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, *University of New Mexico* (with distinction)	2002 – 2006
B.S. Physics, *Haverford College* (with honors and concentration in Computer Science)	1997 – 2001

Academic Positions

Professor, Computer Science Dept., *University of Colorado, Boulder*	2022 – present
Core Faculty, BioFrontiers Institute, *University of Colorado, Boulder*	2010 – present
External Faculty, *Santa Fe Institute*	2012 – present
Affiliated Faculty, Ecology & Evo. Biology Dept., *University of Colorado, Boulder*	2011 – present
Affiliated Faculty, Applied Mathematics Dept., *University of Colorado, Boulder*	2012 – present
Affiliated Faculty, Information Dept., *University of Colorado, Boulder*	2015 – present
Associate Professor, Computer Science Dept., *University of Colorado, Boulder*	2018 – 2022
Assistant Professor, Computer Science Dept., *University of Colorado, Boulder*	2010 – 2018
Omidyar Fellow, *Santa Fe Institute*	2006 – 2010

Editorial Positions

Deputy Editor, *Science Advances*, AAAS	2017 – present
Associate Editor, *Science Advances*, AAAS	2014 – 2017
Associate Editor, *Journal of Complex Networks*, Oxford University Press	2012 – 2017

Honors & Awards (Selected)

Fellow, Network Science Society	2023
Paper of the Year, International Society for Scientometrics and Informetrics (ISSI)	2021
Provost Faculty Achievement Award, *U. Colorado, Boulder*	2019
Erdős-Rényi Prize in Network Science	2016
Top 20 Teachers, College of Engineering, *U. Colorado, Boulder*	2016
NSF CAREER Award	2015
Kavli Fellow	2014
Santa Fe Institute Public Lecturer (YouTube recording)	2010
Graduation Speaker, *U. New Mexico*, School of Engineering Convocation	2006
Outstanding Graduate Student Award, *U. New Mexico*, School of Engineering	2006

Google Scholar scholar.google.com/citations?user=e7VI_HcAAAAJ

* indicates an undergraduate coauthor; ° indicates equal contribution

Manuscripts Under Review

L. Van Kleunen, L. E. Dee, K. L. Wootton, F. Massol, and **A. Clauset**, "Predicting missing links in food webs using stacked models and species traits." Submitted (2024).
(Preprint at biorxiv.org/content/10.1101/2024.11.22.624890v1)

X. Zheng, M. Chowdhury, B. Mirpochoev, **A. Clauset**, R. M. Layer, F. J. Sedlazeck, "STIX: Long-reads based accurate structural variation annotation at population scale." Submitted (2024).
(Preprint at biorxiv.org/content/10.1101/2024.09.30.615931v1)

D. R. Windham, C. J. Wendt, A. Crane, S. Friedler, B. D. Sullivan, and **A. Clauset**, "Fast algorithms to improve fair information access in networks." Submitted (2024).
(Preprint at `arxiv:2409.03127`)

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`)

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`)

Publications (Refereed)

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." To appear, *Network Science* (2024).

U. Dutta, B. K. Fosdick, and **A. Clauset**, "Sampling random graphs with specified degree sequences." To appear, *Journal of Computational and Graphical Statistics* (2024). (Preprint at `arxiv:2105.12120`)

D. Van Egdom, M. M. Piszczek, C. Spitzmueller, P. Lindner, **A. Clauset**, "Supporting academic parents: The effects of dependent care policies on research productivity trends." *Journal of Business and Psychology* (2024).

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." *Cancer Immunology Research* **12**(11): 1492–1507 (2024).
(Preprint `biorxiv.org/content/10.1101/2024.01.26.577350v1`)

X. He, A. Ghasemian, E. Lee, A. Schwarze, **A. Clauset**, and P. J. Mucha, "Link prediction accuracy on real-world networks under non-uniform missing edge patterns." *PLOS ONE* **19**(7), e0306883 (2024). (Preprint at `arxiv:2401.15140`)

N. LaBerge, K. H. Wapman, **A. Clauset**, and D. B. Larremore, "Gendered hiring and attrition on the path to parity for academic faculty." *eLife* **13**, RP93755 (2024).

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).

K. Spoon, N. Laberge, K. H. Wapman, S. Zhang, A. C. Morgan, M. Galesic, B. K. Fosdick, D. B. Larremore, and **A. Clauset**, "Gender and retention patterns among U.S. faculty." *Science Advances* **9**(42), eadi2205 (2023). (Preprint at `osf.io/preprints/socarxiv/u26ze`)

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`)

N. LaBerge, K. H. Wapman, A. C. Morgan, S. Zhang, D. B. Larremore, and **A. Clauset**, "Subfield prestige and gender inequality in computer science." *Communications of the ACM* **65**(12), 46–55 (2022). (Preprint at `arxiv:2201.00254`)

S. Zhang, K. H. Wapman, D. B. Larremore, and **A. Clauset**, "Labor advantages drive the greater productivity of faculty at elite universities." *Science Advances* **8**(46), eabq7056 (2022). (Preprint at `arxiv:2204.05989`)

K. H. Wapman, S. Zhang, **A. Clauset**, and D. B. Larremore, "Quantifying hierarchy and dynamics in US faculty hiring and retention." *Nature* **610**, 120–127 (2022). [Chosen for an invited News & Views editorial]

A. C. Morgan, N. LaBerge, D. B. Larremore, M. Galesic, J. E. Brand, and **A. Clauset**, "Socioeconomic roots of academic faculty." *Nature Human Behavior* **6**, 1625–1633 (2022). (Preprint at `osf.io/preprints/socarxiv/6wjxc`)

W. Li, S. Zhang, Z. Zheng, S. J. Cranmer, and **A. Clauset**, "Untangling the network effects of productivity and prominence among scientists." *Nature Communications* **13**, 4907 (2022).

E. Lee, **A. Clauset**°, and D. B. Larremore°, "The dynamics of faculty hiring networks." *EPJ Data Science* **10**, 48 (2021). (Preprint at `arxiv:2105.02949`)

H. Hosseinmardi, A. Ghasemian, **A. Clauset**, M. Mobiush, 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`)

A. J. Kavran and **A. Clauset**, "Denoising large scale molecular profiling data using network filters." *BMC Bioinformatics* **22**, article 157 (2021). (Preprint at `doi.org/10.1101/2020.03.12.989244`)

A. C. Morgan, S. F. Way, M. J. D. Hoefer, D. B. Larremore, M. Galesic, and **A. Clauset**, "The unequal impact of parenthood in academia." *Science Advances* **7**(9), eabd1996 (2021). [Paper of the Year Award, 2021, International Society for Scientometrics and Informetrics (ISSI)]

K. R. Jordan, M. J. Sikora, J. E. Slansky, A. Minic, J. K. Richer, M. R. Moroney, J. C. Costello, **A. Clauset**, K. Behbakht, T. R. Kumar, and B. G. Bitler, "The capacity of the ovarian cancer tumor microenvironment to integrate inflammation signaling conveys a shorter disease-free interval." *Journal of Clinical Research* **26**(23), 6362–6373 (2020).
(Preprint at `doi.org/10.1101/2020.04.14.041145`)

A. Ghasemian, H. Hosseinmardi, A. Galstyan, E. M. Airoldi, and **A. Clauset**, "Stacking models for nearly optimal link prediction in complex networks." *Proc. Natl. Acad. Sci. USA* **117**(38), 23393–23400 (2020). (Preprint at `arxiv:1909.07578`) [Chosen for an invited Commentary editorial]

S. F. Way, A. C. Morgan, D. B. Larremore°, **A. Clauset**°, "Productivity, prominence, and the effects of academic environment." *Proc. Natl. Acad. Sci. USA* **116**(22), 10729–10733 (2019).

A. Ghasemian, H. Hosseinmardi, and **A. Clauset**, "Evaluating overfit and underfit in models of network community structure." *IEEE Trans. Knowledge and Data Engineering* **32**(9), 1722–1735 (2019). (Preprint at `arxiv:1802.10582`)

S. F. Way, S. Gil, I. Anderson, and **A. Clauset**, "Environmental changes and the dynamics of musical identity." *Proc. 13th International AAAI Conference on the Web and Social Media* (ICWSM), **13**, 527–536 (2019). (Preprint at `arxiv:1904.04948`)

A. D. Broido and **A. Clauset**, "Scale-free networks are rare." *Nature Communications* **10**, 1017 (2019). (Preprint at `arxiv:1801.03400`) [19th most-read article in Physics in *Nat. Comms.* in 2019] [Chosen for a special Comment editorial]

A. C. Morgan, D. J. Economou, S. F. Way and **A. Clauset**, "Prestige drives epistemic inequality in the diffusion of scientific ideas." *EPJ Data Science* **7**, 40 (2018).
(Preprint at `arxiv:1805.09966`)

A. C. Morgan, S. F. Way and **A. Clauset**, "Automatically assembling a full census of an academic field." *PLOS ONE* **13**(8), e0202223 (2018). (Preprint at `arxiv:1804.02760`)

A. Clauset, "Trends and fluctuations in the severity of interstate wars." *Science Advances* **4**(2), eaao3580 (2018).

L. R. Thompson, J. G. Sanders, [et al. including **A. Clauset**], "A communal catalogue reveals Earth's multiscale microbial diversity." *Nature* **551**, 457–463 (2017).

S. F. Way, A. C. Morgan, **A. Clauset**°, and D. B. Larremore°, "The misleading narrative of the canonical faculty productivity trajectory." *Proc. Natl. Acad. Sci. USA* **114**(44), E9216–E9223 (2017). (Preprint at `arxiv:1612.08228`) [Also accepted at *ICWSM* 2017, social science track (non-archival)]

N. Connor, A. Barbaran and **A. Clauset**, "Using null models to infer microbial co-occurrence networks." *PLOS ONE* **12**(5), e0176751 (2017). (Preprint at `doi:10.1101/070789`)

L. Peel, D. B. Larremore, and **A. Clauset**, "The ground truth about metadata and community detection in networks." *Science Advances* **3**(5), e1602548 (2017). (Preprint at `arxiv:1608.05878`)

D. Taylor, S. A. Myers, **A. Clauset**, M. A. Porter, P. J. Mucha, "Eigenvector-based centrality measures for temporal networks." *Multiscale Modeling and Simulation* **15**(1), 537–574 (2017). (Preprint at `arxiv:1507.01266`)

A. Ghasemian, P. Zhang, **A. Clauset**, C. Moore, and L. Peel, "Detectability thresholds and optimal algorithms for community structure in dynamic networks." *Physical Review X* **6**, 031005 (2016). (Preprint at `arxiv:1506.06179`)

M. E. J. Newman and **A. Clauset**, "Structure and inference in annotated networks." *Nature Communications* **7**, 11863 (2016). (Preprint at `arxiv:1507.04001`)
[Included by *Nat. Comms.* in a special collection of papers on "Network structure and dynamics"]

S. F. Way, D. B. Larremore, and **A. Clauset**, "Gender, productivity, and prestige in computer science faculty hiring networks." *Proc. 25th International Conference on World Wide Web* (WWW), 1169–1179 (2016). (Preprint at `arxiv:1602.00795`)

L. Peel and **A. Clauset**, "Predicting sports scoring dynamics with restoration and anti-persistence." *Proc. 2015 IEEE International Conference on Data Mining* (ICDM), 339–348 (2015). (Preprint at `arxiv:1504.05872`)

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).

A. Z. Jacobs, S. F. Way, J. Ugander and **A. Clauset**, "Assembling thefacebook: Using heterogeneity to understand online social network assembly." *Proc. ACM Web Science Conference* (WebSci 2015),

article 18 (Preprint at arxiv:1503.06772)

A. Clauset, M. Kogan and S. Redner, "Safe leads and lead changes in competitive team sports." *Physical Review E* **91**, 062815 (2015). (Preprint at arxiv:1503.03509)
[Chosen as an "Editors' Suggestion"]

A. Clauset, S. Arbesman and D. B. Larremore, "Systematic inequality and hierarchy in faculty hiring networks." *Science Advances* **1**(1), e1400005 (2015). [One of "Top Ten" *Science Advances* articles of 2015.] [One of the top 100 articles of 2015, by almetrics.com.]

L. Peel and **A. Clauset**, "Detecting change points in the large-scale structure of evolving networks." *Proc. 29th Conference on Artificial Intelligence* (AAAI), 2914–2920 (2015). (Preprint at arxiv:1403.0989)

C. Aicher*, A. Z. Jacobs and **A. Clauset**, "Learning latent block structure in weighted networks." *Journal of Complex Networks* **3**(2), 221–248 (2015). (Preprint at arxiv:1404.0431)

A. Scharpf, G. Schneider, A. Nöh and **A. Clauset**, "Forecasting of the risk of extreme massacres in Syria." *European Review of International Studies* **1**(2), 50–68 (2014).

D. B. Larremore, **A. Clauset** and A. Z. Jacobs, "Efficiently inferring community structure in bipartite networks." *Physical Review E* **90**, 012805 (2014). (Preprint at arxiv:1403.2933)
[Best Poster award at NetSci 2014]

P. Sah, L.O. Singh, **A. Clauset** and S. Bansal, "Exploring community structure in biological networks with random graphs." *BMC Bioinformatics* **14**, 220 (2014).
(Preprint at biorxiv.org/content/early/2013/12/22/001545) [Highly accessed paper]

S. Merritt and **A. Clauset**, "Scoring dynamics across professional team sports: tempo, balance and predictability." *EPJ Data Science* **3**, 4 (2014). (Preprint at arxiv:1310.4461)
[Highly accessed paper]

Y. Virkar and **A. Clauset**, "Power-law distributions in binned empirical data."
Annals of Applied Statistics **8**(1), 89–119 (2014). (Preprint at arxiv:1208.3524)

L. Shoemaker and **A. Clauset**, "Body mass evolution and diversification within horses (family Equidae)." *Ecology Letters* **17**(2), 211–220 (2014).

A. Clauset and R. Woodard, "Estimating the historical and future probabilities of large terrorist events." *Annals of Applied Statistics* **7**(4), 1838–1865 (2013). (Preprint at arxiv:1209.0089)
[Subject of a special session at ASA Joint Statistical Meetings, Montreal Canada, 5 August 2013]

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]

S. Merrit, A. Z. Jacobs, W. Mason and **A. Clauset**, "Detecting friendship within dynamic online

interaction networks." *Proc. 7th International AAAI Conference on Weblogs and Social Media* (ICWSM), 380–389 (2013). (Preprint at `arxiv:1303.6372`)

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 pre-Hispanic U.S. Southwest." *Proc. Natl. Acad. Sci. USA* **110**(15): 5785–5790 (2013).

A. Clauset, "How large should whales be?" *PLOS ONE* **8**(1), e53967 (2013).
(Preprint at `arxiv:1207.1478`)

W. Mason and **A. Clauset**, "Friends FTW! Friendship, collaboration and competition in *Halo: Reach*." *Proc. 2013 Conference on Computer Supported Cooperative Work* (CSCW), 375–386 (2013).
(Preprint at `arxiv:1203.2268`)

A. Clauset and K. S. Gleditsch, "The developmental dynamics of terrorist organizations."
PLOS ONE **7**(11), e48633 (2012). (Preprint at `arxiv:0906.3287`)

B. H. Good*, Y.-A. de Montjoye and **A. Clauset**, "The performance of modularity maximization in practical contexts." *Physical Review E* **81**, 046106 (2010). (Preprint at `arxiv:0910.0165`)
[Chosen as an "Editors' Suggestion"]

A. Clauset, L. Heger, M. Young and K. S. Gleditsch, "The strategic calculus of terrorism: Substitution and competition in the Israel-Palestine conflict." *Cooperation & Conflict* **46**(1), 6–33 (2010).

A. Clauset and F. W. Wiegel, "A generalized aggregation-disintegration model for the frequency of severe terrorist attacks." *Journal of Conflict Resolution* **54**(1), 179–197 (2010).
(Preprint at `arxiv:0902.0724`)

A. Clauset, C. R. Shalizi and M. E. J. Newman, "Power-law distributions in empirical data."
SIAM Review **51**(4), 661–703 (2009). (Preprint at `arxiv:0706.1062`)

D. Achlioptas, **A. Clauset**, D. Kempe and C. Moore, "On the bias of traceroute sampling:
Or, power-law degree distributions in regular graphs." *Journal of the ACM* **56**(4), article 21,
28 pages (2009). (Preprint at `arxiv:cond-mat/0503087`) [journal version of STOC 2005 paper]

N. Eagle, J. Quinn and **A. Clauset**, "Methodologies for continuous cellular tower data analysis."
Proc. 7th International Conference on Pervasive Computing (Pervasive 2009), 342–353.

A. Clauset and S. Redner, "Evolutionary model of species body mass diversification."
Physical Review Letters **102**, 038103 (2009). (Preprint at `arxiv:0808.4014`)

A. Clauset, D. J. Schwab and S. Redner, "How many species have mass M?"
American Naturalist **173**, 256–263 (2009). (Preprint at `arxiv:0808.3433`)

A. Clauset, H. G. Tanner, C. T. Abdallah and R. H. Byrne, "Controlling across complex networks – Emerging links between networks and control." *Annual Reviews in Control* **32**, 183–192 (2008).

A. Clauset and D. H. Erwin, "The evolution and distribution of species body size."
Science **321**, 399–401 (2008). (Preprint at `arxiv:0901.0251`)

A. Clauset, C. Moore and M. E. J. Newman, "Hierarchical structure and the prediction of missing links in networks." *Nature* **453**, 98–101 (2008). (Preprint at `arxiv:0811.0484`)
[Chosen for an invited News & Views editorial]

A. Clauset, M. Young and K. S. Gleditsch, "On the frequency of severe terrorist attacks." *Journal of Conflict Resolution* **51**(1), 58–88 (2007). (Preprint at `arxiv:physics/0606007`)

V. Kalapala, V. Sanwalani, **A. Clauset** and C. Moore, "Scale invariance in road networks." *Physical Review E* **73**, 026130 (2006). (Preprint at `arxiv:physics/0510198`)

J. T. Ayers, **A. Clauset**, J. D. Schmitt, L. P. Dwoskin and P. A. Crooks, "Molecular modeling of mono- and bis-quaternary ammonium salts as ligands at the $\alpha 4\beta 2$ nicotinic acetylcholine receptor subtype using nonlinear techniques." *American Association of Pharmaceutical Scientists Journal* **7**(3), E678–85 (2005).

Y. D. Xiao, **A. Clauset**, R. Harris, E. Bayram, P. Santago II, and J. D. Schmitt, "Supervised self-organizing maps in QSAR I: Robust behavior with underdetermined datasets." *Journal of Chemical Information and Modeling* **46**(6), 1749–1758 (2005).

A. Clauset, "Finding local community structure in networks." *Physical Review E* **72**, 026132 (2005). (Preprint at `arxiv:physics/0503036`)

D. Achlioptas, **A. Clauset**, D. Kempe and C. Moore, "On the bias of traceroute sampling (or: Why almost every network looks like it has a power law)." ACM *Proc. 37th Symp. on Theory of Computing* (STOC 2005), 694–703.

A. Clauset and C. Moore, "Accuracy and scaling phenomena in Internet mapping." *Physical Review Letters* **94**, 018701 (2005). (Preprint at `arxiv:cond-mat/0410059`)

A. Clauset, M. E. J. Newman and C. Moore, "Finding community structure in very large networks." *Physical Review E* **70**, 066111 (2004). (Preprint at `arxiv:cond-mat/0408187`)

E. Bayram, P. Santago II, R. Harris, Y. D. Xiao, **A. Clauset** and J. D. Schmitt, "Genetic algorithms and self-organizing maps: A powerful combination for modeling complex QSAR and QSPR problems." *Journal of Computer-Aided Molecular Design* **18** (7-9), 483–493 (2004).

Workshop Papers

I. V. Buskirk, B. Zaharatos, **A. Clauset**, D. B. Larremore, "If the data do not speak for themselves, how ought we to speak for the data?" *ICWSM* Workshop on Disrupt, Ally, Resist, Embrace (DARE): Action Items for Computational Social Scientists in a Changing World (D.A.R.E. Workshop 2023).

A. Ghasemian, A. Galstyan, and **A. Clauset**, "Highly Accurate Link Prediction in Networks Using Stacked Generalization." *WSDM* International Workshop on Heterogeneous Networks Analysis and Mining (HeteroNAM 2018).

A. Z. Jacobs and **A. Clauset**, "A unified view of generative models for networks: models, methods, opportunities, and challenges." *NIPS* Workshop on Networks: From Graphs to Rich Data (2014). (Preprint at `arxiv:1411.4070`)

L. Peel and **A. Clauset**, "Change-point detection in temporal networks using hierarchical random graphs." *KDD* Workshop on Outlier Detection & Description under Data Diversity (2014).

S. Merritt and **A. Clauset**, "Social network dynamics in a massive online game: Network turnover, non-densification, and team engagement in Halo Reach." Eleventh Workshop on Mining and Learning with Graphs (MLG) (2013). (Preprint at `arxiv:1306.4363`)

C. Aicher*, A. Z. Jacobs and **A. Clauset**, "Adapting the stochastic block model to edge-weighted networks." *ICML* Workshop on Structured Learning (2013). (Preprint at `arxiv:1305.5782`)

N. Eagle, **A. Clauset** and J. Quinn, "Location segmentation, inference and prediction for anticipatory computing." *Proc. AAAI Spring Symposium*, 20–25 (2009).

A. Clauset and N. Eagle. "Persistence and periodicity in a dynamic proximity network." DIMACS Workshop on Computational Methods for Dynamic Interaction Networks (Piscataway), 2007. (Preprint at `arxiv:1211.7343`).

A. Clauset, C. Moore and M. E. J. Newman, "Structural inference of hierarchies in networks." *Proc. Workshop on Statistical Network Analysis, 23rd International Conference on Machine Learning* (ICML '06). E. M. Airoldi et al., Eds., *Lecture Notes in Computer Science* **4503**, 1–13 (2007). (Preprint at `arxiv:physics/0610051`)

Book Chapters

A. Clauset, "On the frequency and severity of interstate wars." In Nils Petter Gleditsch (Ed.), *Lewis F. Richardson — His Intellectual Legacy and Influence in the Social Sciences*, Springer Pioneer Series (2020). (Preprint at `arxiv:1901.05086`)

K. S. Gleditsch and **A. Clauset**, "Trends in Conflict." In A. Gheciu and W. C. Wohlforth (Eds.), *The Oxford Handbook of International Security* (pp 227–244) Oxford University Press (2018).

Essays and Perspectives

K. Spoon and **A. Clauset**, "Gendered devaluation and retention among U.S. faculty." *CSWEP News* 2, 7–10 (2024).

F. Karimi and **A. Clauset**, "Abolish ageism in early-career research awards." *Nature* **620**, 492 (2023). `doi:10.1038/d41586-023-02567-9`

A.C. Morgan and **A. Clauset**, "Nearly a quarter of tenure-track faculty have a parent with a PhD." *Nature Human Behavior* (2022). `doi:10.1038/s41562-022-01426-3`

K. Hodges, M. McNutt, **A. Clauset**, J. Jackson, G. Machlis, and S. Naeem, "The fine art of scientific advocacy: A tribute to Tom Lovejoy." *Science Advances* **8**(2), abn9704 (2022).

A. Clauset, K. Behbakht, B. G. Bitler, "Decoding the dynamic tumor microenvironment." *Science Advances* **7**(23), eabi5904 (2021). `doi:10.1126/sciadv.abi5904`

A. Clauset, D. B. Larremore and R. Sinatra, "Data-driven predictions in the science of science." *Science* **355**, 477–480 (2017). [Invited] `doi:10.1126/science.aal4217`

R. T. Gill, A. L. Halweg-Edwards, S. F. Way and **A. Clauset**, "Synthesis aided design: The biological design-build-test engineering paradigm?" *Biotechnology and Bioengineering* **113**(1), 7–10 (2016).

Preprints and Other Publications

N. J. Cordaro, A. J. Kavran, M. Smallegan, M. Palacio, N. Lammer, T. S. Brant, V. DuMont, N. Doherty Garcia, S. Miller, T. Jourabchi, S. L. Sawyer, and **A. Clauset**, "Optimizing polymerase chain reaction (PCR) using machine learning." Preprint, `biorxiv:10.1101/2021.08.12.455589` (2021).

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` (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

M. Coscia, *The Atlas for the Aspiring Network Scientist.* (2nd ed.) (2024). → "*The Atlas* is an essential resource for scientists in every field who want to understand their networks better."

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)

"Using advanced computational analysis to predict ovarian cancer outcomes."
PI, with Ben Bitler (PI; Anschutz)
University of Colorado, AB Nexus seed grant program, $124,105 2024 – 2025

"The impact of socioeconomic heterogeneity on science and innovation."
PI, with Daniel E. Acuña (co-PI; Colorado) and Daniel B. Larremore (co-PI; Colorado)
NSF SBE, $400,000 2024 – 2027

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

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

"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

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

"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 – 2024

"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 (unrestricted)

Facebook Inc. 2015
Microsoft Inc. 2014

Invited Talks (Recent)

- Invited Speaker, American Institute of Mathematics, Pasadena CA, 8–12 December 2025
- Keynote Speaker, Oxford Summer School in Economic Networks, Oxford UK, 23–27 June 2025
- Seminar, Department of Cognitive & Information Sciences, University of California, Merced CA, 24 February 2025
- Colloquium, Integrative Physiology Department, University of Colorado, Boulder CO, 28 October 2024
- Invited Speaker, College of Engineering and Applied Sciences, University of Colorado, Boulder CO, 11 October 2024
- Gordon Rausser Keynote Address, Agricultural & Applied Economics Association annual meeting, New Orleans LA, 28 July 2024

- Invited Speaker, WNAR Annual Conference, Ft. Collins CO, 10 June 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
- 162 other invited talks, since 2004

Advising

Postdoctoral Fellows

- Dr. Lucy Van Kleunen 2024
- Dr. Katherine Wootton 2021 – 2022
- Dr. Eun Lee 2020 – 2022
- Dr. Samuel F. Way 2017 – 2019
- Dr. Andrea Berardi 2015 – 2016
- Dr. Daniel B. Larremore 2012 – 2015
- Dr. Leto Peel 2013 – 2015

Doctoral Students (all at Colorado)

- Kate Barnes 2024 – present
  Computer Science; co-advised with D. B. Larremore
- Carolina Chávez Ruelas 2023 – present
  Computer Science; co-advised with D. Acuña
- Vivian Li 2024 – present
  Computer Science and IQBiology; co-advised with L. Dee
- Katherine Spoon 2020 – present
  Computer Science; NSF GRF; co-advised with D. B. Larremore

- Ian Van Buskirk (PhD Computer Science, co-advised with D. B. Larremore) 2024
  Dissertation: *Datasets and Software for Estimating Consensus in Social Systems*
- Nicholas LaBerge (PhD Computer Science, co-advised with D. B. Larremore) 2024
  Dissertation: *Gender inequalities and peer review disparities in the academic workforce*
- Shimian (Sam) Zhang (PhD Applied Mathematics) 2024
  Dissertation: *Statistical models of scientific careers and decision-making*
- Lucy Van Kleunen (PhD Computer Science, co-advised with L. Dee) 2024
  Dissertation: *Interpretable prediction and decision-making under uncertainty using biological networks*
- 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 Sciene, 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, 2024, 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, Computing Research Association (CRA) Survey Committee 2024 – 2025
- 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. Airoldi (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. Airoldi (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. Airoldi (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 Januarry) 2008
  With M. Girvan (Maryland)

Conferences (Organizer or co-organizer)

- 2^{nd} *Computer Science at UNM Student Research Conference*, Conference Chair, Albuquerque NM, (3 March) 2006
- 1^{st} *Computer Science at UNM Student Research Conference*, Conference Chair, Albuquerque NM, (4 March) 2005

Program Committees

- *International Conference on Computational Social Science* (IC2S2) 2016 – 2018, 2023 – 2024
- *Atlanta Conference on Science and Innovation Policy* (ATLC) 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, Member, School of Computing Task Force 2024 – 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, Advisory Group, Clarivate Partnership in Research Intelligence 2024 – 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` 2023 – present
  - 4700+ followers
- Science microblogger on Mastodon `@aaronclauset@fediscience.org` 2022 – present

– 1100+ followers / 132 posts

- Science microblogger on X/Twitter `@aaronclauset` 2012 – 2024
  – 11,201 followers / 3022 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
  – Fairness in networks data corpus (Python; with D. Windham) 2024
  – 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
  – Fairness in networks algorithms (Python; with D. Windham) 2024
  – 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