Peter J Mucha

List of Publications by Year
in descending order

60 papers	3,764 citations	236925 25 h-index	138484 58 g-index
62 all docs	62 docs citations	62 times ranked	4241 citing authors

#	Article	IF	Citations
1	Community Structure in Time-Dependent, Multiscale, and Multiplex Networks. Science, 2010, 328, 876-878.	12.6	1,655
2	Functional classification of long non-coding RNAs by k-mer content. Nature Genetics, 2018, 50, 1474-1482.	21.4	198
3	Emotion semantics show both cultural variation and universal structure. Science, 2019, 366, 1517-1522.	12.6	177
4	Eigenvector-Based Centrality Measures for Temporal Networks. Multiscale Modeling and Simulation, 2017, 15, 537-574.	1.6	120
5	Topological data analysis of contagion maps for examining spreading processes on networks. Nature Communications, 2015, 6, 7723.	12.8	90
6	Clustering Network Layers with the Strata Multilayer Stochastic Block Model. IEEE Transactions on Network Science and Engineering, 2016, 3, 95-105.	6.4	90
7	Think locally, act locally: Detection of small, medium-sized, and large communities in large networks. Physical Review E, 2015, 91, 012821.	2.1	88
8	Resolving Structural Variability in Network Models and the Brain. PLoS Computational Biology, 2014, 10, e1003491.	3.2	85
9	Taxonomies of networks from community structure. Physical Review E, 2012, 86, 036104-36104.	2.1	79
10	Spatiotemporal patterns and trends of Indian monsoonal rainfall extremes. Geophysical Research Letters, 2016, 43, 1710-1717.	4.0	71
11	Metabolomic networks connect host-microbiome processes to human Clostridioides difficile infections. Journal of Clinical Investigation, 2019, 129, 3792-3806.	8.2	70
12	Cross-linked structure of network evolution. Chaos, 2014, 24, 013112.	2.5	68
13	Portrait of Political Party Polarization. Network Science, 2013, 1, 119-121.	1.0	65
14	Random Walker Ranking for NCAA Division I-A Football. American Mathematical Monthly, 2007, 114, 761-777.	0.3	63
15	Enhanced Detectability of Community Structure in Multilayer Networks through Layer Aggregation. Physical Review Letters, 2016, 116, 228301.	7.8	59
16	Dynamical clustering of exchange rates. Quantitative Finance, 2012, 12, 1493-1520.	1.7	50
17	Climate shocks and migration: an agent-based modeling approach. Population and Environment, 2016, 38, 47-71.	3.0	50
18	Transient Antibody-Mucin Interactions Produce a Dynamic Molecular Shield against Viral Invasion. Biophysical Journal, 2014, 106, 2028-2036.	0.5	49

#	ARTICLE	IF	CITATIONS
19	Diffusion-induced bias in near-wall velocimetry. Journal of Fluid Mechanics, 2007, 577, 443-456.	3.4	46
20	Kantian fractionalization predicts the conflict propensity of the international system. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11812-11816.	7.1	42
21	A local perspective on community structure in multilayer networks. Network Science, 2017, 5, 144-163.	1.0	42
22	Epidemic spreading in localized environments with recurrent mobility patterns. Physical Review E, 2018, 97, 052302.	2.1	36
23	The emergence of a functionally flexible brain during early infancy. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 23904-23913.	7.1	36
24	Dynamics on modular networks with heterogeneous correlations. Chaos, 2014, 24, 023106.	2.5	30
25	Modeling Neutralization Kinetics of HIV by Broadly Neutralizing Monoclonal Antibodies in Genital Secretions Coating the Cervicovaginal Mucosa. PLoS ONE, 2014, 9, e100598.	2.5	27
26	The scaling structure of the global road network. Royal Society Open Science, 2017, 4, 170590.	2.4	26
27	That sinking feeling. Nature, 2001, 409, 569-571.	27.8	24
28	Compressing Networks with Super Nodes. Scientific Reports, 2018, 8, 10892.	3.3	22
29	A new method for simulating rigid body motion in incompressible two€phase flow. International Journal for Numerical Methods in Fluids, 2011, 67, 713-732.	1.6	21
30	Fecal IgA, Antigen Absorption, and Gut Microbiome Composition Are Associated With Food Antigen Sensitization in Genetically Susceptible Mice. Frontiers in Immunology, 2020, 11, 599637.	4.8	20
31	Network Analysis Reveals Sex- and Antibiotic Resistance-Associated Antivirulence Targets in Clinical Uropathogens. ACS Infectious Diseases, 2015, 1, 523-532.	3.8	17
32	Accrual of functional redundancy along the lifespan and its effects on cognition. NeuroImage, 2021, 229, 117737.	4.2	17
33	Lower functional hippocampal redundancy in mild cognitive impairment. Translational Psychiatry, 2021, 11, 61.	4.8	17
34	Multiopinion coevolving voter model with infinitely many phase transitions. Physical Review E, 2013, 88, 062818.	2.1	16
35	Super-Resolution Community Detection for Layer-Aggregated Multilayer Networks. Physical Review X, 2017, 7, .	8.9	16
36	Role of social environment and social clustering in spread of opinions in coevolving networks. Chaos, 2013, 23, 043123.	2.5	15

#	Article	IF	Citations
37	Scientific Training in the Era of Big Data: A New Pedagogy for Graduate Education. Big Data, 2017, 5, 12-18.	3.4	14
38	Evolutionary prisoner's dilemma games coevolving on adaptive networks. Journal of Complex Networks, 2018, 6, 1-23.	1.8	14
39	Modeling of Virion Collisions in Cervicovaginal Mucus Reveals Limits on Agglutination as the Protective Mechanism of Secretory Immunoglobulin A. PLoS ONE, 2015, 10, e0131351.	2.5	13
40	Transitivity reinforcement in the coevolving voter model. Chaos, 2016, 26, 123112.	2.5	12
41	Map equation with metadata: Varying the role of attributes in community detection. Physical Review E, 2019, 100, 022301.	2.1	12
42	Assessing the robustness of cluster solutions obtained from sparse count matrices.. Psychological Methods, 2019, 24, 675-689.	3.5	12
43	Social clustering in epidemic spread on coevolving networks. Physical Review E, 2019, 99, 062301.	2.1	11
44	The association between hippocampal volume and memory in pathological aging is mediated by functional redundancy. Neurobiology of Aging, 2021, 108, 179-188.	3.1	11
45	EndNote: Feature-based classification of networks. Network Science, 2019, 7, 438-444.	1.0	10
46	Fluctuation of similarity to detect transitions between distinct dynamical regimes in short time series. Physical Review E, 2014, 89, 062908.	2.1	9
47	Concurrency and reachability in treelike temporal networks. Physical Review E, 2019, 100, 062305.	2.1	7
48	Comparing transmission potential networks based on social network surveys, close contacts and environmental overlap in rural Madagascar. Journal of the Royal Society Interface, 2022, 19, 20210690.	3.4	7
49	Network-Ensemble Comparisons with Stochastic Rewiring and Von Neumann Entropy. SIAM Journal on Applied Mathematics, 2018, 78, 897-920.	1.8	6
50	Synchronization of coupled Kuramoto oscillators under resource constraints. Physical Review E, 2021, 104, 014211.	2.1	5
51	A Simultaneous Feature Selection and Compositional Association Test for Detecting Sparse Associations in High-Dimensional Metagenomic Data. Frontiers in Microbiology, 2022, 13, 837396.	3.5	4
52	Rigid Graph Compression: Motif-Based Rigidity Analysis for Disordered Fiber Networks. Multiscale Modeling and Simulation, 2018, 16, 1283-1304.	1.6	3
53	Network Interconnectivity and Community Detection in HIV/Syphilis Contact Networks Among Men Who Have Sex With Men. Sexually Transmitted Diseases, 2020, 47, 726-732.	1.7	3
54	Nonaxisymmetric high-aspect-ratio ellipsoids under shear: Lowest-order correction for finite aspect ratios. Physical Review E, 2014, 90, 013005.	2.1	2

#	Article	IF	Citations
55	Infectivity enhances prediction of viral cascades in Twitter. PLoS ONE, 2019, 14, e0214453.	2.5	2
56	Dynamics of social network emergence explain network evolution. Scientific Reports, 2020, 10, 21876.	3.3	2
57	Optimizing Emergency Stroke Transport Strategies Using Physiological Models. Stroke, 2021, 52, 4010-4020.	2.0	2
58	Erratum to "Evolutionary prisoner's dilemma games coevolving on adaptive network" Journal of Complex Networks, 2017, 5, 964-964.	1.8	1
59	Positive psychological states and stress responses in caregivers of adults receiving an allogeneic bone marrow transplant: A study protocol. Journal of Advanced Nursing, 2021, 77, 2073-2084.	3.3	1
60	A bipartite graph-based expected networks approach identifies DDR genes not associated with TMB yet predictive of immune checkpoint blockade response. Cell Reports Medicine, 2022, 3, 100602.	6.5	1