Samir Suweis

List of Publications by Year
in descending order

72 papers	3,389 citations	172457 29 h-index	155660 55 g-index
83 all docs	83 docs citations	83 times ranked	4239 citing authors

#	Article	IF	Citations
1	The Global Foodâ€Energyâ€Water Nexus. Reviews of Geophysics, 2018, 56, 456-531.	23.0	446
2	Water for food: The global virtual water trade network. Water Resources Research, 2011, 47, .	4.2	227
3	Emergence of structural and dynamical properties of ecological mutualistic networks. Nature, 2013, 500, 449-452.	27.8	221
4	Resilience and reactivity of global food security. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6902-6907.	7.1	179
5	Information-based fitness and the emergence of criticality in living systems. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10095-10100.	7.1	145
6	Statistical mechanics of ecological systems: Neutral theory and beyond. Reviews of Modern Physics, 2016, 88, .	45.6	122
7	Global virtual water trade and the hydrological cycle: patterns, drivers, and socio-environmental impacts. Environmental Research Letters, 2019, 14, 053001.	5.2	118
8	Feasibility and coexistence of large ecological communities. Nature Communications, 2017, 8, .	12.8	115
9	Water-controlled wealth of nations. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4230-4233.	7.1	108
10	Structure and controls of the global virtual water trade network. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	103
11	Resilience in the global food system. Environmental Research Letters, 2017, 12, 025010.	5.2	100
12	Reserves and trade jointly determine exposure to food supply shocks. Environmental Research Letters, 2016, 11, 095009.	5.2	88
13	A universal model for predicting human migration under climate change: examining future sea level rise in Bangladesh. Environmental Research Letters, 2018, 13, 064030.	5.2	76
14	Impact of globalization on the resilience and sustainability of natural resources. Nature Sustainability, 2019, 2, 283-289.	23.7	74
15	Spatial effects on species persistence and implications for biodiversity. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4346-4351.	7.1	70
16	Effect of localization on the stability of mutualistic ecological networks. Nature Communications, 2015, 6, 10179.	12.8	70
17	Dynamic metabolic adaptation can promote species coexistence in competitive microbial communities. PLoS Computational Biology, 2020, 16, e1007896.	3.2	60
18	Towards a unified descriptive theory for spatial ecology: predicting biodiversity patterns across spatial scales. Methods in Ecology and Evolution, 2015, 6, 324-332.	5.2	57

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19	Warnings and caveats in brain controllability. NeuroImage, 2018, 176, 83-91.	4.2	57
20	Disentangling the effect of hybrid interactions and of the constant effort hypothesis on ecological community stability. Oikos, 2014, 123, 525-532.	2.7	56
21	Stochastic modeling of soil salinity. Geophysical Research Letters, 2010, 37, .	4.0	49
22	Modeling past and future structure of the global virtual water trade network. Geophysical Research Letters, 2012, 39, .	4.0	42
23	Early Warning Signs in Social-Ecological Networks. PLoS ONE, 2014, 9, e101851.	2.5	42
24	Species coexistence in a neutral dynamics with environmental noise. Journal of Theoretical Biology, 2017, 413, 1-10.	1.7	42
25	Stochastic modeling of salt accumulation in the root zone due to capillary flux from brackish groundwater. Water Resources Research, 2011, 47, .	4.2	41
26	True scale-free networks hidden by finite size effects. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	40
27	Homeostatic plasticity and emergence of functional networks in a whole-brain model at criticality. Scientific Reports, 2018, 8, 15682.	3.3	35
28	Explorability and the origin of network sparsity in living systems. Scientific Reports, 2017, 7, 12323.	3.3	34
29	River basin salinization as a form of aridity. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17635-17642.	7.1	33
30	On species persistence-time distributions. Journal of Theoretical Biology, 2012, 303, 15-24.	1.7	32
31	An indirect assessment on the impact of connectivity of conductivity classes upon longitudinal asymptotic macrodispersivity. Water Resources Research, 2010, 46, .	4.2	31
32	Biophysical controls on cluster dynamics and architectural differentiation of microbial biofilms in contrasting flow environments. Environmental Microbiology, 2014, 16, 802-812.	3.8	29
33	Past and present biophysical redundancy of countries as a buffer to changes in food supply. Environmental Research Letters, 2016, 11, 055008.	5.2	29
34	Upscaling species richness and abundances in tropical forests. Science Advances, 2017, 3, e1701438.	10.3	29
35	Collapse of resilience patterns in generalized Lotka-Volterra dynamics and beyond. Physical Review E, 2017, 95, 062307.	2.1	27
36	Vegetation Controls on Dryland Salinity. Geophysical Research Letters, 2018, 45, 11,669.	4.0	25

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37	Simulating the Cascading Effects of an Extreme Agricultural Production Shock: Global Implications of a Contemporary US Dust Bowl Event. Frontiers in Sustainable Food Systems, 2020, 4, .	3.9	24
38	Neutral dynamics with environmental noise: Age-size statistics and species lifetimes. Physical Review E, 2015, 92, 022722.	2.1	22
39	Scaling and criticality in a phenomenological renormalization group. Physical Review Research, 2020, 2, .	3.6	22
40	Recovery of neural dynamics criticality in personalized whole-brain models of stroke. Nature Communications, 2022, 13, .	12.8	22
41	Reconciling cooperation, biodiversity and stability in complex ecological communities. Scientific Reports, 2019, 9, 5580.	3.3	19
42	Taxonomic classification method for metagenomics based on core protein families with Core-Kaiju. Nucleic Acids Research, 2020, 48, e93-e93.	14.5	19
43	Dimensionality reduction of complex dynamical systems. IScience, 2021, 24, 101912.	4.1	19
44	Prescription-induced jump distributions in multiplicative Poisson processes. Physical Review E, 2011, 83, 061119.	2.1	17
45	Neuronal Avalanches Across the Rat Somatosensory Barrel Cortex and the Effect of Single Whisker Stimulation. Frontiers in Systems Neuroscience, 2021, 15, 709677.	2.5	15
46	Impact of stochastic fluctuations in storageâ€discharge relations on streamflow distributions. Water Resources Research, 2010, 46, .	4.2	12
47	Brain controllability: Not a slam dunk yet. NeuroImage, 2019, 200, 552-555.	4.2	12
48	Disentangling the critical signatures of neural activity. Scientific Reports, 2022, 12, .	3.3	11
49	Neutral and niche forces as drivers of species selection. Journal of Theoretical Biology, 2019, 483, 109969.	1.7	10
50	Constrained proteome allocation affects coexistence in models of competitive microbial communities. ISME Journal, 2021, 15, 1458-1477.	9.8	10
51	Effective Resource Competition Model for Species Coexistence. Physical Review Letters, 2021, 127, 208101.	7.8	10
52	Cooperation, competition and the emergence of criticality in communities of adaptive systems. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 033203.	2.3	9
53	What commodities and countries impact inequality in the global food system?. Environmental Research Letters, 2016, 11, 095013.	5.2	8
54	Critical slowing down associated with critical transition and risk of collapse in crypto-currency. Royal Society Open Science, 2020, 7, 191450.	2.4	7

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55	An ecological approach to structural flexibility in online communication systems. Nature Communications, 2021, 12, 1941.	12.8	7
56	Inferring macroâ€ecological patterns from local presence/absence data. Oikos, 2019, 128, 1641-1652.	2.7	5
57	Statistical physics of DNA hybridization. Physical Review E, 2021, 103, 042503.	2.1	5
58	Effect of delay on the emergent stability patterns in generalized Lotkaâ€"Volterra ecological dynamics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, .	3.4	5
59	An exactly solvable coarse-grained model for species diversity. Journal of Statistical Mechanics: Theory and Experiment, 2012, 2012, P07017.	2.3	4
60	A Data Driven Network Approach to Rank Countries Production Diversity and Food Specialization. PLoS ONE, 2016, 11, e0165941.	2.5	4
61	Network model of conviction-driven social segregation. Physical Review E, 2019, 99, 032310.	2.1	4
62	Neutral theory for competing attention in social networks. Physical Review Research, 2021, 3, .	3.6	4
63	Growth or reproduction: emergence of an evolutionary optimal strategy. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P10020.	2.3	3
64	Pairing statistics and melting of random DNA oligomers: Finding your partner in superdiverse environments. PLoS Computational Biology, 2022, 18, e1010051.	3.2	3
65	Criticality and network structure drive emergent oscillations in a stochastic whole-brain model. Journal of Physics Complexity, 2022, 3, 025010.	2.2	3
66	Negative ion beam source as a complex system: identification of main processes and key interdependence. Rendiconti Lincei, 2019, 30, 277-285.	2.2	2
67	Species survival and scaling laws in hostile and disordered environments. Physical Review E, 2016, 94, 042404.	2.1	1
68	Upscaling human activity data: A statistical ecology approach. PLoS ONE, 2021, 16, e0253461.	2.5	1
69	Particle Beams as Controllable Complex Systems: Application of the Network Theory. Plasma and Fusion Research, 2018, 13, 3405091-3405091.	0.7	1
70	Needles in Haystacks: Understanding the Success of Selective Pairing of Nucleic Acids. International Journal of Molecular Sciences, 2022, 23, 3072.	4.1	1
71	OxDNA to Study Species Interactions. Entropy, 2022, 24, 458.	2.2	1
72	Quantifying the drivers behind collective attention in information ecosystems. Journal of Physics Complexity, 0, , .	2.2	0