Aaron Clauset

CONTACT INFORMATION	Department of Computer Science University of Colorado at Boulder 430 UCB Boulder CO, 80309-0430 USA	*voice:* 303–492–6643 *fax:* 303–492–2844 *email:* aaron.clauset@colorado.edu *web:* www.santafe.edu/~aaronc

RESEARCH INTERESTS

Network science (methods, theories, applications); Data science, statistical inference, machine learning; Models and simulations; Collective dynamics and complex systems; Rare events, power laws and forecasting; Computational social science; Computational biology and biological computation.

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

Assistant Professor, Computer Science, *University of Colorado, Boulder*	2010 – present
Assistant Professor, BioFrontiers Institute, *University of Colorado, Boulder*	2010 – present
External Faculty, *Santa Fe Institute*	2012 – present
Affiliated Faculty, Ecology & Evolution. Biology, *University of Colorado, Boulder*	2011 – present
Affiliated Faculty, Applied Mathematics, *University of Colorado, Boulder*	2012 – present
Omidyar Fellow, *Santa Fe Institute*	2006 – 2010

INDUSTRY POSITIONS

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
Project Scientist, *Targacept Inc.*, Winston-Salem NC	2001 – 2002

GOOGLE SCHOLAR   scholar.google.com/citations?user=e7VI_HcAAAAJ

* indicates an undergraduate coauthor

MANUSCRIPTS UNDER REVIEW

L. Peel and **A. Clauset**, "Predicting sports scoring dynamics with restoration and anti-persistence." Submitted (2015).

A. Z. Jacobs, S. F. Way, J. Ugander and **A. Clauset**, [manuscript under double-blind review] Submitted (2015).

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." Submitted (2014).

PUBLICATIONS (REFEREED)

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

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

C. Aicher*, A. Z. Jacobs and **A. Clauset**, "Learning latent block structure in weighted networks." To appear, *Journal of Complex Networks* (2014). (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. of the 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 Prehispanic 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. of the 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`)

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`)

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), 1679–1758 (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

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`)

OTHER
PUBLICATIONS

J. Warner and **A. Clauset**, "What Same-Sex Marriage Means for the Future of Recreational Weed."
Pacific Standard, 24 October `http://bit.ly/1tdlut1` (2014).

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). `http://tinyurl.com/2gx7z5l`

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).

GRANTS
(PI OR CO-PI)

"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, joint with Caroline Buckee (PI; Harvard)
NIH/NIGMS, R21, $286,485   2013 – 2015

"EAGER: Understanding Technological Change from the Map of Capabilities."
co-PI, with Hyejin Youn (PI; Santa Fe Institute)
NSF SciSIP, $152,500   2013 – 2015

"Statistical Inference for Detecting Structures and Anomalies in Networks."
PI, joint with Cris Moore (PI; Santa Fe Institute) and Mark Newman (PI; Michigan)
DARPA and AFOSR, GRAPHS, $2,924,396   2012 – 2016

"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

INVITED TALKS
(RECENT)

- Workshop on "Dynamics Of and On Networks", Santa Fe Institute, Santa Fe NM, 1–4 December 2014
- Toyota Artificial Intelligence Seminar, Department of Computer Science, University of Michigan, Ann Arbor MI, 16 September 2014
- Seminar Series, Center for the Study of Complex Systems, University of Michigan, Ann Arbor MI, 16 September 2014
- Keynote, Santa Fe Institute Annual Public BBQ, Tesuque NM, 14 August 2014
- Keynote, "Temporal Networks, Human Dynamics and Social Physics" NetSci Satellite Workshop, Berkeley CA, 3 June 2014
- "Higher-Order Models in Network Science" NetSci Satellite Workshop, Berkeley CA, 3 June 2014
- Satellite Meeting on Reticulated Microbial Evolution, Society for Molecular Biology & Evolution (SMBE) Annual Meeting, Kiel, Germany, 27–30 April 2014
- Symposium on Molecular Evolution, University of Colorado, Denver CO, 17 April 2014
- Computer Science Colloquium, Brigham Young University, Provo UT, 6 March 2014
- Symposium on Algorithms from Statistical Physics and the Physics of Algorithms, APS March Meeting, Denver CO, 3 March 2014
- Young Alumni in Academics Lecture Series, Haverford College, Haverford PA, 20 February 2014

- Center for Automation, Robotics, and Distributed Intelligence (CARDI) and Department of Electrical Engineering and Computer Science (EECS) Colloquium, Colorado School of Mines, Golden CO, 6 February 2014

CONTRIBUTED TALKS (RECENT)	• Colloquium, Computer Science Dept., University of Colorado, Boulder CO, 18 September 2014 • Lightening Talk, Internat. Conf. on Network Science (NetSci), Berkeley CA, 6 June 2014

HONORS &
AWARDS
(SELECTED)

NSF CAREER Award	2015–2020
Kavli Fellow	2014
Santa Fe Institute Public Lecture Series (http://bit.ly/I6t9gf)	2010
Graduation Speaker, U. New Mexico School of Engineering Convocation	2006
Outstanding Graduate Student Award, U. New Mexico School of Engineering	2006

ADVISING

Postdoctoral Fellows

• Dr. Daniel B. Larremore (joint with Harvard School of Public Health)	2012 – present
• Dr. Leto Peel	2013 – present

Doctoral Students (all at Colorado)

• Nora Connor Computer Science & IQ Biology; NSF GRF	2011 – present
• Amir Ghasemian EECE	2014 – present
• Abigail Z. Jacobs Computer Science; NSF GRF	2011 – present
• Lauren Shoemaker Ecology & Evol. Biology & IQ Biology; NSF GRF; co-advised with B. Melbourne	2012 – present
• Sam F. Way Computer Science & IQ Biology	2014 – present
• Sears Merritt (PhD, Computer Science) Dissertation: *Dynamics and structure in competitive social systems*	graduated 2013

Masters Students (all at Colorado)

• Christopher Aicher (BS/MS Applied Mathematics) Thesis: *The weighted stochastic block model*	graduated 2014
• Pooneh Mortazavi (MS, Computer Science) Thesis: *Genome optimization and evolution modeling using genetic algorithm and GA-TRMR*	graduated 2013
• Yogesh Virkar (MS, Computer Science) Thesis: *Power-law distributions and binned empirical data*	graduated 2012

Undergraduate Students

• Dominic Tonozzi (BS Computer Sciene, Colorado)	2014–present
• Matthias Sainz (BS Computer Science, Colorado)	2014–present
• 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
• Andrew Mauboussin (High school fellow at SFI)	Summer 2009
• Benjamin Good (BS Physics, Swarthmore; REU)	2008–2010

TEACHING	**University Courses** (* indicates a new course)

University Courses (* indicates a new course)
- Algorithms (undergraduate)   Spring 2014
  Colorado CSCI 3104
- History and Future of Computing* (undergraduate)   Spring 2015
  Colorado CSCI 4380
- Network Analysis and Modeling* (graduate)   Fall 2013 – 2014
  Colorado CSCI 5352
- 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

Summer Schools
- Faculty, Santa Fe Institute, "Complex Systems Summer School" (CSSS)   2007 – 2015
  Santa Fe NM, 2007–2008; Beijing China, 2008–2009; Santa Fe NM, 2013–2014; Ajitgarh India 2015.
- Faculty, Santa Fe Institute, "Short Course on Exploring Complexity"   2011 – 2015
  Albuquerque NM, 2011; Washington DC, 2012; Stanford CA, 2012; Austin TX, 2013; Santa Fe NM, 2015.

EDITORIAL WORK
- Associate Editor, *Science Advances* (AAAS)   2014 – present
- Associate Editor, *Journal of Complex Networks* (Oxford University Press)   2012 – present

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REFEREE WORK
- **Applied Math and Statistics**: Annals of Applied Statistics, EPJ Data Science, SIAM ICDM Workshop on Analysis of Dynamic Networks (2009), Statistical Analysis and Data Mining
- **Biology**: Bioinformatics, BMC Bioinformatics, 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), 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 (2014–2015), 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), 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 (2010–2015)
- **General**: Nature, Nature Communications, Nature Methods, PLOS ONE, PNAS, Science
- **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, British Journal of Political Science, Defense & Peace Economics, Journal of Conflict Resolution, Journal of Peace Research
- **Others**: Advances in Complex Systems, Computational Linguistics, Hydrology Earth System Sciences, Journal of Chemical Information and Modeling, Journal of Complex Networks, Networks and Spatial Economics
- **Funding Agencies**: U.S. National Science Foundation (NSF), U.S. Department of Energy (DOE), ETH Zürich Research Commission, European Research Council (ERC)

PROFESSIONAL SERVICE

Workshops (Organizer or co-organizer)
- *Statistical Inference for Network Models*
  NetSci 2015, Satellite Workshop, Zaragoza Spain, 1 June 2015.

Organized 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.
  Organized 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.
  Organized with M.A. Porter (Oxford) and D. Kempe (Southern Cal.)
- *Statistical Inference for Network Models*
  NetSci 2014, Satellite Workshop, Berkeley CA, 2 June 2014.
  Organized 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.
  Organized 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.
  Organized with C. Moore (SFI) and M.E.J. Newman (Michigan)
- *The Mathematics of Terrorism*
  Santa Fe Institute, Santa Fe NM, Aug. 31–Sept. 2, 2009.
  Organized with B. Tivnan (MITRE)
- *Statistical Inference for Complex Networks*
  Santa Fe Institute, Santa Fe NM, Dec. 3–5 2008.
  Organized with C. Moore (New Mexico, SFI)
- *Navigability and Complex Networks*
  Santa Fe Institute, Santa Fe NM, Aug. 4–6, 2008. Organized with D. Krioukov (UCSD) and kc claffy (UCSD)
- *Is There a Physics of Society?*
  Santa Fe Institute, Santa Fe NM, Jan. 10–12, 2008.
  Organized with M. Girvan (Maryland)

Conferences (Organizer or co-organizer)
- *2nd Computer Science at UNM Student Research Conference*, Conference Chair,
  Albuquerque NM, March 3, 2006.
- *1st Computer Science at UNM Student Research Conference*, Conference Chair,
  Albuquerque NM, March 4, 2005.

Program Committees
- *International Conference on Network Science* (NetSci, main cycle)   2015
- *International Conference on Network Science* (NetSci-X)   2015
- *AAAI Conference on Artificial Intelligence* (AAAI)   2014
- *International AAAI Conference on Web and Social Media* (ICWSM)   2014 – 2015
- *World Wide Web Conference* (WWW)   2010 – 2015
- *1st SIAM Workshop on Network Science*   2013
- *International Workshop 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

Institutional Committees
- Colorado, Computer Science, Executive Committee   2013 – present

- Colorado, BioFrontiers Institute, Task Force   2010 – present
- Colorado, Interdisciplinary Quantitative Biology (IQBio) liaison with CS   2010 – present
- Colorado, BioFrontiers Faculty Search Committee (co-chair)   2014 – present
- Colorado, Computer Science, Faculty Search Committee   2014 – present
- Colorado, Computer Science, Faculty Search Committee (co-chair)   2013 – 2014
- Colorado, Computer Science, Faculty Search Committee   2012 – 2013
- Colorado, Computer Science, Graduate Committee   2010 – 2012
- Colorado, Interdisciplinary Quantitative Biology (IQBio) Mentoring Committee   2011 – 2012
- Santa Fe Institute, Colloquium Committee   2007 – 2009
- New Mexico, Computer Science, Faculty Search Committee   2005 – 2006

Society Leadership Positions
- Co-founder and Administrator, Zachary Karate Club CLUB Prize in Network Science
  `http://networkkarate.tumblr.com`   2013 – present
- President, UNM Computer Science Grad. Student Assoc. (CSGSA)   2004 – 2005
- Vice President, UNM Computer Science Grad. Student Assoc. (CSGSA)   2003 – 2004

SYNERGISTIC ACTIVITIES

- Science blogger at *Structure+Strangeness*   2005 – present
  - `http://structureandstrangeness.com`
  - 363 entries and >500,000 page hits
- Science microblogger on Twitter `@aaronclauset`   2012 – present
  - 1897 followers (top 4% of all users)
  - 634 tweets with mean 3.4 retweets per tweet (top 4% of all users)
- Popular science writing, for *Pacific Standard*   2014 – present
- Wikipedia contributor (various science and mathematics articles)   2006 – present
- Stackexchange contributor (various CS and mathematics questions)   2011 – present
- Public release of working algorithms (open source; typically GPL or CC)   2004 – present
  - 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