

Aaron Clauset

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RESEARCH INTERESTS	Network science — methods, data, theories, applications Epistemology — data science, statistical inference, machine learning, complex systems Science of science — social and epistemic inequalities, prestige economy, faculty Computational biology — oncology, genomics, networks, macroevolution	
EDUCATION	Ph.D. Computer Science, <i>University of New Mexico</i> (with distinction) B.S. Physics, <i>Haverford College</i> (with honors and concentration in Computer Science)	2002 – 2006 1997 – 2001
ACADEMIC POSITIONS	Professor, Computer Science Dept., <i>University of Colorado, Boulder</i> Core Faculty, BioFrontiers Institute, <i>University of Colorado, Boulder</i> External Faculty, <i>Santa Fe Institute</i> Affiliated Faculty, Ecology & Evo. Biology Dept., <i>University of Colorado, Boulder</i> Affiliated Faculty, Applied Mathematics Dept., <i>University of Colorado, Boulder</i> Affiliated Faculty, Information Dept., <i>University of Colorado, Boulder</i> Associate Professor, Computer Science Dept., <i>University of Colorado, Boulder</i> Assistant Professor, Computer Science Dept., <i>University of Colorado, Boulder</i> Omidyar Fellow, <i>Santa Fe Institute</i>	2022 – present 2010 – present 2012 – present 2011 – present 2012 – present 2015 – present 2018 – 2022 2010 – 2018 2006 – 2010
EDITORIAL POSITIONS	Deputy Editor, <i>Science Advances</i> , AAAS Associate Editor, <i>Science Advances</i> , AAAS Associate Editor, <i>Journal of Complex Networks</i> , Oxford University Press	2017 – present 2014 – 2017 2012 – 2017
HONORS & AWARDS (SELECTED)	Fellow, Network Science Society Paper of the Year, International Society for Scientometrics and Informetrics (ISSI) Provost Faculty Achievement Award, <i>U. Colorado, Boulder</i> Erdős-Rényi Prize in Network Science Top 20 Teachers, College of Engineering, <i>U. Colorado, Boulder</i> NSF CAREER Award Kavli Fellow Santa Fe Institute Public Lecturer (http://bit.ly/I6t9gf) Graduation Speaker, <i>U. New Mexico</i> , School of Engineering Convocation Outstanding Graduate Student Award, <i>U. New Mexico</i> , School of Engineering	2023 2021 2019 2016 2016 2015 2014 2010 2006 2006
GOOGLE SCHOLAR	scholar.google.com/citations?user=e7VI-HcAAAAJ * indicates an undergraduate coauthor; ° indicates equal contribution	
MANUSCRIPTS UNDER REVIEW	W. Li, H. Zhenge, J. E. Brand, and A. Clauset , “Gender and racial diversity socialization in science.” Submitted (2024). K. Spoon, J. Mendy*, M. Martinez*, M. Galesic, D. B. Larremore, A. Clauset , L. A. Rivera, “Gendered devaluation underlies faculty retention.” Submitted (2024). (Preprint at osf.io/preprints/socarxiv/g6xwk)	

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L. Van Kleunen, M. Ahmadian, M. D. Post, R. Wolsky, C. Rickert, K. Jordan, J. Hu, J. K. Richer, K. Behbakht, M. J. Sikora, B. G. Bitler, **A. Clauset**, “The spatial structure of the tumor immune microenvironment can explain and predict patient response in high-grade serous carcinoma.” Submitted (2023). (Preprint [biorxiv.org/content/10.1101/2024.01.26.577350v1](https://www.biorxiv.org/content/10.1101/2024.01.26.577350v1))

Z. P. Neal, Z. Almquist, J. Bagrow, **A. Clauset**, J. Diesner, E. Lazega, J. Lovato, J. Moody, T. P. Peixoto, Z. Steinert-Threlkeld, and A. S. Teixeira, “Recommendations for sharing network data and materials.” Submitted (2023).

S. Zhang, N. LaBerge, S. F. Way, D. B. Larremore, and **A. Clauset**, “Scientific productivity as a random walk.” Submitted (2023). (Preprint at [arxiv:2309.04414](https://arxiv.org/abs/2309.04414))

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A. Greenwood, E. R. Woodruff, C. Nguyen, C. Piper, **A. Clauset**, L. W. Brubaker, K. Behbakht, B. G. Bitler, “Early ovarian cancer detection in the age of fallopian tube precursors: a systematic review.” *Obstetrics & Gynecology* **143**(3), e63–e77 (2024).

X. He, A. Ghasemian, E. Lee, **A. Clauset**, and P. J. Mucha, “Sequential stacking link prediction algorithms for temporal networks.” *Nature Communications* **15**, 1364 (2024).

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I. V. Buskirk, **A. Clauset**, and D. B. Larremore, “An open-source cultural consensus approach to name-based gender classification.” *Proc. 17th International AAAI Conference on the Web and Social Media (ICWSM)* **17**, 866–877 (2023). (Preprint at [arxiv:2208.01714](https://arxiv.org/abs/2208.01714))

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- H. Hosseinmardi, A. Ghasemian, **A. Clauset**, M. Mobius, D. M. Rothschild, and D. J. Watts, “Examining the consumption of radical content on YouTube.” *Proc. Natl. Acad. Sci. USA* **118**(32), e2101967118 (2021). (Preprint at [arxiv:2011.12843](https://arxiv.org/abs/2011.12843))
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- D. B. Larremore, S. A. Sundararaman, W. Liu, W. R. Proto, **A. Clauset**, D. E. Loy, S. Speede, P. M. Sharp, B. H. Hahn, J. C. Rayner, and C. O. Buckee, “Ape origins of human malaria virulence genes.” *Nature Communications* **6**, 8368 (2015).
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- 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). (Preprint at [arxiv:1308.5254](#))
- S. Merritt and **A. Clauset**, “Environmental structure and competitive scoring advantages in team competitions.” *Scientific Reports* **3**, 3067 (2013). (Preprint at [arxiv:1304.1039](#))
- A. Scharpf, G. Schneider, A. Nöh and **A. Clauset**, “The blood trail of the veto: A forecast of the risk of extreme massacres in Syria.” *Zeitschrift für Friedens – und Konfliktforschung* **2**(1), 6–31 (2013). [In German]
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- B. J. Mills, J. J. Clark, M. Peeples, W. R. Haas Jr., J. M. Roberts Jr., B. Hill, D. L. Huntley, L. Borck, R. L. Breiger, **A. Clauset**, and M. S. Shackley, “Transformation of social networks in the late Prehispanic U.S. Southwest.” *Proc. Natl. Acad. Sci. USA* **110**(15): 5785–5790 (2013).
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- A. Clauset** and K. S. Gleditsch, “The developmental dynamics of terrorist organizations.” *PLOS ONE* **7**(11), e48633 (2012). (Preprint at [arxiv:0906.3287](#))

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N. Connor and **A. Clauset**, “Predicting the outcomes of policy diffusion from U.S. states to federal law.” Preprint, arxiv:1810.08988 (2018).

J. I. Perotti, C. J. Tessone, **A. Clauset** and G. Caldarelli, “Thermodynamics of the minimum description length on community detection.” Preprint, arxiv:1806.07005 (2018).

K. Ikehara and **A. Clauset**, “Characterizing the structural diversity of complex networks across domains.” Preprint, arxiv:1710.11304 (2017).

R. C. Tillquist, L. Shoemaker, K. B. Knight, and **A. Clauset**, “The evolution of primate body size: Left-skewness, maximum size, and Copes rule.” Preprint, doi:10.1101/092866 (2016).

L. Fortunato and **A. Clauset**, “Revisiting the effect of red on competition in humans.” Preprint, doi:10.1101/086710 (2016).

A. Z. Jacobs, J. A. Dunne, C. Moore, and **A. Clauset**, “Untangling the roles of parasites in food webs with generative network models.” Preprint, arxiv:1505.04741 (2015).

C. R. Shalizi, A. Z. Jacobs*, K. L. Klinkner and **A. Clauset**, “Adapting to non-stationarity with growing expert ensembles.” Preprint, arxiv:1103.0949 (2011).

A. Clauset, M. Young and K. S. Gleditsch, “A novel explanation of the power-law form of the frequency of severe terrorist events: Reply to Saperstein.” *Peace Economics, Peace Science and Public Policy* **16**(1), Article 12 (2010).

A. Clauset, “Story-telling, statistics, and other grave scientific insults.” *Nature Soapbox Science Blog* (posted 27 October 2010). go.nature.com/3mYkXfq

A. Clauset, “A theoretician ponders what physics has to offer ecology.” *Nature* **465**, 139 (2010).

N. Eagle, **A. Clauset**, A. Pentland and D. Lazer, “Multi-dimensional edge inference: Response to comment by Dr. Adams.” *Proc. Natl. Acad. Sci. USA* **107**(9), E31 (2010).

A. Clauset and C. Moore, “How do networks become navigable?”
Preprint, [arxiv:cond-mat/0309415](https://arxiv.org/abs/cond-mat/0309415) (2003).

POPULAR PRESS D. B. Larremore, A. C. Morgan and **A. Clauset**, “More inclusive scholarship begins with active experimentation.” *The Chronicle of Higher Education*, published online 1 November (2017).

D. B. Larremore and **A. Clauset**, “Why predicting the future is more than just horseplay.”
The Christian Science Monitor, published online 24 April (2017).

J. Warner and **A. Clauset**, “The Academy’s dirty secret.” *Slate*, published online 23 February (2015).

J. Warner and **A. Clauset**, “What same-sex marriage means for the future of recreational weed.”
Pacific Standard, published online 24 October (2014).

BOOK
ENDORSEMENTS B. F. Braumoeller, *Only the Dead: The Persistence of War in the Modern Age*. Oxford University Press (2019). → “*Only the Dead* demolishes the myth that war is in decline, and constructs a compelling explanation for the true drivers of war in the past, and likely in the future.”

PATENTS A. C. Morgan, S. F. Way, and **A. Clauset**, “System and methods for crawling web pages and parsing relevant information stored in web pages.” U.S. Patent Application 20200293581, Number 62/593,804 (2020).

INDUSTRY
CONSULTING Scientific & Technical Consultant, *Respond Software Inc.*, Mountain View CA 2017
Scientific & Technical Consultant, *FullContact Inc.*, Denver CO 2015 – 2017
Scientific & Technical Consultant, *Institute for Defense Analysis*, Alexandria VA 2010 – 2014
Corporate Advisory Board, *33across LLC*, New York NY 2008 – 2012
Scientific & Technical Consultant, *33across LLC*, New York NY 2007 – 2012
Strategy & Management Consultant, *FischerJordan LLC*, New York NY 2005

GRANTS
(PI OR CO-PI) “Assessing bias and idiosyncrasies in elite scientific peer review.”
PI, with Daniel B. Larremore (co-PI; Colorado) 2022 – 2025
NSF SBE, \$501,890

“Mining thousands of genomes to classify somatic and pathogenic structural variants.”
co-I, with Ryan Layer (PI) and Fritz Sedlazeck (co-I; Baylor) 2022 – 2027
NIH R01, \$3,176,940

“A machine learning approach to chemotherapy-induced remodeling of the tumor microenvironment.”
co-PI, with Benjamin Bitler (PI; Anschutz) 2022 – 2024
Ovarian Cancer Research Alliance (OCRA), \$895,275

“NRT: Integrated Data Science (Int dS): Teams for Advancing Bioscience Discovery.”
co-PI, with Tom Cech (PI; Colorado), Robin Dowell (co-PI; Colorado), Eric Vance (co-PI; Colorado)

and Manuel Lladser (co-PI; Colorado)
NSF DGE, \$3,000,000 2020 – 2025

“Evaluating and Maximizing Fairness in Information Flow on Networks.”
PI, with Suresh Venkatasubramanian (PI; Utah), Carlos E. Scheidegger (PI; Arizona), and Sorelle Friedler (PI; Haverford)
NSF CISE, \$1,173,487 2020 – 2023

“A New Synthesis for the Science of Science.”
PI
NSF SBE, SMA Conference, \$40,418 2020 – 2022

“Ovarian cancer ascites: A glimpse of therapeutic response and recurrence.”
co-PI, with Benjamin Bitler (PI; Anschutz), Kian Behbakht (co-PI; Anschutz), Raj Kumar (co-PI; Anschutz), Jennifer Richer (co-PI; Anschutz), Jill Slansky (co-PI; Anschutz), Matthew Sikora (co-PI; Anschutz), Kim Jordan (co-PI; Anschutz)
Comprehensive Cancer Center Developmental Therapeutics Program Multi-PI Grant, University of Colorado Denver, \$100,000 2020

“Mapping the structure and dynamics of the scientific ecosystem.”
PI, with Daniel B. Larremore (PI; Colorado), Mirta Galesic (co-PI; Santa Fe), and Jennifer Dunne (co-PI; Santa Fe)
DoD and AFOSR, MINERVA, \$2,568,889 2019 – 2023

“Leveraging machine learning to improve biological protocol accuracy.”
PI, with Sara Sawyer (co-PI; Colorado)
University of Colorado, Research & Innovation Seed Grant, \$50,000 2018 – 2020

“Academic hiring networks and scientific productivity across disciplines.”
PI, with Daniel B. Larremore (PI; Santa Fe) and Mirta Galesic (co-PI; Santa Fe)
NSF SBE, \$550,000 2016 – 2020

“CAREER: Hierarchical probabilistic models for networks with rich data in scientific domains.”
PI
NSF CISE, \$550,000 2015 – 2020

“Extracting diagnostic signals from human microbiome data.”
PI, with Ken Krauter (co-PI; Colorado) and Matt McQueen (co-PI; Colorado)
University of Colorado, Butcher Seed Grant Award, \$70,000 2014 – 2016

“High-throughput ecosystem analysis and design.”
co-PI, with Rob Knight (PI; Colorado), Ryan Gill (co-PI; Colorado), Noah Fierer (co-PI; Colorado), Manuel Lladser (co-PI; Colorado) and Robin Dowell (co-PI; Colorado)
Keck Foundation, \$1,000,000 2013 – 2014

“An alignment-free network approach to analyzing highly recombinant malaria parasite antigens.”
PI, with Caroline Buckee (PI; Harvard)
NIH/NIGMS, R21, \$286,485 2013 – 2016

“EAGER: Understanding technological change from the map of capabilities.”
co-PI, with Hyejin Youn (PI; Santa Fe Institute)
NSF SBE, \$152,500 2013 – 2017

“Statistical inference for detecting structures and anomalies in networks.”

	PI , with Cris Moore (PI; Santa Fe Institute) and Mark Newman (PI; Michigan) DARPA and AFOSR, GRAPHS, \$2,924,396	2012 – 2015
	“Measuring the structure of research university networks.” PI Kauffman Foundation, \$53,000	2012 – 2013
	“Statistical inference and machine learning for complex networks.” co-PI , with Cris Moore (PI; Santa Fe Institute) and Mark Newman (PI; Michigan) McDonnell Foundation, \$417,576	2008 – 2012
GIFTS	Facebook Inc.	2015
(UNRESTRICTED)	Microsoft Inc.	2014
INVITED TALKS (RECENT)	<ul style="list-style-type: none"> • Invited Speaker, Dynamics Days Conference, Denver CO, 3–5 January 2025 • Gordon Rausser Keynote Address, Agricultural & Applied Economics Association annual meeting, New Orleans LA, 28 July 2024 • Invited Speaker, Colloquium, Chemical & Biomolecular Engineering Department, Cornell University, Ithaca NY, 3 April 2024 • Invited Speaker, Symposium on Diversity and Equality in Physics, German Physical Society annual meeting, Berlin Germany, 19 March 2024 • Invited Speaker, Entrepreneurship and Innovation Seminar, University of California, Berkeley CA, 28 February 2024 • Seminar, Academic Analytics Research Center, 1 February 2024 • Colloquium, Department of Computer Science, University of Memphis, Memphis TN, 1 December 2023 • Colloquium, Department of Physics, University of Colorado, Boulder CO, 29 November 2023 • Colloquium, Institute for Social Science Research, University of Massachusetts, Amherst MA, 8 November 2023 • Seminar, NIH National Institute of Child Health and Human Development, 15 September 2023 • Seminar, German Centre for Higher Education Research and Science Studies (DZHW), Hannover Germany, 14 August 2023 • Seminar, Academic Analytics Research Center, 3 August 2023 • Keynote, “Parenthood in Academia” panel, International Conference on Network Science, Vienna Austria, 12 July 2023 • Keynote, International Conference on the Science of Science and Innovation (ICSSI), Northwestern University, Evanston IL, 26–28 June 2023 • 155 other invited talks, since 2004 	
ADVISING	Postdoctoral Fellows <ul style="list-style-type: none"> • Dr. Katherine Wootton • Dr. Eun Lee • Dr. Samuel F. Way • Dr. Andrea Berardi • Dr. Daniel B. Larremore • Dr. Leto Peel 	2021 – 2022 2020 – 2022 2017 – 2019 2015 – 2016 2012 – 2015 2013 – 2015
	Doctoral Students (all at Colorado) <ul style="list-style-type: none"> • Carolina Chavez; co-advised with D. Acuña Computer Science • Nicholas LaBerge Computer Science; co-advised with D. B. Larremore 	2023 – present 2019 – present

- Vivian Li 2024 – present
Computer Science; co-advised with L. Dee
- Katherine Spoon 2020 – present
Computer Science; NSF GRF; co-advised with D. B. Larremore
- Ian Van Buskirk 2019 – present
Computer Science; co-advised with D. B. Larremore
- Lucy Van Kleunen 2020 – present
Computer Science; co-advised with L. Dee
- Shimian (Sam) Zhang 2019 – present
Applied Mathematics; NSF GRF
- Andrew J. Kavran (PhD Biochemistry, and IQ Biology, co-advised with N. Ahn) 2021
Dissertation: *Intermittent drug treatment of $BRAF^{V600E}$ melanoma cells delays resistance by adaptive resensitization to drug rechallenge*
- Allison C. Morgan (PhD Computer Science) 2021
Dissertation: *Quantifying structural inequalities in the academic workforce*
- Anna Broido (PhD Applied Mathematics, and IQ Biology) 2019
Dissertation: *Characterizing the tails of degree distributions in real-world networks*
- Amir Ghasemian (PhD Computer Science) 2018
Dissertation: *Limits of model selection, link prediction, and community detection*
- Nora Connor (PhD Computer Science, and IQ Biology) 2018
Dissertation: *Using data science to find interpretable answers for problems in ecology and political science*
- Abigail Z. Jacobs (PhD Computer Science) 2017
Dissertation: *Comparative, population-level analysis of social networks in organizations*
- Samuel F. Way (PhD Computer Science, and IQ Biology) 2017
Dissertation: *Systematic inequalities in the composition and productivity of Computer Science faculty*
- Lauren G. Shoemaker (PhD Ecology & Evolutionary Biology, and IQ Biology, co-advised with B. Melbourne) 2017
Dissertation: *Stabilizing and equalizing mechanisms alter community coexistence and macroevolutionary diversity patterns*
- Sears Merritt (PhD Computer Science) 2013
Dissertation: *Dynamics and structure in competitive social systems*

Masters Students (all at Colorado)

- Bisman Singh (MS Applied Mathematics) 2024
Thesis: *Predicting algorithm performance for missing link prediction in real-world networks*
- Dennis Windham (MS Computer Science) 2024
Thesis: *Refining the Framework for Closing Gaps in Information Access in Networks.*
- Behzod Mirpochoev (MS Computer Science) 2024
Thesis: *A Bayesian tool for estimating allele frequencies via Hardy-Weinberg equilibrium for structural variants*
- Upasana Dutta (MS Computer Science) 2022
Thesis: *Sampling random graphs with specified degree sequences*
- Trevor DiMartino (MS Computer Science) 2017
Thesis: *Ratchet mechanisms in macroevolutionary processes*
- Kansuke Ikehara (MS Computer Science) 2017
Thesis: *Structure of complex networks across domains*
- Christopher Aicher (BS/MS Applied Mathematics) 2014
Thesis: *The weighted stochastic block model*
- Pooneh Mortazavi (MS, Computer Science) 2013
Thesis: *Genome optimization and evolution modeling using genetic algorithm and GA-TRMR*
- Yogesh Virkar (MS, Computer Science) 2012
Thesis: *Power-law distributions and binned empirical data*

Undergraduate Students

- Behzod Mirpochoev (BS Computer Science, Colorado) 2022 – 2023
Thesis: *Classification of genomic structural variants*
- Skylar Martin (BS Computer Science, Colorado) 2020 – 2021
Thesis: *PhageOne: Inferring the grammar of bacteriophage genomes*
- Nicholas Cordaro (BS Biochemistry, Colorado) 2019 – 2020
- Christoph Uhl (BS Computer Science, Colorado) 2018 – 2020
- Alexander Ray (BS Computer Science, Colorado) 2017 – 2019
Thesis: *Scaling laws in empirical networks*
- McKenzie Weller (BS Computer Science, Colorado) 2016 – 2019
- Tetsumichi Umada (BS Computer Science, Colorado) 2016 – 2018
- Ellen Tucker (BS Mathematics, Colorado) 2015 – 2016
- Matthias Sainz (BS Computer Science, Colorado) 2014 – 2016
- Dominic Tonozzi (BS Computer Science, Colorado) 2014 – 2015
- Christopher Aicher (BS/MS Applied Mathematics, Colorado) 2011 – 2014
- Kenneth Sheedlo (BS Comp. Sci., Colorado; Discovery Learning Apprentice) 2011 – 2012
- Andrew Zizzi (BS Aerospace, Colorado; Discovery Learning Apprentice) 2011 – 2012
- Kristen Hargett (BS Applied Math., Colorado) 2011
- Zachary Newman (BS Math., Colorado; McNair Scholar & UROP) Summer 2011
- Abigail Jacobs (BS Math., Northwestern; REU) Summer 2010
- Amy Wesolowski (BS Math., C.o. Atlantic; REU) Summer 2010
- Benjamin Good (BS Physics, Swarthmore; REU) 2008 – 2010

High School Students

- Preston Dunton (Legacy High School, CO) Fall 2017
- Arnab Purkayastha (Fairview High School, CO) Spring 2014
- Andrew Mauboussin (Darien High School, CT) Summer 2009

TEACHING

University Courses (* indicates a new course)

- Biological Networks* (undergraduate) Fall 2019, Spring 2020 – 2024
Colorado, CSCI 3352
- Network Analysis and Modeling* (graduate) Fall 2013, 2014, 2016, 2017, 2021, 2022
Colorado, CSCI 5352
- Algorithms (undergraduate) Spring 2014, 2017, 2018
Colorado, CSCI 3104
- History and Future of Computing* (undergraduate) Spring 2015, 2016
Colorado, CSCI 4380
- Design and Analysis of Algorithms (graduate) Spring 2011 – 2013
Colorado, CSCI 5454
- Inference, Models and Simulation for Complex Systems* (graduate) Fall 2010, 2011
Colorado, CSCI 7000
- Topics in Interdisciplinary Research* (graduate) Fall 2019 – 2022, Spring 2022, 2023
Colorado, CSCI 7000 (co-taught with D. Larremore)

Summer School Courses

- Santa Fe Institute, Complex Systems Summer School (CSSS) 2007 – 2023
Santa Fe NM, 2007, 2008, 2013, 2014, 2016 – 2019, 2022, 2023;
Beijing China, 2008, 2009; Ajitgarh India 2015
- Science of Science Summer School (S4), Syracuse U. 2022
- Philosophy & Political Economy Graduate Summer Workshop, Chapman U. 2021
- Santa Fe Institute, Complexity Interactive 2021
- Summer Institute in Computational Social Science (SICSS), Boulder CO 2018
- Santa Fe Institute, Short Course on Exploring Complexity 2011 – 2016
Albuquerque NM, 2011; Washington DC, 2012; Stanford CA, 2012; Austin TX, 2013; Santa Fe

NM, 2015; Santa Fe NM, 2016

REFEREE WORK

- **Applied Math and Statistics:** Annals of Applied Statistics, EPJ Data Science, SIAM ICDM Workshop on Analysis of Dynamic Networks (2009), SIAM Workshop on Network Science (2013, 2017, 2018, 2020, 2022), Statistical Analysis and Data Mining
- **Biology:** Bioinformatics, BMC Bioinformatics, eLife, Evolutionary Biology, Global Ecology and Biogeography, IET Systems Biology, Journal of Animal Ecology, Journal of Theoretical Biology, Marine Ecology Progress Series, Methods in Ecology and Evolution, PLOS Biology, PLOS Computational Biology, Trends in Ecology & Evolution
- **Computer Science:** AAAI (2014), Communications of the ACM (CACM), Computer Science Reviews (CSR), Foundations and Trends in Machine Learning, IEEE GLOBECOM (2010), Proceedings of the IEEE, IEEE International Conference on Robotics and Automation (2006), ICWSM (2014–2017), Journal of the ACM (JACM), ACM Journal of Experimental Algorithmics (JEA), Journal of Statistical Analysis and Data Mining, Machine Learning, ACM Trans. on Knowledge Discovery from Data (TKDD), IEEE Trans. on Knowledge and Data Engineering (TKDE), MLG (2016–2018, 2020), IEEE Trans. on Network Science and Engineering (TNSE), ACM Trans. on the Web (TWEB), RANDOM (2007), SIMPLEX (2010), SODA (2006, 2007), SDM Workshop on Analysis of Dynamic Networks (2009), NIPS Workshop on Analyzing Graphs (2008), Workshop on Experimental Algorithms (2006), ACM SIGKDD Workshop on Social Network Mining and Analysis (2008, 2009), WSDM (2010), WWW (2010–2018)
- **General:** Nature, Nature Communications, Nature Methods, PLOS ONE, PNAS, PNAS Nexus, Science, Science Advances
- **Physics:** European Physical Journal B, Europhysics Letters, Journal of Statistical Mechanics, New Journal of Physics, Physica A, Physical Review E, Physical Review Letters
- **Political Science:** American Journal of Political Science, American Political Science Review, British Journal of Political Science, Defense & Peace Economics, Journal of Conflict Resolution, Journal of Peace Research
- **Others:** Advances in Complex Systems, American Sociological Review, Computational Linguistics, Hydrology Earth System Sciences, Journal of Chemical Information and Modeling, Journal of Complex Networks, Journal of Quantitative Criminology, Networks and Spatial Economics, Social Policy & Administration, The Social Science Journal
- **Funding Agencies:** U.S. National Science Foundation (NSF), U.S. Department of Energy (DOE), U.S. Army Research Office (ARO), ETH Zürich Research Commission, European Research Council (ERC), Computing Research Association (CRA) Computing Innovation Fellows (CIFellows 2020, 2021)

PROFESSIONAL SERVICE

National

- Member, Committee on *Pathways to Doctoral Degrees in Computing*
CSTB, National Academies of Science, Engineering, and Medicine (NASEM) 2023 – 2024

Workshops (Organizer or co-organizer)

- *A New Synthesis for the Science of Science*
Santa Fe Institute, Santa Fe NM (5–6 May) 2022
With D. B. Larremore (Colorado) and M. Galesic (Santa Fe)
- *Fairness in Networks*
Internat. Conf. on Knowledge Discovery and Data Mining (KDD) (14–18 September) 2021
With S. Friedler (Haverford), C. Scheidegger (Arizona), and S. Venkatasubramanian (Brown)
- *Statistical Inference for Network Models*
NetSci 2020, Satellite Workshop, Rome Italy (20 September) 2020
With D. B. Larremore (Colorado), B. K. Fosdick (Colo. State), T. Eliassi-Rad (Northeastern), and T. P. Peixoto (Cent. Eur. U.)
- *Statistical Inference for Network Models*
NetSci 2019, Satellite Workshop, Burlington VT (27 May) 2019

- With D. B. Larremore (Colorado), B. K. Fosdick (Colo. State), and T. Eliassi-Rad (Northeastern)
- *Statistical Inference for Network Models*
NetSci 2018, Satellite Workshop, Paris France (11 June) 2018
With D. B. Larremore (Colorado), B. K. Fosdick (Colo. State), and T. Eliassi-Rad (Northeastern)
- *Statistical Inference for Network Models*
NetSci 2017, Satellite Workshop, Indianapolis IN (19 June) 2017
With D. B. Larremore (Santa Fe), B. K. Fosdick (Colo. State), and T. Broderick (MIT)
- *Violent Radicalization in Western Democracies*
Santa Fe Institute, Santa Fe NM (1–4 March) 2017
With M. Galesic (Santa Fe), M. Dumas (Santa Fe), and D. Pines (UC Davis)
- *Statistical Inference for Network Models*
NetSci 2016, Satellite Workshop, Seoul Korea (30 May) 2016
With D. B. Larremore (Santa Fe), B. Fosdick (Colo. State), and A. Z. Jacobs (Colorado)
- *Inference on Networks: Algorithms, Phase Transitions, New Models and New Data*
Santa Fe Institute, Santa Fe NM (14–18 December) 2015
With C. Moore (SFI) and M.E.J. Newman (Michigan)
- *Networks in the Social and Information Sciences*
NIPS 2015, Montreal Canada (12 December) 2015
With E. Airolidi (Harvard), D. Choi (CMU), J. Ugander (Microsoft), and P. Toulis (Harvard)
- *Statistical Inference for Network Models*
NetSci 2015, Satellite Workshop, Zaragoza Spain (1 June) 2015
With D. B. Larremore (Harvard), L. Peel (Colorado), and A. Z. Jacobs (Colorado)
- *Networks: From Graphs to Rich Data*
NIPS 2014, Montreal Canada (13 December) 2014
With E. Airolidi (Harvard), D. Choi (CMU), J. Ugander (Microsoft), and L. Peel (Colorado)
- *Mathematics Research Community Workshop on Network Science*
Snowbird UT (24–30 June) 2014
With M. A. Porter (Oxford) and D. Kempe (Southern Cal.)
- *Statistical Inference for Network Models*
NetSci 2014, Satellite Workshop, Berkeley CA (2 June) 2014
With D. B. Larremore (Harvard), L. Peel (Colorado), and A. Z. Jacobs (Colorado)
- *Frontiers of Network Analysis: Methods, Models, and Applications*
NIPS 2013, Lake Tahoe NV (9 December) 2013
With E. Airolidi (Harvard), D. Choi (CMU), K. El-Arini (Facebook), and J. Leskovec (Stanford)
- *Structure, Statistical Inference, and Dynamics in Networks: From Graphs to Rich Data*
Santa Fe Institute, Santa Fe NM (6–9 May) 2013
With C. Moore (SFI) and M.E.J. Newman (Michigan)
- *The Mathematics of Terrorism*
Santa Fe Institute, Santa Fe NM (31 Aug.–2 Sept) 2009
With B. Tivnan (MITRE)
- *Statistical Inference for Complex Networks*
Santa Fe Institute, Santa Fe NM (3–5 December) 2008
With C. Moore (New Mexico, SFI)
- *Navigability and Complex Networks*
Santa Fe Institute, Santa Fe NM (4–6 August) 2008
With D. Krioukov (UCSD) and kc claffy (UCSD)
- *Is There a Physics of Society?*
Santa Fe Institute, Santa Fe NM (10–12 January) 2008
With M. Girvan (Maryland)

Conferences (Organizer or co-organizer)

- 2nd Computer Science at UNM Student Research Conference, Conference Chair,
Albuquerque NM, (3 March) 2006
- 1st Computer Science at UNM Student Research Conference, Conference Chair,

Program Committees

- *Atlanta Conference on Science and Innovation Policy* (ATLC) 2023
- *International Conference on Computational Social Science* (IC2S2) 2016 – 2018, 2023
- *International Conference on Network Science* (NetSci, main cycle) 2015 – 2018, 2020
- *World Wide Web Conference* (WWW) 2010 – 2018
- *SIAM Workshop on Network Science* (NS) 2013, 2017, 2018, 2020, 2022
- (PC co-chair) *International Conference on Computational Social Science* (IC2S2) 2017
- (Senior PC) *International Conference on Network Science* (NetSci, main cycle) 2017
- (Senior PC) *World Wide Web Conference* (WWW) 2017
- *International Conference on Network Science* (NetSci-X) 2015 – 2017
- *International Workshop on Mining and Learning With Graphs* (MLG) 2016 – 2018, 2020
- *International AAAI Conference on Web and Social Media* (ICWSM) 2014 – 2017
- (Senior PC) *International Conference on Computational Social Science* (IC2S2) 2016
- *AAAI Conference on Artificial Intelligence* (AAAI) 2014
- *International Conference on Complex Networks* (CompleNet) 2009, 2010
- *Workshop on Simplifying Complex Networks for Practitioners* (SIMPLEX) 2010
- *ACM International Conference on Web Search and Data Mining* (WSDM) 2010
- *Workshop on Social Network Mining and Analysis* (at ACM SIGKDD) 2008, 2009
- *Workshop on Analysis of Dynamic Networks* (at SIAM ICDM) 2009
- *Workshop on Analyzing Graphs: Theory and Applications* (at NIPS) 2008
- *International Workshop on Experimental Algorithms* 2006

Advisory Boards

- University Advisory Board, *Industry of Ideas*, Social Science Research Council 2024 – present

Institutional Committees & Service

- Colorado, BioFrontiers Institute, Council 2010 – present
- Colorado, College of Engineering & Applied Science (CEAS),
First Level Review Committee 2023 – present
- Colorado, Computational Biology Minor (CBIO), Director (founding) 2018 – present
- Colorado, Computational Biology Minor (CBIO), Curriculum Committee 2018 – present
- Colorado, BioFrontiers Institute, Computing Committee 2015 – present
- Colorado, Interdisciplinary Quant. Biology (IQBio) Curriculum Committee 2017 – present
- Colorado, Computer Science, Executive Committee 2021 – 2024
- Colorado, BioFrontiers Outstanding Contribution Award Review Committee 2023 – 2024
- Colorado, Computer Science, Strategic Planning Committee, Co-chair 2023
- Colorado, College of Engineering & Applied Science (CEAS)
Multi-Disciplinary Faculty Search Committee, Chair 2022 – 2023
- Colorado, Computer Science, CRA CERP point-of-contact 2016 – 2022
- Colorado, Computer Science, Teaching Circles, Director (founding) 2019 – 2022
- Colorado, Provost's Faculty Achievement Award Committee 2020 – 2021
- Colorado, BioFrontiers Faculty Search Committee, Co-chair 2016 – 2017
- Colorado, Computer Science, Faculty Search Committee 2012 – 2016
- Colorado, BioFrontiers Faculty Search Committee, Co-chair 2014 – 2015
- Colorado, Computer Science, Executive Committee 2013 – 2015
- Colorado, Computer Science, Graduate Committee 2010 – 2012
- Colorado, Interdisciplinary Quant. Biology (IQBio) Mentoring Committee 2011 – 2012
- Santa Fe Institute, Colloquium Committee 2007 – 2009

Professional Society Leadership Positions

- Co-founder and Administrator, Zachary Karate Club CLUB Prize in Network Science
networkkarate.tumblr.com 2013 – present

- Erdős-Rényi Prize selection committee, Network Science Society 2020
- President, UNM Computer Science Grad. Student Assoc. (CSGSA) 2004, 2005
- Vice President, UNM Computer Science Grad. Student Assoc. (CSGSA) 2003, 2004

Professional Society Memberships (current)

- American Association for the Advancement of Science (AAAS)
- International Society for Scientometrics and Informetrics (ISSI)
- Complex Systems Society (CSS)
- Network Science Society
- Sigma Xi (Full Member)

SYNERGISTIC ACTIVITIES

- Founder and project lead for *Colorado Index of Complex Networks* (ICON) 2016 – present
 - icon.colorado.edu
 - public index of >5407 publicly accessible network science data sets
- Science blogger at *Structure+Strangeness* 2005 – present
 - aaronclauset.github.io, 5 entries 2017 – present
 - structureandstrangeness.com (defunct), 366 entries and >500,000 page hits 2005 – 2016
- Science microblogger on Bluesky [@aaronclauset.bsky.social](https://bsky.app/profile/aaronclauset.bsky.social) 2023 – present
 - 553 followers / 27 posts
- Science microblogger on Mastodon [@aaronclauset@fediscience.org](https://fediscience.org/@aaronclauset) 2022 – present
 - 1100+ followers / 132 posts
- Science microblogger on X/Twitter [@aaronclauset](https://twitter.com/aaronclauset) 2012 – present
 - 11,224 followers / 3021 tweets
 - proud to be blocked by Steven Pinker since at least 2021
- Popular science writing 2014 – 2017
 - *Pacific Standard*, *Slate*, *Christian Science Monitor*, and *Chronicle of Higher Education*
- Wikipedia contributor (various science and mathematics articles) 2006 – present
- Stackexchange contributor (various CS and mathematics questions) 2011 – present
- Public release of scientific data sets (open source; typically GPL or CC) 2007 – present
 - LinkPrediction network corpus (with A. Ghasemian, H. Hosseinmardi) 2019
 - Parental leave policies, U.S. & Canada (with A.C. Morgan, S.F. Way, D.B. Larremore) 2018
 - CommunityFitNet network corpus (with A. Ghasemian, H. Hosseinmardi) 2018
 - Degree sequences for 927 complex networks (with A.D. Broido) 2018
 - Faculty hiring networks for computer science, business, and history 2015
 - NFL 2009 network (with C. Aicher) 2014
 - Terrorist event sizes worldwide 2013
 - Body masses of all extant whale species 2013
 - Various binned quantities with heavy-tailed distributions (with Y. Virkar) 2012
 - 9/11 hijackers association network 2008
 - Various quantities with heavy-tailed distributions (with M.E.J. Newman) 2007
- Public release of working algorithms (open source; typically GPL or CC) 2004 – present
 - Configuration model sampler (Python; with U. Dutta) 2022
 - Stacked topological model for link prediction in networks (Python; with A. Ghasemian) 2019
 - Scale-free network toolkit (Python; with A.D. Broido) 2018
 - neoSBM for metadata community detection (Python; with L. Peel) 2017
 - Block entropy statistical test (BESTest) for networks (Matlab; with D.B. Larremore) 2017
 - Minimum violation ranking sampling code (Matlab) 2015
 - Bipartite stochastic block model package (Matlab; with D.B. Larremore) 2014
 - Network change-point detection package (C++ and Python; with L. Peel) 2014
 - Weighted stochastic block model package (Matlab; with C. Aicher) 2014
 - Power-law distributions with bins toolkit (Matlab; with Y. Virkar) 2012
 - Rare event forecasting tool kit (Matlab) 2012
 - Terrorist organization simulation code (Matlab) 2011
 - Modularity landscape mapping software package (Python; with B.H. Good) 2010

- Hierarchical random graph and missing-link prediction software package (C++) 2008
- Species mass macroevolution simulation code (Matlab) 2008
- Power-law distributions tool kit (Matlab and R; with C.R. Shalizi) 2007
- Local-modularity network clustering algorithm (C++) 2005
- Fast-modularity network clustering algorithm (C++) 2004