Curriculum Vitae
Daniel B. Larremore
daniel.larremore@colorado.edu

Contact Information

BioFrontiers Institute
3415 Colorado Ave.
Boulder, CO 80303, USA
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Website: LarremoreLab.github.io
Twitter: @danlarremore
Google Scholar: here
Github: @DBLarremore

Education

University of Colorado Boulder, Department of Applied Mathematics   2012
Ph.D in Applied Mathematics. Advisor: Juan G. Restrepo
"Critical Dynamics in Complex Excitable Networks"

University of Colorado Boulder, Department of Applied Mathematics   2009
M.S. in Applied Mathematics

Washington University in St. Louis, School of Engineering and Applied Science   2005
B.S. in Chemical Engineering, *cum laude*

Academic Positions

University of Colorado	**Boulder, CO**
Assistant Professor, BioFrontiers Institute	2017 - Present
Assistant Professor, Computer Science	2017 - Present
Affiliate Faculty, Applied Mathematics	2020 - Present
Harvard T.H. Chan School of Public Health	**Boston, MA**
External Faculty, Center for Communicable Disease Dynamics	2020 - Present
Santa Fe Institute	**Santa Fe, NM**
Omidyar Fellow	2015 - 2017
Harvard School of Public Health, Center for Communicable Disease Dynamics	**Boston, MA**
Postdoctoral Fellow with Caroline Buckee (HSPH) and Aaron Clauset (Colorado)	2012 - 2015

Editorial Positions

PLOS Computational Biology	**San Francisco, CA**
Associate Editor	2022 - Present

Awards

- **Alan T. Waterman Award**, National Science Foundation   2022
- **Robert L. Stearns Award**, University of Colorado Boulder   2021
- **Provost's Faculty Achievement Award**, University of Colorado Boulder   2021
- **Research & Innovation Office Faculty Fellow**, University of Colorado Boulder   2020
- **Best Poster** – Genetic Epidemiology of Malaria, Sanger Institute   2018
- **Best Poster** – NetSci 2014, Berkeley, CA   2014
- **Best Poster** – Dynamics Days 2010, Evanston, IL   2010

Peer-Reviewed Publications

* equal contribution
† alphabetical author order
★ advised student coauthor

Peer-Reviewed Journal Articles

1. A. C. Morgan, ★ N. LaBerge, **D. B. Larremore**, M. Galesic, J. E. Brand, A. Clauset. "Socioeconomic Roots of Academic Faculty." *In Press, Nature Human Behaviour*, (2022).

2. ★ N. LaBerge, ★ K. H. Wapman, A. C. Morgan, S. Zhang, D. B. Larremore, Aaron Clauset. "Subfield Prestige and Gender Inequality in Computing." *In Press, Communications of the ACM* (2022).

3. ★ K. M. Bubar*, ★ C. E. Middleton*, K. K. Bjorkman, R. Parker, **D. B. Larremore**. "SARS-CoV-2 Transmission and Impacts of Unvaccinated-Only Screening in Populations of Mixed Vaccination Status." *In Press, Nature Communications* (2022).

4. C. A. Lopez, C. H. Cunningham, S. Pugh, K. Brandt, U. P. Vanna, M. J. Delacruz, Q. Guerra, S. J. Goldstein, Y. J. Hou, M. Gearhart, C. Wiethorn, C. Pope, C. Amditis, K. Pruitt, C. Newberry-Dillon, J. Schmitz, L. Premkumar, A. A. Adimora, M. Emch, R. Boyce, A. E. Aiello, B. K. Fosdick, **D. B. Larremore**, A. M. de Silva, J. J. Juliano, A. J. Markmann. "Ethnoracial disparities in SARS-CoV-2 seroprevalence in a large cohort of individuals in central North Carolina from April to December 2020." *In Press at mSphere* (2022).

5. ★ E. Lee, A. Clauset, **D. B. Larremore.** "The Dynamics of Faculty Hiring Networks." *EPJ Data Science,* 10, 48, (2021)

6. K. K. Bjorkman, T. K. Saldi, E. Lasda, L. C. Bauer, J. Kovarik, P. K. Gonzales, M. R. Fink, K. L. Tat, C. R. Hager, J. C. Davis, C. D. Ozeroff, G. R. Brisson, **D. B. Larremore**, L. A. Leinwand, M. B. McQueen, R. Parker. "Higher viral load drives infrequent SARS-CoV-2 transmission between asymptomatic residence hall roommates." *Journal of Infectious Diseases,* jiab386, (2021).

7. E. Hobson, M. Silk, N. Fefferman, **D. B. Larremore**, P. Rombach, S. Shai, N. Pinter-Wollman. "A guide to choosing and implementing reference models for social network analysis." *Biological Reviews,* (2021)

8. **D. B. Larremore**, D. Toomre, R. Parker. "Modeling the effectiveness of olfactory testing to limit SARS-CoV-2 transmission." *Nature Communications*, 12, 3664 (2021).

9. M. I. Nisar, N. Ansari, F. Khalid, M. Amin, H. Shahbaz, A. Hotwani, N. Rehman, S. Pugh, U. Mehmood, A. Rizvi, A. Memon, Z. Ahmed, A. Ahmed, J. Iqbal, A. F. Saleem, U. B. Aamir, **D. B. Larremore,** B. K. Fosdick, F. Jehan. "Serial population-based serosurvey for COVID-19 in two neighborhoods of Karachi, Pakistan." *International Journal of Infectious Diseases* (2021).

10. **D. B. Larremore**, B. K. Fosdick, ★ K. M. Bubar, S. Zhang, S. M. Kissler, C. J. E. Metcalf, C. O. Buckee, Y. H. Grad. "Estimating SARS-CoV-2 seroprevalence and epidemiological parameters with uncertainty from serological surveys." *eLife* 10:e64206 (2021).

11. M. Kawakatsu*, P. S. Chodrow*, N. Eikmeier*, **D. B. Larremore**. "Emergence of hierarchy in networked endorsement dynamics." *Proceedings of the National Academy of Sciences, USA* 118 (16) e2015188118 (2021).

12. A. C. Morgan, S. F. Way, ★ M. J. D. Hoefer, **D. B. Larremor**e, M. Galesic, A. Clauset. "The unequal impact of parenthood in academia." *Science Advances,* 7 (9), eabd1996 (2021).

13. ★ K. M. Bubar, S. M. Kissler, M. Lipsitch, S. Cobey, Y. H. Grad, **D. B. Larremore**. "Model-informed COVID-19 vaccine prioritization strategies by age and serostatus" *Science,* 371 (6532), 916-921 (2021).

14. K. R. Sabourin, J. Schultz, J. Romero, M. M. Lamb, **D. B. Larremore**, T. E. Morrison, A. Frazer-Abel, S. Zimmer, R. M. Kedl, T. Jaenisch, R. Rochford. "Risk Factors of SARS-CoV-2 Antibodies in Arapahoe County First Responders - the COVID-19 Arapahoe SErosurveillance Study (CASES) Project" *Journal of Occupational and Environmental Medicine* 63 (3), 191-198 (2021).

15. **D. B. Larremore**, B. Wilder, E. Lester, S. Shehata, J. M. Burke, J. A. Hay, M. Tambe, M. J. Mina, R. Parker. "Test sensitivity is secondary to frequency and turnaround time for COVID-19 screening." *Science Advances,* eabd5393 (2020).

16. K. Finlinson, W. L. Shew, **D. B. Larremore**, J. G. Restrepo. Control of excitable systems is optimal near criticality. *Physical Review Research* 2, 033450 (2020).

17. A. Patania, B. McShane, B. Falk, **D. B. Larremore**, E. McDonnell Feit, E. Bruch, F. Feinberg, J. Helveston, M. Small, M. Braun, N. Fefferman. "Choices In Networks: A Research Framework." *Marketing Letters* (2020).

18. ★ T.-C. Yen, **D. B. Larremore**. Community Detection in Bipartite Networks with Stochastic Blockmodels. *Physical Review E,* 102, 032309 (2020).

19. S. M. Kissler*, N. Kishore*, M. Prabhu*, D. Goffman*, Y. Beilin*, R. Landau, C. Gyamfi-Bannerman, B. T. Bateman, D. Katz, J. Gal, A. Bianco, J. Stone, **D. B. Larremore**, C. O. Buckee, Y. H. Grad. "Reductions in commuting mobility predict geographic differences in SARS-CoV-2 prevalence in New York City." *Nature Communications,* 11, 4674 (2020).

20. **D. B. Larremore**, ★ K. M. Bubar, Y. H. Grad. "Implications of test characteristics and population seroprevalence on 'immune passport' strategies." *Clinical Infectious Diseases*, ciaa1019, (2020).

21. N. Obeng-Adjei*, **D. B. Larremore***, L. Turner, A. Ongoiba, S. Li, S. Doumbo, T. B. Yazew, O. K. Doumbo, K. Kayentao, L. H. Miller, B. Traore, S. K. Pierce, C. O. Buckee, T. Lavstsen, P. D. Crompton, T. M. Tran, "Longitudinal analysis of naturally acquired antibodies to PfEMP1 CIDR domain variants and their association with malaria protection." *JCI Insight*, 5(12) e137262 (2020).

22. † A. Berdahl*, C. Brelsford*, C. De Bacco*, M. Dumas*, V. Ferdinand*, J. A. Grochow*, L. Hébert-Dufresne*, Y. Kallus*, C. P. Kempes*, A. Kolchinsky*, **D. B. Larremore***, E. Libby*, E. A. Power*, C. A. Stern*, B. D. Tracey*. "Dynamics of beneficial epidemics." *Nature Scientific Reports* 9 (15093), (2019). [link]

23. ★ K. H. Wapman, **D. B. Larremore**. "webweb: a tool for creating, displaying, and sharing interactive network visualizations on the web." *Journal of Open Source Software* 4(40), 1458 (2019).

24. S. F. Way, A. C. Morgan, **D. B. Larremore***, A. Clauset*, "Productivity, prominence, and the effects of academic environment." *Proceedings of the National Academy of Sciences, USA* 116(18) (2019).

25. **D. B. Larremore**. "Bayes-optimal estimation of overlap between populations of fixed size." *PLOS Computational Biology* 15(3): e1006898. (2019).

26. V. Agrawal, A. B. Cowley, W. L. Shew, **D. B. Larremore**, J. G. Restrepo, Q. Alfaori. "Robust information capacity requires strong and balanced excitatory and inhibitory synapses." *Chaos* **28** 103115 (2018). [link]

27. C. De Bacco*, **D. B. Larremore***, C. Moore. "A physical model for efficient ranking in networks." *Science Advances* **4**(7) eaar8260 (2018). [link]

28. † Bailey K. Fosdick*, **D. B. Larremore***, Joel Nishimura*, Johan Ugander*. "Configuring random graph models with fixed degree sequences." *SIAM Review,* **60** (2) 315-355. (2018). [link]

29. S. F. Way, A. C. Morgan, A. Clauset*, **D. B. Larremore***. "The misleading narrative of the canonical faculty productivity trajectory." *Proceedings of the National Academy of Sciences, USA* **114** (44) E9216-E9223 (2017). [link] [Also accepted at *ICWSM 2017*, social science track (non-archival).]

30. L. Peel*, **D. B. Larremore***, A. Clauset. "The ground truth about metadata and community detection in networks." *Science Advances* **3**(5) e1602548 (2017).

31. C. De Bacco, E. A. Power, **D. B. Larremore**, C. Moore. "Community detection, link prediction, and layer interdependence in multilayer networks." *Physical Review E* **95** 042317 (2017).

32. **D. B. Larremore**, S. A. Sundararaman, W. Liu, W. R. Proto, A. Clauset, D. E. Loy, S. Speede, L. J. Plenderleith, P. M. Sharp, B. H. Hahn, J. C. Rayner*, and C. O. Buckee*. "Ape parasite origins of human malaria virulence genes." *Nature Communications*, **6**, 8368 (2015).

33. A. Clauset, S. Arbesman, **D. B. Larremore**, "Systematic inequality and hierarchy in faculty hiring networks." *Science Advances,* **1**, e1400005 (2015).

34. A. K. Bei, A. Diouf, K. Miura, **D. B. Larremore**, U. Ribacke, G. Tullo, E. L. Moss, D. E. Neafsey, R. F. Daniels, A. E. Zeituni, I. Nosamiefan, S. K. Volkman, A. D. Ahouidi, D. Ndiaye, T. Dieye, S. Mboup, C. O. Buckee, C. Long, and D. F. Wirth., "Immune characterization of *P. falciparum* parasites with a shared genetic signature in a region of decreasing transmission." *Infection and Immunity*, **83**(1), 276 (2014).

35. **D. B. Larremore,** A. Clauset, and A. Z. Jacobs, "Efficiently inferring community structure in bipartite networks." *Physical Review E,* **90**(1), 012805 (2014).

36. **D. B. Larremore**, W. L. Shew, E. Ott, F. Sorrentino, and J. G. Restrepo, "Inhibition causes ceaseless dynamics in networks of excitable nodes" *Physical Review Letters*, **112**, 138103 (2014).

37. **D. B. Larremore**, A. Clauset, and C. O. Buckee, "A network approach to analyzing highly recombinant malaria parasite genes." *PLOS Computational Biology* **9**(10) e1003268 (2013).

38. **D. B. Larremore*** and D. Taylor*, "Social Climber attachment in forming networks produces phase transition in a measure of connectivity." *Physical Review E* **86** 031140 (2012).

39. **D. B. Larremore**, M. Y. Carpenter, E. Ott, and J. G. Restrepo, "Statistical properties of avalanches in networks." *Physical Review E* **85**, 066131 (2012).
40. **D. B. Larremore**, W. L. Shew, E. Ott, and J. G. Restrepo, "Effects of network topology, transmission delays, and refractoriness on the response of coupled excitable systems to a stochastic stimulus." *Chaos* **21**, 025117 (2011).
41. **D. B. Larremore**, W. L. Shew, J. G. Restrepo, "Predicting criticality and dynamic range in complex networks: effects of topology." *Physical Review Letters* **106**, 058101 (2011).

Peer-Reviewed Conference Proceedings

42. S. F. Way, **D. B. Larremore**, A. Clauset. "Gender, Productivity, and Prestige in Computer Science Faculty Hiring Networks. " *Proceedings of the 2016 World Wide Web Conference (WWW)* 1169-1179, (2016). 11 pages, 16% acceptance rate.

Peer-Reviewed Workshop Papers

43. R. M. Layer, B. K. Fosdick, M. Bradshaw, **D. B. Larremore**, P. Doherty. "Case Study: Using Facebook Data to Monitor Adherence to Stay-at-home Orders in Colorado and Utah." *ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Workshop on Humanitarian Data Mapping,* (2020).

Peer-Reviewed Book Chapters

44. L. M. Childs, **D. B. Larremore**, "Network models for malaria: antigens, dynamics, and evolution over space and time." *Systems Medicine: Integrative Qualitative and Computational Approaches.* Elsevier (2020).
45. **D. B. Larremore**, W. L. Shew, J. G. Restrepo, "Critical Dynamics in Complex Networks" *Criticality in Neural Systems.* Ed. Dietmar Plenz & Ernst Niebur. NY: Wiley, 365-392, (2014).

Peer-Reviewed Perspectives and Essays

46. S. Cobey, **D. B. Larremore**, Y. H. Grad, M. Lipsitch. "Concerns about SARS-CoV-2 evolution should not hold back efforts to expand vaccination." *Nature Reviews Immunology* (2021).
47. M. J. Mina, R. Parker, **D. B. Larremore**. "Rethinking Covid-19 Test Sensitivity — A Strategy for Containment." *The New England Journal of Medicine* (2020).
48. A. Clauset, **D. B. Larremore**, R. Sinatra. "Data-driven predictions in the science of science." *Science* **355**, 477-480 (2017).

Journal Articles Currently Under Review

49. A. K. Bei, **D. B. Larremore**, K. Miura, A. Diouf, N. K. Baro, R. F. Daniels, A. Griggs, E. L. Moss, D. E. Neafsey, A. B. Deme, M. Sy, S. Schaffner, A. D. Ahouidi, D. Ndiaye, T. Dieye, S. Mboup, C. O. Buckee, S. K. Volkman, C. A. Long, D. F. Wirth, "Plasmodium falciparum population genetic complexity influences expression dynamics and immune recognition among highly related genotypic clusters." *Submitted* (2021).
50. **D. B. Larremore**,* K. Joseph*, A. Hannak*, A. Cimpian*, "Explaining Gender Differences in Academics' Career Trajectories." *Submitted* (2021).
51. S. Ruybal-Pesántez, F. E. Sáenz, S. Deed, ★ E. K. Johnson, **D. B. Larremore**, C. A. Vera-Arias, K. E. Tiedje, K. P. Day. "Evolution of Plasmodium falciparum var repertoires by sexual recombination sustains disease transmission after an outbreak in Ecuador" *Submitted* (2021).
52. T. S. Brown, P. Martinez de Salazar Munoz, A. Bhatia, B. Bunda, E. K. Williams, D. Bor, J. S. Miller, A. Mohareb, V. Naranbai, W. Garcia Beltran, T. E. Miller, J. Thierauf, W. Yang, D. Kress, K. Stelljes, K. Johnson, **D. B. Larremore**, J. Lennerz, A. J. Iafrate, S. Balsari, C. O. Buckee, Y. H. Grad. "GPS-estimated foot traffic data and venue selection for COVID-19 serosurveillance studies." *Submitted* (2021).
53. ★ E. K. Johnson, R. Kahn, Y. H. Grad, M. Lipsitch, **D. B. Larremore**. "Test negative designs with uncertainty, sensitivity, and specificity." *Submitted* (2021).

54. ★ E. K. Johnson, **D. B. Larremore**. "Bayesian estimation of population size and overlap from random subsamples." *Submitted* (2022).
55. ★ K. H. Wapman, S. Zhang, Aaron Clauset, D. B. Larremore. "Quantifying hierarchy and dynamics in U.S. Faculty Hiring." *Submitted* (2021).
56. S. Zhang, ★ K. H. Wapman, D. B. Larremore, Aaron Clauset. "Labor advantages drive the greater productivity of faculty at elite universities." *Submitted* (2022).
57. Q. Yang, N. R. Meyerson, C. L. Paige, J. H. Morrison, S. K. Clark, W. T. Fattor, C. J. Decker, H. R. Steiner, E. Lian, **D. B. Larremore**, R. Perera, E. M. Poeschla, R. Parker, R. D. Dowell, S. L. Sawyer. "A universal immune response to infection can be measured in human saliva." *Submitted* (2022).

Other Publications

58. D. E. Geer Jr. and **D. B. Larremore**, "Progress is Infectious." *IEEE Security & Privacy* **10**(6) p. 94-95 (2012).
59. † A. Berdahl*, U. Bhat*, V. Ferdinand*, J. Garland*, K. Ghazi-Zahedi*, J. Grana*, J. A.Grochow*, E. Hobson*, Y. Kallus*, C. P. Kempes*, A. Kolchinsky*, **D. B. Larremore***, E. Libby*, E. A. Power*, B. D. Tracey*. "On the records." (2017) Available via arxiv.org.

Funding

Model-informed vaccine prioritization strategies   2020-2022
PI
3U24GM132013-02S2, Models of Infectious Disease Agent Study (MIDAS)
National Institute of General Medical Science, National Institutes of Health
MIDAS Coordination Center (MIDASNI2020-2)
$140,000

Causal, Statistical and Mathematical Modeling with Serologic Data   2020-2022
Co-PI (via Subcontract to University of Colorado Boulder)
U01CA261277, National Cancer Institute, Nation Institutes of Health
$179,565 (to University of Colorado Boulder)
With PIs Marc Lipsitch and Michael Mina (Harvard T. H. Chan School of Public Health)

Mapping the Structure and Dynamics of the Scientific Ecosystem   2019-2022
PI
19RT0301. Air Force Office of Scientific Research, Minerva
$2,565,505
With Co-I Aaron Clauset (University of Colorado Boulder), Co-I Mirta Galesic (Santa Fe Institute), and Co-I Jennifer Dunne (Santa Fe Institute)

Academic hiring networks and scientific productivity across disciplines   2016-2020
PI
SMA 1633747. National Science Foundation, Social, Behavioral and Economic Sciences
$550,000.
With Co-PI Mirta Galesic (Santa Fe Institute) and PI Aaron Clauset (University of Colorado Boulder)
and with additional supplements awarded to PI Larremore:
REU Supplement, 2018, $5000
REU Supplement, 2019, $6000

Models of Infections Disease Agents Study Center for Communicable Disease Dynamics 2015-2019
Consultant
U54 GM088558. National Institutes of Health, National Institute of General Medical Sciences,
$11,279,771
With PI Marc Lipsitch (Harvard T.H. Chan School of Public Health).

Network Assortativity   2014
Proposer
American Mathematical Society Mathematical Research Communities, collaboration grant
$2,250
With co-proposers Bailey Fosdick (Colorado State University), Joel Nishimura (Arizona State University), and Johan Ugander (Microsoft Research)

Industry Experience and Advising

Darwin BioSciences   **Boulder, CO**
Scientific Advisory Board   2020 -

Gambro Blood Component Technologies   **Lakewood, CO**
Research and Development Engineer   2005 - 2007
Engineering Intern II   Summer 2005
Engineering Intern I   Summer 2004

Invited Talks

- "Optimal control of excitable systems near criticality"
Physical Review Journal Club   December 7, 2021
- "Mathematical Models for Disease Mitigation via Testing"
Mathematical Biology and Applied Dynamics Seminar, Ohio State University   October 28, 2021
- "Vaccination Strategies Prioritization, Dose Sparing, and Decision Making Under Uncertainty & Inequity"
Society for Mathematical Biology, COVID-19 Vaccination Minisymposium   June 16, 2021
- "Modeling COVID-19 Testing Strategies: Mitigation vs Information"
Laboratory Medicine Research Conference, Yale School of Medicine   June 2, 2021
- "Vaccination Strategies Prioritization, Dose Sparing, and Decision Making Under Uncertainty & Inequity"
Computing Advisory Board, Dept. of Computer Science, Univ. Colorado Boulder April 15, 2021
- "Vaccination Strategies Prioritization, Dose Sparing, and Decision Making Under Uncertainty & Inequity"
Colloquium, Santa Fe Institute   March 17, 2021
- "Model-informed COVID-19 vaccine prioritization and dose-sparing strategies by age and serostatus"
Div. of Infectious Diseases Grand Rounds, Univ. of Colorado Anschutz Sch. Medicine March 3, 2021
- "Model-informed COVID-19 Vaccine Prioritization Strategies by Age & Serostatus"
Applied Mathematics Dynamics Seminar, University of Colorado Boulder   January 28, 2021
- "COVID-19 Testing Strategies: Mitigation vs Information"
University of British Columbia - BC COVID-19 Modeling Group   December 16, 2020
- "COVID-19 Testing Strategies: Mitigation vs Information"
MIT Media Lab - Trust in Pandemic Tech Seminar   December 4, 2020
- "Model-informed COVID-19 Vaccine Prioritization by Age and Serostatus"
Models of Infectious Disease Agent Study (MIDAS) Network seminar   November 20, 2020
- "Estimating SARS-CoV-2 seroprevalence & epidemiological parameters with uncertainty from serological surveys"
World Health Organization Solidarity II Sero-Epidemiology Meeting   November 5, 2020
- "Model-informed COVID-19 Vaccine Prioritization by Age and Serostatus"
EU/EEA National Immunisation Technical Advisory Group   October 15, 2020
- "Surveillance Testing of SARS-CoV-2"
UT Austin COVID-19 Modeling Consortium, University of Texas at Austin   September 23, 2020
- "Surveillance Testing of SARS-CoV-2"
McGill Genome Center, McGill University   August 13, 2020
- Panelist: COVID-19 Briefing on Testing
Ergo COVID-19 Intelligence Forum, New York City   August 11, 2020

- "Surveillance Testing of SARS-CoV-2"

COVID-19 Genomics Research Network Meeting, New York Genome Center,   August 3, 2020
- "Modeling the impacts of test sensitivity, frequency, and turnaround time for COVID-19 surveillance."

CSQUID/CIDID Seminar, *University of Florida College of Medicine*, Gainesville, FL.   July 29, 2020
- "SARS-CoV-2 Seroprevalence Estimation, Study Design, and Modeling"

BioStatistics Seminar, *University of Colorado Medical School*, Aurora, CO.   June 17, 2020
- "Explaining Gender Differences in Academics' Career Trajectories"

Webinar, *Computational Social Science Society of the Americas*   May 6, 2020
- "How do Infectious Disease Models Work?"

Collabeeration, BioFrontiers Institute, *University of Colorado Boulder*, Boulder, CO   April 1, 2020
- "Complex networks and *P. falciparum*: from evolution to epidemiology"

Computational BioSciences Seminar, *University of Colorado Medical School*, Aurora, CO.   Mar 9, 2020
- "Complex networks, math, and malaria: from evolution to epidemiology"

Applied Math Colloquium, *University of Colorado Boulder*, Boulder, CO   January 17, 2020
- "Complex networks and *P. falciparum*: from evolution to epidemiology"

Applied Math & Statistics Colloquium, *Colorado School of Mines*, Golden, CO.   Nov 8, 2019
- Panelist: "Development of Trustworthy AI"

Mozilla Foundation & CU Data Science Team, Boulder, CO   October 8, 2019
- "Complex networks and *P. falciparum*: from evolution to epidemiology"

Infectious Disease Epidemiology Seminar Series, *Harvard Sch. Pub. Health*, Boston, MA. May 9, 2019
- "Which community detection method is best?"

Analysis and Interpretation of Connectomes, *HHMI Janelia*, Ashburn, VA.   May 22, 2018
- "A physical model for efficient ranking in networks."

Applied Math Seminar, *UNC Chapel Hill*, Chapel Hill, NC.   Apr 11, 2018
- "A physical model for efficient ranking in networks."

Duke Network Analysis Center seminar, *Duke University*, Durham, NC.   Apr 10, 2018
- Paper Unwind: "The misleading narrative of the canonical faculty productivity trajectory"

CompleNet, Boston, MA   March 4, 2018
- "Gender, prestige, and productivity in academic hiring networks and career trajectories."

Annenberg School of Communication, *University of Pennsylvania*, Philadelphia, PA.   Feb 13, 2018
- "A physical model for efficient ranking in networks"

Special Session: Network Science,
Joint Mathematics Meeting, San Diego, CA   Jan 12, 2018
- "Estimating the entropy of activity in excitable networks"

Special Session: Emergent Phenomena in Discrete Models,
Joint Mathematics Meeting, San Diego, CA   Jan 12, 2018
- "The ground truth about metadata and community detection in networks"

Special Session: Theory, Practice, and Applications of Graph Clustering,
Joint Mathematics Meeting, San Diego, CA   Jan 11, 2018
- "Large-scale structures in networks: hidden communities and latent hierarchies."

Network Science School, *NetSciX*, Hangzhou, China.   Jan 5, 2018
- "The assembly of prestige and status in networks."

Omidyar Network Applied Complexity Meeting, Santa Fe Institute, Santa Fe, NM.   Dec 12, 2017
- "A physical model for efficient ranking in networks."

Physics Colloquium, *U Arkansas, Fayetteville.*   Nov 17, 2017
- "A physical model for efficient ranking in networks."

Center for the Study of Complex Systems Seminar, *U Michigan.*   Nov 9, 2017
- "Gender, prestige, and productivity in academic hiring networks and career trajectories."

NSF-FAST: Machine Learning for Discovery Science, Yerevan, Armenia.   Oct 20, 2017
- "The dynamics of beneficial epidemics."

Dynamics of/on Complex Networks Satellite Symp., *NetSci 2017,* Indianapolis, IN   June 20, 2017
- "Gender, prestige, and productivity in academic hiring networks and career trajectories."

Workshop on Gendered Creative Teams, *Central European Univ.*, Budapest, Hungary   May 25, 2017
- "Gender, prestige, and productivity in academic hiring networks and career trajectories."

Seminar, Berkeley Institute for Data Science, *UC Berkeley*, Berkeley, CA   Mar 17, 2017
- "The assembly of prestige and status in networks."

Influence, Complexity and Networks, *Dialog Group*, Austin, TX   Feb 23, 2017
- "The ground truth about metadata and community detection in networks."

Networks Seminar, *University of Houston*, Houston, TX   Oct 28, 2016
- "Gender, prestige, and productivity in faculty hiring networks."

Quantifying Success Satellite Symposium, *NetSci 2016*, Seoul, Korea   June 1, 2016
- "Networks and the evolution of malaria's virulence in humans and apes."

Network Frontiers Workshop, *Northwestern Univ. Inst. of Complex Systems*, Evanston, IL   Dec 7, 2015
- "Networks in two acts: faculty hiring hierarchies and malaria's evolving virulence."

Arts & Sciences Seminar, *Clarkson University*, Potsdam, NY   Nov 13, 2015
- "Networks and the evolution of malaria's virulence in humans and apes."

Mathematics Colloquium, *Clarkson University*, Potsdam, NY   Nov 12, 2015
- "Networks, inference, and the evolution of malaria's virulence in humans and apes."

Mechanical Engr. Seminar, *University of New Mexico*, Albuquerque, NM   Nov 6, 2015
- "A complex networks approach to malaria's genetic recombination dynamics."

Minisymposium, *SIAM Conf. on Applications of Dynamical Systems (DS15)*, Snowbird, UT   May 15, 2015
- "Using networks to analyze rapid genetic recombination in malaria parasites."

Dynamics & Complex Systems Seminar, *Applied Math, University of Colorado Boulder*   April 9, 2015
- "Complex networks, rapid genetic recombination, and tricky malaria antigens."

Mathematics Colloquium, *Western New England University*   Nov 7, 2014
- "Efficiently inferring community structure in bipartite networks."

Seminar at Network Science and Graph Algorithms Program*, ICERM, Brown University*   Mar 4, 2014
- "Ceaseless critical dynamics in excitable networks with inhibitory nodes."

Information, Self-Organizing Dynamics, and Synchronization on Complex Networks,
(ISODS) Satellite Symposium*, NetSci 2014*, Berkeley, CA   June 3, 2014
- "Critical dynamics in balanced excitable networks: neuronal avalanches, dynamic range, and ceaseless activity."

Dynamics & Complex Systems Seminar*, Applied Math, University of Colorado Boulder*   Feb 28, 2013
- "Critical dynamics in balanced excitable networks: neuronal avalanches, dynamic range, and ceaseless activity."

Seminar*, Center for Complex Network Research, Northeastern University*   Feb 5, 2013
- "Predicting criticality and dynamic range in complex networks: effects of topology."

Minisymposium, *SIAM Conf. on Applications of Dynamical Systems (DS11),* Snowbird, UT   May 23, 2011

Contributed or Submitted Talks and Presentations

- NIH SeroNet Investigators Meeting   March 24, 2022
- Int'l Conf. on Computational Social Science (IC2S2), *University of Amsterdam*   July 19, 2019
- SIAM Network Science (SIAM NS19), *Snowbird, UT*   May 23, 2019
- BioFrontiers Institute Advisory Board – *Boulder, CO*   April 17, 2019
- ASTMH Annual Meeting – poster, *New Orleans, LA*   October 31, 2018
- d3.js Boulder Meetup, *Boulder, CO*   August 30, 2018
- Int'l Conf. on Computational Social Science (IC2S2), *Northwestern University*   July 14, 2018
- NetSci, *Paris, France*   June 15, 2018
- Genetic Epidemiology of Malaria – poster [best poster award], *Sanger Institute, UK*   June 13, 2018
- CompleNet, Network Science Institute at Northeastern University, *Boston, MA.*   March 5, 2018
- Dynamical Systems Seminar, CU Boulder, *Boulder, CO.*   Nov 2, 2017
- StatOptML Seminar, CU Boulder, *Boulder, CO.*   Sept 12, 2017
- NetSci, *Indianapolis, IN.*   June 21, 2017
- Complex Systems Summer School, Santa Fe Institute, *Santa Fe, NM.*   June 14, 2017
- YConf, YCombinator Research, *San Francisco, CA.*   June 10, 2017
- Santa Fe Science Writers' Workshop, Santa Fe Institute, *Santa Fe, NM.*   May 2, 2017
- Outside In seminar, Santa Fe Institute, *Santa Fe, NM.*   October 19, 2016
- Conference on Complex Systems (CCS), *Amsterdam, NL*   September 22, 2016

- SIAM Network Science (SIAM NS16), *Boston, MA* — July 15, 2016
- Int'l Conf. on Computational Social Science (IC2S2), *Northwestern University* — June 24, 2016
- NetSci, *Seoul, Korea* — June 2, 2016
- Int'l Conf. on the Science of Science, *Library of Congress, Washington D.C.* — April 7, 2016
- Los Alamos Rotary Club, *Los Alamos, NM* — March 15, 2016
- NetSci, *Zaragoza, Spain* — June 3, 2015
- Freeman Symposium, *Harvard T. H. Chan School of Public Health* — April 10, 2015
- Boston Area Parasitology Symposium (BAPS), *Boston, MA* — December 8, 2014
- Defeating Malaria: from genes to the globe – poster *Harvard School of Public Health* — December 2, 2014
- ASTMH – poster, *New Orleans, LA* — November 4, 2014
- Harvard Channing Network Science Seminar, *Boston, MA.* — October 31, 2014
- NetSci – poster [best poster award], *Berkeley, CA* — June 4, 2014
- BioMalPar/EVIMalar, *EMBL, Heidelberg, Germany* — May 13, 2014
- Network Frontiers Workshop, *NICO, Northwestern University* — December 6, 2013
- ASTMH – poster, *Washington D.C.* — November 15, 2013
- Oxford Tropical Network, *KEMRI, Kilifi, Oxford-Wellcome Trust, Kenya* — October 1, 2013
- Networks Journal Club, *OCIAM, Oxford University, UK* — March 8, 2013
- Dynamics Days – poster, *University of Colorado Boulder* — January 3, 2013
- Freeman Symposium, *Harvard School of Public Health* — December 14, 2012
- Ph.D. Dissertation Defense, *University of Colorado Boulder* — April 5, 2012
- Front Range Applied Mathematics Student Conference, *Univ. of Colorado Denver* — March 3, 2012
- Dynamics Days – poster, *University of Maryland* — January 3, 2012
- Comprehensive Examination, *University of Colorado Boulder* — September 27, 2011
- Front Range Applied Mathematics Student Conference, *Univ. of Colorado Denver* — March 5, 2011
- Dynamics Days 2011, *Duke University* — January 6, 2011
- Complex and Dynamical Systems Seminar, *University of Colorado Boulder* — October 20, 2010
- Nonlinear Dynamics of Networks (NTD10) – poster, *University of Maryland* — April 4, 2010
- Complex and Dynamical Systems Seminar, *University of Colorado Boulder* — April 1, 2010
- Front Range Applied Mathematics Student Conference, *Univ. of Colorado Denver* — March 6, 2010
- Dynamics Days 2010 – poster, *Northwestern University* — January 3, 2010

Supported Workshops

- Model-Based Research and Reproducibility Workshop, Center for Open Science — Feb 4-5, 2020
- Network Null Models Working Group, NIMBIOS — Oct 23-26, 2019
- Decision Processes in Networks, Triennial Choice Symposium — May 29-June 2, 2019
- The Dynamics of Discovery: Is Science Slowing and Can We Speed It Up? — March 16-17, 2018

Affiliations, Accreditations

- Models of Infectious Disease Agent Study Network – Member — 2020 - present
- Network Science Society – Member — 2014 - present
- American Mathematical Society – Member — 2014 - present
- American Society of Tropical Medicine and Hygiene – Member — 2013 - present
- Society of Industrial and Applied Mathematics – Member — 2008 - present
- NIH "Protecting Human Research Participants" – certification — June, 2016
- Physical Review Letters – "Inhibition causes ceaseless…" – Editors' Suggestion — April, 2014
- National Postdoctoral Association – Member — 2012 - 2015
- Arts and Sciences Dean's Teaching Assistant Fellowship — Spring 2010
- Colorado – Lead Teaching Assistant, Dept. of Applied Mathematics — 2009 - 2010

Advising

Postdocs

• Dr. Katherine Wootton, Computer Science	2021 - present
• Dr. Eun Lee, Computer Science	2020 - 2022

PhD Students

• Tzu-Chi Yen, Computer Science (co-adv: Josh Grochow)	2018 - present
• K. Hunter Wapman, Computer Science	2019 - present
• Nicholas LaBerge, Computer Science (co-adv: Aaron Clauset)	2019 - present
• Ian van Buskirk, Computer Science (co-adv: Aaron Clauset)	2019 - present
• Kate Bubar, Applied Mathematics	2020 - present
• Katherine Spoon, Computer Science (co-adv: Aaron Clauset)	2020 - present
• Casey Middleton, Computer Science	2021 - present
• Erik Johnson, Applied Mathematics	2021

PhD Rotation Students (IQ Biology)

• Casey Middleton	2021
• Sharon Wu	2020
• Elise Tate	2019
• Kate Bubar	2019
• Sierra Jech	2019
• Phillip Benson	2019
• Dieu My Nguyen	2018
• Michael Smallegan	2018

Masters Students

• Upasana Dutta, M.S. Computer Science, Colorado	2020 - present
• Aaron Aaeng, M.S. Computer Science, Colorado	2020
• Marshall Y. Carpenter, M.S. Applied Math, Colorado (Co-adv: Juan G. Restrepo, NSF MCTP)	2012

Undergraduate Students

• Aloha Churchill, University of Colorado Boulder	2020 - 2021
• Suchita Lulla, University of Colorado Boulder	2018 - 2021
• Aparajithan Venkateswaran, University of Colorado Boulder, NSF REU	2018 - 2020
• Mark Wilmes, Computer Science.	2019
• Suyog Soti, University of Colorado Boulder	2018 - 2019
• Katie Younglove, University of Colorado Boulder, NSF REU	2018 - 2019
• Robert Steele, University of Colorado Boulder	2018
• Phuc Nguyen, Macalester College via the Santa Fe Institute	2017
• Maya Banks, Carleton College via the Santa Fe Institute	2017

High School Students

• William McKinnon, High School Student, Santa Fe Institute	2016
• Kat Wicks, High School Student, Santa Fe Institute	2015 - 2016

Teaching

University of Colorado Boulder	**Boulder, CO, USA**
• CSCI 2897 (Calculating Biological Quantities)	Fall 2021
• [new course] CSCI 2897 (Calculating Biological Quantities)	Spring 2021
• CSCI 5352 (Network Analysis and Modeling)	Fall 2020
• CSCI 5352 (Network Analysis and Modeling)	Fall 2019

- CSCI 4802/5802 (Data Science Team)   Fall 2019
- CSCI 4802/5802 (Data Science Team)   Spring 2019
- CSCI 5352 (Network Analysis and Modeling)   Fall 2018
- CSCI 3022 (Intro to Data Science with Probability and Statistics)   Fall 2018
- CSCI 3022 (Intro to Data Science with Probability and Statistics)   Spring 2018
- [new course] CSCI 3022 (Intro to Data Science with Probability and Statistics)   Fall 2017

How to Science (Series)   **Boulder, CO, USA**
- Data Visualization
- Giving a Talk
- Clean Code
- Peer Review
- LaTeX

Complex Networks Winter Workshop   **Quebec City, Quebec**
- Networks and hierarchies   Jan 6, 2021
- Large-scale structures in networks: Hidden communities and latent hierarchies   Dec 15, 2019

NetSci 2019 International Conference on Network Science   **Burlington, VT, USA**
- Large-scale structures in networks: Hidden communities and latent hierarchies   May 27, 2019

Santa Fe Institute - Complex Systems Summer School   **Santa Fe, NM, USA**
- Networks & Hierarchies   June 24-25, 2019
- Networks & Hierarchies   June 25-26, 2018

University of Michigan   **Ann Arbor, MI, USA**
- Comp. Soc. Sci. Workshop (Communities, hierarchies: large-scale network structure) Nov 10, 2017

Harvard School of Public Health   **Boston, MA, USA**
- *Lecturer – CB399 Introduction to Modeling Infectious Disease* (networks)   July 24 & 27, 2014

Kenya Medical Research Institute (KEMRI)   **Kilifi, Kenya**
- *Lecturer – TDModNet Modeling Workshop* (networks in genetics & epidemiology)   October 3, 2013

University of Colorado - Predoctoral   **Boulder, CO, USA**
- *Instructor of Record – APPM 2350,* Calculus III (Multivariable Calculus)   Spring 2012
- *Instructor of Record – APPM 2350,* Calculus III (Multivariable Calculus)   Fall 2011
- *Lead Teaching Asst. –* Applied Mathematics   2009 - 2010
- *Teaching Asst. –* APPM 1360, Calculus II   Fall 2009
- *Teaching Asst. –* APPM 2360, Ordinary Differential Equations   Spring 2009
- *Teaching Asst. –* APPM 2350, Calculus III (Multivariable Calculus)   Fall 2008
- *Teaching Asst. –* APPM 2350, Calculus III (Multivariable Calculus)   Summer 2008
- *Teaching Asst. –* APPM 2360, Ordinary Differential Equations   Spring 2008
- *Teaching Asst. –* APPM 2350, Calculus III (Multivariable Calculus)   Fall 2007

Editorial and Referee Work

Associate Editor
- PLOS Computational Biology   2022 -

Guest Academic Editor
- PLOS Biology   2018

Grant Review
- NSF - Science of Science and Information Policy (SciSIP)
- NSF - Division of Mathematical Sciences - Dynamical Systems (DMS)
- NSF/NIH - Science of Science: Discovery, Communication, Impact & SCISIPBIO

Journal Review
- ACM Transactions on Knowledge Discovery from Data (TKDD)
- Communications of the ACM
- Europhysics Letters (EPL)
- IEEE Security and Privacy
- Journal of Complex Networks
- Journal of Infectious Diseases
- Journal of Machine Learning Research (JMLR)
- Journal of Statistical Mechanics: theory and experiment (JSTAT)
- Journal of the Association for Information Science and Technology (JASIST)
- Malaria Journal
- Methods in Ecology and Evolution
- Nature Scientific Reports
- Nature Microbiology
- New England Journal of Medicine
- Physical Review Letters (PRL)
- Physical Review X (PRX)
- Physical Review E (PRE)
- Physical Review Research (PRR)
- Physica A
- PLOS Biology
- PLOS Computational Biology
- PLOS Neglected Tropical Diseases
- PLOS ONE
- Proceedings of the National Academy of Sciences of the USA (PNAS)
- Proceedings of the Royal Society B (Proc B)
- Science
- Science Advances
- Science Translational Medicine
- SIAM Journal on Mathematics of Data Science (SIMODS)
- Vaccines
- Wellcome Open Research

Conferences
- Program Committee, Int'l Conf. on Computational Social Science (IC2S2 2017, 2018, 2019, 2020, 2021)
- Program Committee, NetSci 2017, 2019, 2020, 2022
- Program Committee, ICWSM Workshop: Beyond Online Data: Tackling Challenging Social Science Questions
- Program Committee, 9th Int'l Conf. on Complex Networks (CompleNet 18)
- Program Committee, NetSciX 2018, 2020
- Program Committee, Int'l World Wide Web Conf. (WWW 17, 18)
- Program Committee, SIAM Network Science 2016 - 2019 (NS 16, 17, 18, 19)
- Program Committee, 9th Int'l Conf. on Web Search and Data Mining (WSDM 2016)
- Subreviewer, AAAI Conference on Artificial Learning (AAAI 2014)

University and Professional Service

Conferences, Workshops, Speaker Series (Organizer or co-organizer)
- *International Conference on the Science of Science & Innovation*   June 7-9, 2022

Chair, Program Committee
Nat'l. Acad. of Sciences, Washington D.C.

- *A New Synthesis for the Science of Science*   May 4-6, 2022
    Co-Organizer (with A. Clauset, M. Galesic)
    Santa Fe Institute, Santa Fe, NM
- *Statistical Inference for Network Models* - A Satellite Symposium of the NetSci Conference
    Creator and Organizer
    Rome, Italy (with T. Peixoto, T. Eliassi-Rad, B. Fosdick, and A. Clauset)   June, 2020
    Burlington, Vermont (with T. Eliassi-Rad, B. Fosdick, and A. Clauset)   May 27, 2019
    Paris, France (with T. Eliassi-Rad, B. Fosdick, and A. Clauset)   June 11, 2018
    Indianapolis, Indiana (with T. Broderick, B. Fosdick, and A. Clauset)   June 19, 2017
    Seoul, Korea (with B. Fosdick, A. Z. Jacobs, and A. Clauset)   May 31, 2016
    Zaragoza, Spain (with L. Peel, A. Z. Jacobs, and A. Clauset)   June 1, 2015
    Berkeley, California (with L. Peel, A. Z. Jacobs, and A. Clauset)   June 2, 2014
- *Slice of Science*   2016 - 2017
    Organizer
    Santa Fe, NM. Ongoing Santa Fe Institute talk series.
- *Applied Network Science at Longwood Seminar Series, at Harvard School of Public Health.*   2014 - 2015
    Conceived and organized with John Platig.
    Boston, MA, monthly seminar for network research with biological,
    public health, or medical application.
- *Harvard School of Public Health Infectious Disease Epidemiology Seminar Series*   2014
    Organized with William Hanage.
    Boston, MA
- *Mathematics Research Community Workshop on Network Science*   June 24-30, 2014
    Assisting Aaron Clauset, Mason Porter, & David Kempe
    Snowbird, UT
- *TDModNet Modeling Workshop* (networks in genetics & epidemiology)   Oct 3, 2013
    Organized with Caroline O. Buckee
    Kenya Medical Research Institute (KEMRI), Kilifi, Kenya
- *Front Range Applied Mathematics Student Conference*   March 14, 2009
    Organized with Daniel N. Kaslovsky, Anne Dougherty, *et al.*
    University of Colorado Denver
- *SIAM Graduate Student Chapter Speaker Series*   Spring 2009
    Co-organized with Daniel N. Kaslovsky
    University of Colorado Boulder

PhD Thesis Committees
- Graham Kesler O'Connor, Applied Mathematics. Adv: Manuel Lladser   Expected 2023
- Lucas Hayne, Computer Science. Adv: McKell Carsten   Expected 2023
- Aislyn Keyes, Ecology & Evolutionary Biology. Adv: Laura Dee   Expected 2023
- Behzad Vahedi Torghabeh   Expected 2023
- Nicholas Landry, Applied Mathematics. Adv: Juan G. Restrepo   2022
- Samantha Molnar, Computer Science. Adv: Elizabeth Bradley   2021
- Allison Morgan, Computer Science. Adv: Aaron Clauset   2021
- Ignacio Tripodi, Computer Science. Adv: Robin Dowell   2020
- Antony Pearson, Applied Mathematics, Adv: Manuel Lladser   2020
- Lee Korshoj, Chem. & Biol. Engr. Adv: Anushree Chatterjee and Prashant Nagpal   2020
- Richard Carter Tillquist, Applied Mathematics, Adv: Manuel Lladser   2020
- Anna Broido, Computer Science. Adv: Aaron Clauset   2019
- Amir Ghasemian, Computer Science. Adv: Aaron Clauset   2018
- Jean-Gabriel Young, Physics, Université Laval, Adv: Louis Dube   2018

Undergraduate Thesis Committees

• Kieran Zylstra, Computer Science, Adv: Ryan Layer	2022
• Maxwell Wenzel, Computer Science. Adv: James Martin	2020
• Ian Wilkins, Computer Science. Adv: James Martin	2020
• Maxine Hartnett, Computer Science. Adv: Elizabeth Bradley	2019
• Brandon Zink, Computer Science. Adv: Rhonda Hoenigman	2019

Institutional Committees

• Colorado, Provost's Faculty Achievement Awards Committee	2022 - present
• Colorado, Computer Science Pedagogy Committee	2021 - present
• Colorado, Vaccine Policy & Guidance Subcommittee	2021
• Colorado, COVID-19 Scientific Advisory Committee	2020 - present
• Colorado, EMPOWERS Oversight Committee	2020 - present
• Colorado, Computational Biology Minor, Curriculum Committee	2019 - present
• Colorado, Computer Science Faculty Search Committee	2019 - 2020
• Colorado, Interdisc. Quant. Biol. Program (IQBio), Academic Advising Committee	2018 - 2020
• Colorado, BioFrontiers Institute, Council (Formerly called Task Force)	2017 - present
• Colorado, Interdisc. Quant. Biol. Program (IQBio), Curriculum Committee	2017 - present
• Colorado, Computer Science, Undergraduate Curriculum Committee	2018 - 2019
• Colorado, BioFrontiers Institute, Social Committee (BioFunTiers)	2017 - 2018
• Colorado, Interdisciplinary Quant. Biol. Program (IQBio), Grad. Admissions	2017 - 2018
• Santa Fe Institute, Complex Systems Summer School Admissions	2016 - 2017
• Santa Fe Institute, Omidyar Fellowship Review & Selection	2015 - 2016
• Colorado, Office of Discrimination and Harassment Review	2010 - 2012
• Colorado, SIAM Graduate Student Chapter	2008 - 2010

Outreach

• "Prioritizing Vaccines: Who Should Get Them First and Why?" BioFrontiers Institute Community COVID-19 Session III	November 20, 2020
• "COVID-19 Surveillance Testing: A Way Out?" College of Engineering & Applied Sciences CU Boulder COVID-19 Webinar	September 17, 2020
• "How do infectious disease models work?" BioFrontiers Institute Community COVID-19 Session I	April 13, 2020

• "What it is to be a Scientist"
    Santa Fe Institute
    Keynote, SFI High School Prize for Scientific Excellence
	May 4, 2016

• "What it is to be a Scientist"
    Santa Fe Institute
    REU Program Mentorship
	2016-2019

Other Service & Outreach

Faculty Sanity	**Boulder, CO**

A monthly, open, unstructured meetup for junior faculty at CU Boulder, all departments.

Founder, Organizer	2018 - 2021

March for Science - Santa Fe	**Santa Fe, NM**
Lead Organizer	April 22, 2017

New Mexico Corrections / Penitentiary of New Mexico	**Santa Fe, NM**
Volunteer math teacher and tutor	January 2016 - May 2017

Santa Fe Alliance for Science	**Santa Fe, NM**

Science fair judge   2015 - 2017

Greater University Service Foundation, Inc.   **St. Louis, MO**
Director   2008 - present
Co-founder and Secretary   2006 - 2008

The Boulder County AIDS Project   **Boulder, CO**
Volunteer math tutor; grocery packing and delivery.   2005 - 2011