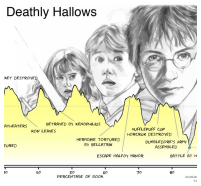

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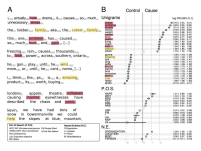

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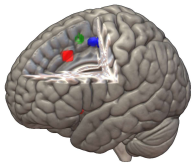

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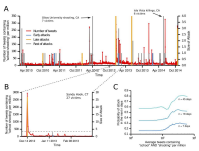

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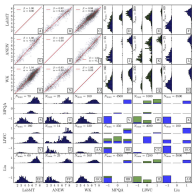

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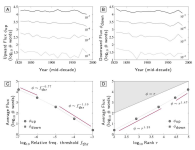

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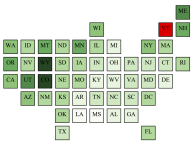

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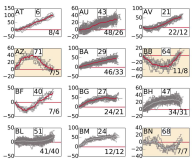

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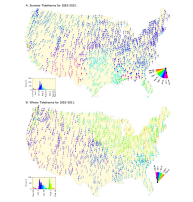

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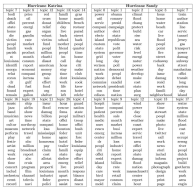

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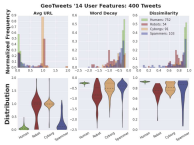

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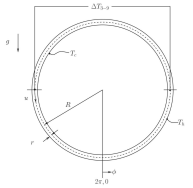

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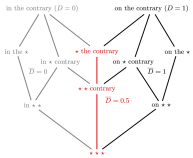

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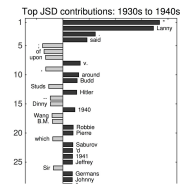

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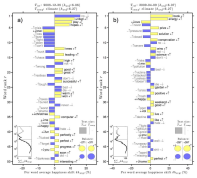

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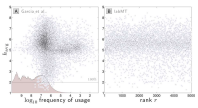

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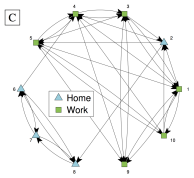

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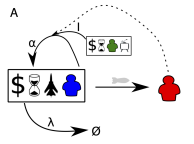

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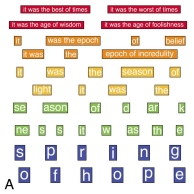

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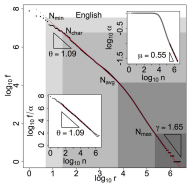

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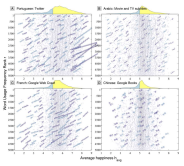

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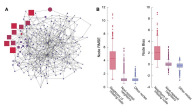

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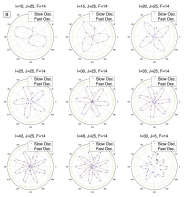

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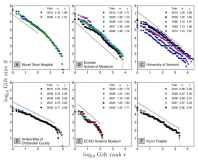

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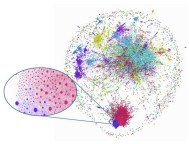

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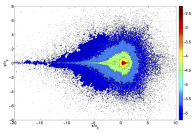

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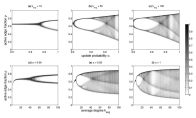

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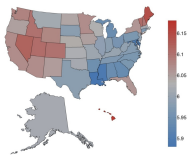

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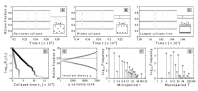

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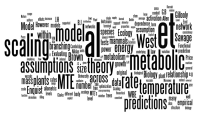

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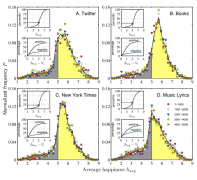

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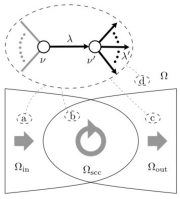

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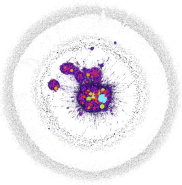

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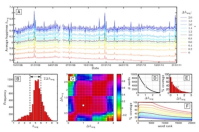

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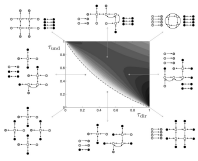

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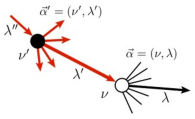

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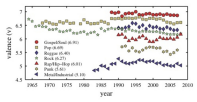

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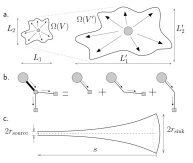

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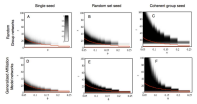

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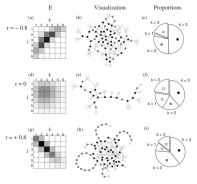

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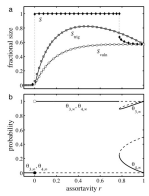

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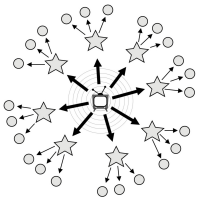

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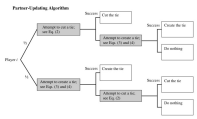

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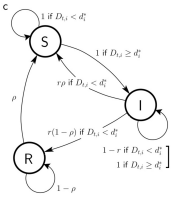

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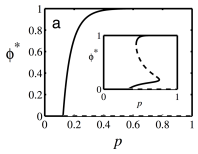

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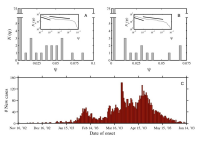

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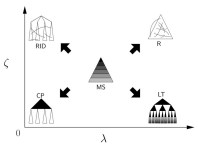

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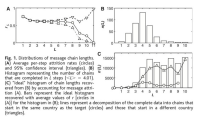

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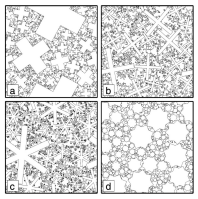

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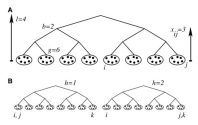

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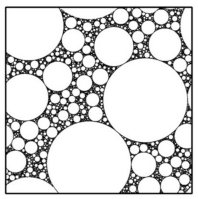

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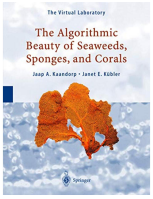

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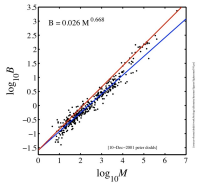

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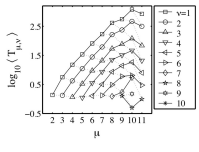

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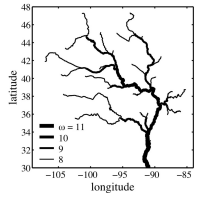

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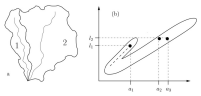

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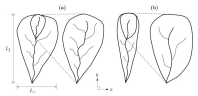

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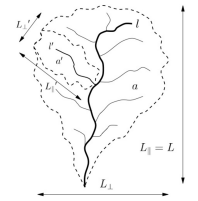

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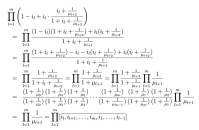

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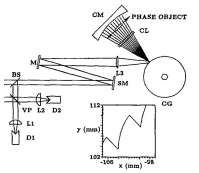

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Students, Postdocs, Research Scientists supervised

Current at University of Vermont (co-supervised with Chris Danforth and others):

Danny Benett, PhD (2025–)
Wei Tang, PhD (2025–) Pablo Rosillo Rodes, visiting PhD student (Fall of 2025)
Tabia Prama, PhD (2025–)
Alejandro Ruiz, PhD (2025–)
Shun Zhang, PhD (2024–)
Tessa Lawler, MS (2024–)
Fitz Keenan-Koch, MS (2024–)
Calla Beauregard, PhD (2023–)
Ashley Fehr, PhD (2023–)
Parisa Suchdev, PhD (2023–)
Julia Zimmerman, PhD (2020–2025), Postdoc (2025–)
Yoshi Bird, Phd (2020–2025)
Mikaela Fudolig, Postdoc (2020–2023), Research Scientist (2023–2025)
Ben Cooley, Research Data Visualization Engineer (2024–)
Michael Arnold, MS, PhD (2017–2024), Data Engineer (2024–)

Former people at University of Vermont:

Kathryn Cramer, Graduate Certificate, MS (2021–2024)
Juniper Lovato, PhD (2021–2024)
Will Thompson, PhD (2022–2023)
Josh Minot, MS and PhD (2017–2022)
Danne Elbers, PhD (2018–2022)
Thayer Alshaabi, MS and PhD (2018–2021)
Ethan Davis, MS (2019–2021)
Kathy Gothard, UG and MS (2018–2021)
Henry Wu, UG (2020–2021)
Kelsey Linnell, PhD (2019–2022)
John Ring, MS (2016–2021)
Colin Van Oort, MS (2016–2021)
Jane Adams, Data Artist in Residence (2018–2021)
Sophia Hodson, UG (2018–2020)
Max Green, MS (2018–2020)
David Dewhurst, UG, MS, and PhD (2015–2020)
Benjamin Emery, UG, MS (2016–2020)
Tyler Gray, PhD (2017–2020)
Todd DeLuca, PhD (2018–2020)
Melissa Seib, UG (2017–2020)
Peter Larsen, UG (2017–2018)
Eric Clark, UG, MS, and PhD
Aaron Schwartz, PhD (2015–2020)
Andy Reagan, MS and PhD (2012–2016)
Abby Ross, MS (2016–2017)
Ryan Gallagher, MS (2015–2017)
Chris Fusting, MS (2015–2017)

Former students at University of Vermont (cont.):
Dilan Kiley, UG and MS (2013–2016)
Mark Ibrahim, MS, (2014–2016)
Jake Williams, UG, MS, and PhD (2011–2015)
Eitan Pechenick, PhD (2009–2015)
Kayla Horak, MS, (2013–2015)
Sharon Alajajian, UG and MS (2013–2015)
Morgan Frank, UG and MS (–2014)
Suma Desu Bailis, UG and Research Associate (–2013)
Lewis Mitchell, Postdoc (2011–2014)
Catherine Bliss, PhD (2009–2014)
Michael Foley, UG and MS
Aaron Powers, PhD (2011–2013)
Lindsay Van Lier, MS (2012–2014)
Kameron Decker Harris, UG and MS
Paul Lessard, MS
Nick Allgaier, MS and PhD
Matthew Tretin, UG (2010)
Kara Cummings, UG (2009)
Isabel Kloumann, UG (2011)

As Assistant Director of Collective Dynamics Group at Columbia University, aided D. J. Watts in supervising:
Gregory Kossinets (PhD, Sociology),
Matthew Salganik (PhD, Sociology),
Roby Muhamad (PhD, Sociology),
Nobuyaki Hanaki (PhD, Economics),
Damon Centola (visiting PhD, Sociology, Cornell),
Alexander Peterhansl (PhD, Economics),
Michael Mahoney (Postdoc),
and Dunia Lopez-Pintado (Postdoc).

Press highlights

Notes:

- Numerous global press coverage events for research on Stories, Happiness, Fame, and the Small-World Phenomenon.
- Work on lexical meters (e.g., the Lexicocalorimeter), scaling in biology, river networks, and influence also covered by international media.
- Major media: New York Times, CNN, Washington Post, BBC, London Times, Wired, Science Magazine, the Economist, Reuters, the Associated Press, National Geographic, and Scientific American.
- Coverage of work has appeared in print, television/video, blogs, podcasts, and radio.

Note: Not up to date.

The Economist: A house divided: The war in Ukraine has made Russian social-media users glum (March 12, 2022)

The Economist: Twitter users have had their most miserable year yet (December 31, 2020)

Washington Post: Just how bad was this year? These professors found answers on Twitter by Travis M. Andrews (December 31, 2020)

The Santa Fe Institute's Complexity podcast: Text-Based Timeline Analysis & New Instruments for The Science of Stories with Michael Garfield (November 26, 2020)

Sunday Extra, Australian Broadcasting Corporation (ABC): Word count: The data that shows when President Trump lost control of the narrative. Interview with Julian Morrow (November 15, 2020)

Reply All podcast: #168 Happiness Calculator vs. Alex Goldman with Alex Goldman and PJ Vogt (October 29, 2020)

New York Times: Is Everybody Doing ... OK? Let's Ask Social Media by Casey Schwartz (October 12, 2020)

The Ringer: What Was the Happiest Day on the Internet This Decade? by Victor Luckerson (March 5, 2019)

COSMOS: Tweets suggest a visit to the park may lift the mood by Ben Lewis (August 10, 2018)

Chronical of Higher Education: The New Happiness Studies: Interdisciplinary, cross-cultural, empirical work takes the lead by Alexander C. Kafka (July 25, 2018)

The Guardian: Texas high school shooting prompts talk of 'contagion effect' by Lois Beckett (May 19, 2018)

BBC: How your social media betrays your mood by Jules Montague (February 1, 2018)

Washington Post: The massacre in Las Vegas resulted in Twitter's saddest day on record by Philip Bump (October 10, 2017)

Reuters: Las Vegas shooting was Twitter's saddest day ever: study by Angela Moon (October 3, 2017)

Outside Magazine: Inside the Lab that's Quantifying Happiness by Rowan Jacobsen (August 11, 2017)

The Economist: The science of popularity: The magic of making hits (March 3, 2017)

Scientific American: Great literature is surprisingly arithmetic by Mark Fischetti, (February, 2017) (Note: One of Scientific American's most popular stories of the year)

Washington Post, Wonkblog: Researchers have quantified what makes us love Harry Potter by Ana Swanson (November 25, 2016)

Aeon: When the stories add up: the six narrative arcs in fiction by Veronique Davenport (November 18, 2016)

Chemical & Engineering News: Scientific studies of sports and spoilers by Matt Davenport (June 13, 2016)

The Guardian: Upset? Find your happy place using Twitter data by Anna Petherick (June 1, 2016)

FlowingData: Tarot cards for complex network concepts by Nathan Yau (March 3, 2016)

National Geographic: The Power of Positive Speaking by Jeremy Berlin (March issue, 2016)

Washington Post: Someone is tracking how much you 'vape' on Twitter by Aleszu Bajak (February 24, 2016)

Aeon Magazine: The story trap. We use neat stories to explain everything from sports matches to symphonies. Is it time to leave the nursery of the mind? by Philip Ball (November 12, 2015)

Motherboard, Vice: One Degree of Separation in the Forever War by Brian Castner (November 11, 2015)

New York Times: Google Books: A Complex and Controversial Experiment by Stephen Heyman (October 28, 2015)

Interview on the Brian Lehrer Show (WNYC) on Google Books: Tracking the popularity of words (October 22, 2015)

Future Tense, slate.com: Is Google Books Leading Researchers Astray? by Jacob Brogan (October 14, 2015)

wired.com: The pitfalls of using Google Ngram to study language by Sarah Zhang (October 12, 2015)

discovery.com Can Google Books Really Tell Us About Cultural Evolution? by Neuroskeptic (October 10, 2015)

Statistical Modeling, Causal Inference, and Social Science: Meet Teletherm, the hot new climate change statistic! by Andrew Gelman (September 10, 2015)

Pacific Standard Magazine: Twitter Is Changing How We Talk About Climate Change by Madeleine Thomas (August 25, 2015)

A bot, not a Kardashian, probably wrote that e-cig tweet by Rachel Ehrenberg (August 21, 2015)

FastCoEXIST: See How Healthy Your State Is By How Often People Tweet About Donuts And Exercise by Adele Peters (August 4, 2015)

Washington Post: Twitter can tell which states love jogging and which are eating hot dogs, by Aleszu Bajak (July 29, 2015)

MIT Technology Review: How the New Science of Game Stories Could Change the Future of Sports (July 27, 2015)

Lexicon Valley podcast: Language Has a Positivity Bias. How Did We Measure That? with Mike Vuolo and Bob Garfield (June 17, 2015)

The New York Times: According to the Words, the News Is Actually Good, by John Tierney (February 23, 2015)

CBS News This Morning: How language shows we're biased toward positivity (also on youtube: https://www.youtube.com/watch?v=i0DTDk6XMMw). Interview of John Tierney with hosts Gayle King, Charlie Rose, and Norah O'Donnell. (February 24, 2015)

Naked Scientists (story and podcast): Measuring the world's happiness by Khalil Thirlaway (February 23, 2015)

The Atlantic: Languages Are Mostly Made of Happy Words by Julie Beck (February 11, 2015)

Christian Science Monitor: Do our languages skew toward happiness? by Eoin O'Carroll (February 10, 2015)

Bloomberg News: Science Says We're All Optimists by Michelle Cortez (February 9, 2015)

ABC Science: Language proves we're all optimists at heart by Bianca Nogrady (February 9, 2015)

Science Magazine: Spanish is the happiest language; Chinese, not so much by John Bohannon (February 9, 2015)

Medical Daily: Is Human Nature Optimistic? People Use More Positive Words Than Negative In 10 Different Languages by Susan Scutti (February 9, 2015)

Nature News: Crowdsourcing in manhunts can work: Despite mistakes over the Boston bombers, social media can help to find people quickly. by Philip Ball (April 26, 2013)

Bloomberg News: How Social Dynamics Made You Successful by Cass R. Sunstein (September 25, 2012)

New York Times: Luck vs. Skill: Seeking the Secret of Your Success by Robert H. Frank (August 4, 2012)

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 (Feburary 10, 2006).

National Geographic Online: Attention "American Idol": Hits Are Tough to Predict by Mason Inman (Feburary 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, Associate, and Full Professor at University of Vermont teaching undergraduate and graduate students, 2006–. Classes from 2013 onwards include full videos of all lectures, re-used eventually. Classes taught:

- Complex Networks/Storyology, CSYS/MATH 6712, Spring 2024.
- Principles of Complex Systems 3D, CSYS/MATH unlisted, Fall 2023 and Spring of 2024.
- Principles of Complex Systems, CSYS/MATH 6701, Fall 2023.
- Complex Networks/Storyology, CSYS/MATH 303, Spring 2023.
- Principles of Complex Systems 3D, CSYS/MATH 394, Fall 2022 and Spring of 2023.
- Principles of Complex Systems, CSYS/MATH 300, Fall 2022.
- Complex Networks/Storyology, CSYS/MATH 303, Spring 2022.
- Principles of Complex Systems (Online), CSYS/MATH 300, Fall 2021.
- Data Science Ethics, co-taught with Prof. C. M. Danforth, CSYS, Spring 2021.
- Complex Networks/Storyology, CSYS/MATH 303, Spring 2021.
- Principles of Complex Systems (Online), CSYS/MATH 300, Fall 2020.
- Sabbatical: 2019–2020 school year.
- Data Science Ethics, co-taught with Prof. C. M. Danforth, CSYS, Spring 2019.
- Complex Networks/Storyology, CSYS/MATH 303, Spring 2019.
- Principles of Complex Systems (Online), CSYS/MATH 300, Spring 2019.
- Principles of Complex Systems, CSYS/MATH 300, Fall 2018.
- Mass Mutual Summer School, Amherst, June 2018.
- Complex Networks/Storyology, CSYS/MATH 303, Spring 2018.
- Principles of Complex Systems, CSYS/MATH 300, Fall 2017.
- Mass Mutual Summer School, Amherst, June 2017.
- Principles of Complex Systems, CSYS/MATH 300, Fall 2016.
- Matrixology (Applied Linear Algebra), Math 122, Fall 2016. **Note: Flipped the class generating 70+ new lecture videos and online notes.**

- Complex Networks, CSYS/MATH 303, Spring 2016.
- Principles of Complex Systems, CSYS/MATH 300, Fall 2015.

- 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.

Lead instructor at the Lake Como School of Advanced Studies for School #178 NTMG Complex Networks: Theory, Methods, and Applications (7th Edition).

- Slides form part of the PoCSverse 22–26 May 2023.

Lecturer at the J. T. Schwartz International School for Scientific Research, Lipari Island, Italy. School theme: "Data mining and modeling of complex techno-socio-economic systems." Classes taught (graduate level):

- Stories of Complex Sociotechnical Systems: Measurement, Mechanisms, and Meaning, Summer 2012.

Lecturer at the Santa Fe Institute's Complex Systems Summer School. Classes taught (graduate level):

- Networks, one week course, Summer 2009.
- Networks, one week course, Summer 2010.

Lecturer for the Governor's Institute in the Mathematical Sciences, University of Vermont. Classes taught (high school level):

- Understanding Complex Systems, Summer 2012.
- The Form and Function of Complex Networks, Summer 2008.

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

NetSci 2019, University of Vermont, Burlington, VT.

15th Japanese-American Frontiers of Science Symposium (2014), meeting co-organizer with direct responsibility for social sciences session for US.

13th Japanese-American Frontiers of Science Symposium (2012), meeting co-organizer with direct responsibility for social sciences session for US.

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.

Selected Talks

"Ousiometrics and Telegnomics: The essence of Meaning, Stories, and Characters." Quantitative Collaborative Colloquium, University of Virginia, February, 2025.

"The essence of meaning conforms to a two-dimensional powerful-weak and dangerous-safe framework with diverse corpora presenting a safety bias." IC2S2, 10th International Conference on Computational Social Science, Philadelphia, July, 2024.

"Ousiometrics and Telegnomics: Distant measurement of essential meaning, timelines, and stories." University of Limerick, April 22, 2022.

"Ousiometrics and Telegnomics: Distant measurement of essential meaning, timelines, and stories." Santa Fe Institute, November 1, 2021. Recording: https://www.youtube.com/watch?v=NekYscmYWtI

"Ousiometrics and Telegnomics: Distant measurement of historical timelines, story turbulence, and essential meaning." Computational Social Science Seminar, University of Pittsburgh, October 8, 2021.

"Computational History and the stories surrounding Trump: Measurements of timelines, fame, story turbulence, and collective chronopathy." CUDAN Open Lab Seminar, Tallin University, Estonia, November 11, 2020.

"Computational History and the stories surrounding Trump: Measurements of timelines, fame, story turbulence, and collective chronopathy." AI Seminar, Information Sciences Institute, USC, October 9, 2020. Recording: https://www.youtube.com/watch?v=I7WabqAaYxA.

"Computational History and the stories surrounding Trump: Measurements of timelines, fame, story turbulence, and collective chronopathy." Meeting on Beliefs, Narratives, and Market Structure, Santa Fe Institute, October 7, 2020.

Microsoft Research "Building and using lexical meters and instruments to measure the nature and evolution of social systems, language, social contagion, and stories." April 2, 2020.

"Rank-turbulence divergence." Complex Networks Winter Workshop, Quebec City, December, 2019.

"Rank-turbulence divergence: A tunable instrument for comparing complex systems." QBioS Brown-bag Seminar, Georgia Tech, November, 2019.

"The Science of Stories: Measuring and exploring the ecology of human stories with lexical instruments." IDEaS Distinguished Lecture, The Institute for Data Engineering and Science, Georgia Tech, November, 2019.

"Contagious Stories, Fame, and Ultrafame." Complexity of Commerce, Santa Fe Institute, San Fransisco, September, 2019.

"Lexical Ultrafame and Story Turbulence: "?" > "trump" > "god" > …." Reckless Ideas lecture series, Generator, Burlington, Vermont April, 2019

"All kinds of contagion." Complex Networks Winter Workshop, Quebec City December, 2018.

"Building and using Lexical Meters to explore Happiness, Health, Public Opinion, Language, and Stories." Dartmouth Interdisciplinary Network Research Group, Dartmouth College, November, 2018.

"Science of Stories." Science of Stories Symposium, Burlington, Vermont, October, 2018

"Building and using Lexical Meters to explore Happiness, Health, Public Opinion, Language, and Stories." Northeaster Networks Institute, Boston, October, 2018.

"Simon's fundamental rich-gets-richer model entails a dominant first-mover advantage." Dynamics Days, Denver, January, 2018.

"Data-driven Explorations of the Ecology of Human Stories." SFI Big Data and Networks Short Course, NYC, July, 2017

"Exploring the Ecology of Human Stories." University of Chicago, Computational Social Science Seminar, April, 2017.

"Exploring the Ecology of Human Stories." Brown University, February, 2017.

"Simon's fundamental rich-gets-richer model entails a dominant first-mover advantage." University of Utah, November, 2016.

"Measuring the Happiness, Health, and Stories of Populations." Indiana University, October 2016.

"The Panometer: Building lexical meters to gauge emotional states, health, opinions, and stories." International Conference on Computational Social Science (ICCSS), Kellogg, June 2016.

"Measuring the Happiness, Health, and Stories of Populations." IPAM Workshop, Cultural Patterns, May 2016.

"Measuring the Happiness, Health, and Stories of Populations." MIT Media Lab, December 2015.

"Measuring the Happiness, Health, and Stories of Populations." Wednesdays@NICO Seminar, Northwestern Institute on Complex Systems, Northwestern, September 2015.

"Measuring Happiness, Health, & Social Stories of Populations." University of Michigan, Complex Systems Center, March, 2015.

"Hedonometer & Panometer: Measuring Happiness, Health, & Social Stories." University of Vermont Alumni Association, Boston. March, 2015.

"Measuring Happiness, Health, & Social Stories." UMass Amherst, Computational Social Science Institute. September, 2014.

"Measuring Happiness, Health, & Social Stories." UVM Emeritus Faculty symposium. Vermont, May, 2014.

"The Metabolism of Cities" Kavli Foundation Japanese-American Frontiers of Science Symposium Planning Committee. Honolulu, Hawaii, March, 2014.

"Measuring Happiness, Health, & Social Stories." Georgia Tech, Dynamical Systems/Mathematics (online), February, 2014.

"Measuring Happiness, Health, & Social Stories." University of Florida, January, 2014.

"Measuring Happiness, Health, & Social Stories." NYU Stern, Information Systems Research Seminar, November 2013.

"Happiness, Health, and Language." Civil and Electrical Engineering Seminar, University of Vermont, October 2013.

"Happiness, Health, and Language." Mason Porter's Networks Club, Oxford University, September 2013.

"Happiness, health, and language." CUSP, Brooklyn, July 2013.

"Human language has a self-similar, positively-biased emotional spectrum." Snowbird, May 2013.

"Measuring the happiness and health of populations in real time using an unexpectedly tunable hedonometer." MIT, February 2013.

"Health, Happiness, and Hahaha: Twitter's many reflections of Social Stories." Gund Institute, University of Vermont, February 2013.

"Health, Happiness, and Hahaha: Twitter's many reflections of Social Stories" ETH Zurich, December 2012.

"Why is global success so unpredictable? Making sense of influence, social contagion, marketing, and stories." TEDxUVM: Big Scale, Big Fail?, University of Vermont, October 2012.

"Measuring Happiness: Societal well-being and language's encoding of emotion." Positive Psychology Center, University of Pennsylvania, April 2012.

"Real-time, remote-sensing of societal well-being." Strategic Studies Group, Newport, RI, November 2011.

"Big Data Science." TEDxUVM: Big Data, Big Stories, University of Vermont, October 2011.

"Complexity, Big Data Science, and Happiness." Discrete Days, St. Michael's College, July 2011.

"Complexity and the Smart Grid." Powering the Future: The Vermont Smart Grid and Beyond, Burlington, May 2011.

"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." GNH2010: Changing What We Measure from Wealth to Well-Being , 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

14th Biannual Japanese-American Frontiers of Science Symposium, Japan, 2014.

13th Biannual Japanese-American Frontiers of Science Symposium, Irvine, CA, 2012.

12th Biannual Japanese-American Frontiers of Science Symposium, Kazusa Arc, Kisaruzu-City, Chiba, Japan, 2010.

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.

Service

Various lead roles in creating content and graduate programs for Complex Systems and Data Science at UVM, 2007–.

Faculty search committees: University wide, College of Engineering and Mathematical Sciences, Department of Mathematics and Statistics.

Complex Systems Spire Steering Commmittee, Chair, 2010–2015.

Member of graduate and undergraduate thesis committees.

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; Advances in Complex Systems; PLoS ONE; Journal of Experimental Psychology: Learning, Memory, and Contagion; Nature Scientific Reports.