Albert Barabasi

List of Publications by Year in Descending Order

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

148 papers	86,704 citations	74 h-index	158 g-index
158 ext. papers	102,192 ext. citations	18.7 avg, IF	8.65 L-index

#	Paper	IF	Citations
148	Quantifying NFT-driven networks in crypto art.. *Scientific Reports*, **2022**, 12, 2769	4.9	4
147	Dynamics of ranking.. *Nature Communications*, **2022**, 13, 1646	17.4	3
146	Nutrient concentrations in food display universal behaviour. *Nature Food*, **2022**, 3, 375-382	14.4	1
145	Network medicine framework shows that proximity of polyphenol targets and disease proteins predicts therapeutic effects of polyphenols. *Nature Food*, **2021**, 2, 143-155	14.4	14
144	Network medicine framework for identifying drug-repurposing opportunities for COVID-19. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	77
143	Multidose evaluation of 6,710 drug repurposing library identifies potent SARS-CoV-2 infection inhibitors and **2021**,		3
142	Science of science. *Bibliosfera*, **2021**, 25-42	0.4	0
141	Isotopy and energy of physical networks. *Nature Physics*, **2021**, 17, 216-222	16.2	4
140	Uncovering the genetic blueprint of the nervous system. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 33570-33577	11.5	7
139	Historical comparison of gender inequality in scientific careers across countries and disciplines. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 4609-4616	11.5	165
138	The exposome and health: Where chemistry meets biology. *Science*, **2020**, 367, 392-396	33.3	231
137	Discovering the genes mediating the interactions between chronic respiratory diseases in the human interactome. *Nature Communications*, **2020**, 11, 811	17.4	13
136	Synthetic ablations in the nervous system. *Network Neuroscience*, **2020**, 4, 200-216	5.6	3
135	The unmapped chemical complexity of our diet. *Nature Food*, **2020**, 1, 33-37	14.4	99
134	A Genetic Model of the Connectome. *Neuron*, **2020**, 105, 435-445.e5	13.9	20
133	A systematic comprehensive longitudinal evaluation of dietary factors associated with acute myocardial infarction and fatal coronary heart disease. *Nature Communications*, **2020**, 11, 6074	17.4	10
132	Exploring food contents in scientific literature with FoodMine. *Scientific Reports*, **2020**, 10, 16191	4.9	6

131	A global network for network medicine. *Npj Systems Biology and Applications*, **2020**, 6, 29	5	6
130	Network Medicine Framework for Identifying Drug Repurposing Opportunities for COVID-19 **2020**,		4
129	Network-based prediction of protein interactions. *Nature Communications*, **2019**, 10, 1240	17.4	156
128	Network-based prediction of drug combinations. *Nature Communications*, **2019**, 10, 1197	17.4	216
127	Success in books: predicting book sales before publication. *EPJ Data Science*, **2019**, 8,	3.4	6
126	Nature's reach: narrow work has broad impact. *Nature*, **2019**, 575, 32-34	50.4	19
125	Uremic Toxin Indoxyl Sulfate Promotes Proinflammatory Macrophage Activation Via the Interplay of OATP2B1 and Dll4-Notch Signaling. *Circulation*, **2019**, 139, 78-96	16.7	65
124	Taking census of physics. *Nature Reviews Physics*, **2019**, 1, 89-97	23.6	25
123	The universal decay of collective memory and attention. *Nature Human Behaviour*, **2019**, 3, 82-91	12.8	49
122	Science of science. *Science*, **2018**, 359,	33.3	373
121	Success in books: a big data approach to bestsellers. *EPJ Data Science*, **2018**, 7,	3.4	18
120	Network-based approach to prediction and population-based validation of in silico drug repurposing. *Nature Communications*, **2018**, 9, 2691	17.4	208
119	Predicting perturbation patterns from the topology of biological networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E6375-E6383	11.5	88
118	Quantifying reputation and success in art. *Science*, **2018**, 362, 825-829	33.3	68
117	A structural transition in physical networks. *Nature*, **2018**, 563, 676-680	50.4	22
116	The chaperone effect in scientific publishing. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 12603-12607	11.5	44
115	Functional structures of US state governments. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 11748-11753	11.5	8
114	and the network control framework-FAQs. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2018**, 373,	5.8	16

113	Controllability in an islet specific regulatory network identifies the transcriptional factor NFATC4, which regulates Type 2 Diabetes associated genes. *Npj Systems Biology and Applications*, **2018**, 4, 25	5	14
112	Trade-offs between driving nodes and time-to-control in complex networks. *Scientific Reports*, **2017** , 7, 39978	4.9	18
111	Integrating personalized gene expression profiles into predictive disease-associated gene pools. *Npj Systems Biology and Applications*, **2017**, 3, 10	5	34
110	Epigenomic and transcriptomic approaches in the post-genomic era: path to novel targets for diagnosis and therapy of the ischaemic heart? Position Paper of the European Society of Cardiology Working Group on Cellular Biology of the Heart. *Cardiovascular Research*, **2017**, 113, 725-736	9.9	85
109	Network control principles predict neuron function in the Caenorhabditis elegans connectome. *Nature*, **2017**, 550, 519-523	50.4	185
108	Recordings of Caenorhabditis elegans locomotor behaviour following targeted ablation of single motorneurons. *Scientific Data*, **2017**, 4, 170156	8.2	11
107	The elegant law that governs us all. *Science*, **2017**, 357, 138	33.3	5
106	The fundamental advantages of temporal networks. *Science*, **2017**, 358, 1042-1046	33.3	197
105	Network Medicine **2017**,		36
104	Tissue Specificity of Human Disease Module. *Scientific Reports*, **2016**, 6, 35241	4.9	62
103	PARP9 and PARP14 cross-regulate macrophage activation via STAT1 ADP-ribosylation. *Nature Communications*, **2016**, 7, 12849	17.4	120
102	Endophenotype Network Models: Common Core of Complex Diseases. *Scientific Reports*, **2016**, 6, 27414	4.9	55
101	Network-based in silico drug efficacy screening. *Nature Communications*, **2016**, 7, 10331	17.4	240
100	Quantifying the evolution of individual scientific impact. *Science*, **2016**, 354,	33.3	258
99	Scaling identity connects human mobility and social interactions. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 7047-52	11.5	58
98	Universal resilience patterns in complex networks. *Nature*, **2016**, 530, 307-12	50.4	520
97	From comorbidities of chronic obstructive pulmonary disease to identification of shared molecular mechanisms by data integration. *BMC Bioinformatics*, **2016**, 17, 441	3.6	16
96	An inter-species protein-protein interaction network across vast evolutionary distance. *Molecular Systems Biology*, **2016**, 12, 865	12.2	31

95	Control of fluxes in metabolic networks. *Genome Research*, **2016**, 26, 956-68	9.7	26
94	Controllability analysis of the directed human protein interaction network identifies disease genes and drug targets. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 4976-81	11.5	155
93	Control principles of complex systems. *Reviews of Modern Physics*, **2016**, 88,	40.5	292
92	Controllability of multiplex, multi-time-scale networks. *Physical Review E*, **2016**, 94, 032316	2.4	37
91	A DIseAse MOdule Detection (DIAMOnD) algorithm derived from a systematic analysis of connectivity patterns of disease proteins in the human interactome. *PLoS Computational Biology*, **2015**, 11, e1004120	5	189
90	Network science: Destruction perfected. *Nature*, **2015**, 524, 38-9	50.4	29
89	Widespread macromolecular interaction perturbations in human genetic disorders. *Cell*, **2015**, 161, 647-660	56.2	343
88	Response to letter of correspondence - Bastiaens et al. *Nature Biotechnology*, **2015**, 33, 339-42	44.5	2
87	A century of physics. *Nature Physics*, **2015**, 11, 791-796	16.2	91
86	Spectrum of controlling and observing complex networks. *Nature Physics*, **2015**, 11, 779-786	16.2	173
85	Constructing minimal models for complex system dynamics. *Nature Communications*, **2015**, 6, 7186	17.4	50
84	Disease networks. Uncovering disease-disease relationships through the incomplete interactome. *Science*, **2015**, 347, 1257601	33.3	767
83	A disease module in the interactome explains disease heterogeneity, drug response and captures novel pathways and genes in asthma. *Human Molecular Genetics*, **2015**, 24, 3005-20	5.6	108
82	Quantifying information flow during emergencies. *Scientific Reports*, **2014**, 4, 3997	4.9	36
81	Career on the move: geography, stratification, and scientific impact. *Scientific Reports*, **2014**, 4, 4770	4.9	92
80	A proteome-scale map of the human interactome network. *Cell*, **2014**, 159, 1212-1226	56.2	898
79	Collective credit allocation in science. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 12325-30	11.5	113
78	Human symptoms-disease network. *Nature Communications*, **2014**, 5, 4212	17.4	340

77	Quantitative social science. A network framework of cultural history. *Science*, **2014**, 345, 558-62	33.3	101
76	A genetic epidemiology approach to cyber-security. *Scientific Reports*, **2014**, 4, 5659	4.9	11
75	Modules, networks and systems medicine for understanding disease and aiding diagnosis. *Genome Medicine*, **2014**, 6, 82	14.4	126
74	Target control of complex networks. *Nature Communications*, **2014**, 5, 5415	17.4	232
73	Science communication. Response to Comment on "Quantifying long-term scientific impact". *Science*, **2014**, 345, 149	33.3	3
72	Understanding the spread of malicious mobile-phone programs and their damage potential. *International Journal of Information Security*, **2013**, 12, 383-392	2.8	12
71	Quantifying long-term scientific impact. *Science*, **2013**, 342, 127-32	33.3	439
70	Universality in network dynamics. *Nature Physics*, **2013**, 9,	16.2	183
69	Observability of complex systems. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 2460-5	11.5	307
68	Network science. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2013**, 371, 20120375	3	185
67	Control centrality and hierarchical structure in complex networks. *PLoS ONE*, **2012**, 7, e44459	3.7	192
66	Viral perturbations of host networks reflect disease etiology. *PLoS Computational Biology*, **2012**, 8, e1002531	5	90
65	Interactome networks and human disease. *Cell*, **2011**, 144, 986-98	56.2	1187
64	Flavor network and the principles of food pairing. *Scientific Reports*, **2011**, 1, 196	4.9	231
63	Network medicine: a network-based approach to human disease. *Nature Reviews Genetics*, **2011**, 12, 56-68	30.1	2899
62	Controllability of complex networks. *Nature*, **2011**, 473, 167-73	50.4	2001
61	Liu et al. reply. *Nature*, **2011**, 478, E4-E5	50.4	12
60	Modelling the scaling properties of human mobility. *Nature Physics*, **2010**, 6, 818-823	16.2	729

59	Limits of predictability in human mobility. *Science*, **2010**, 327, 1018-21	33.3	2015
58	Time to CARE: a collaborative engine for practical disease prediction. *Data Mining and Knowledge Discovery*, **2010**, 20, 388-415	5.6	90
57	An empirical framework for binary interactome mapping. *Nature Methods*, **2009**, 6, 83-90	21.6	674
56	Scale-free networks: a decade and beyond. *Science*, **2009**, 325, 412-3	33.3	1243
55	Impact of the solvent capacity constraint on E. coli metabolism. *BMC Systems Biology*, **2008**, 2, 7	3.5	87
54	Quantifying social group evolution. *Nature*, **2007**, 446, 664-7	50.4	1117
53	SCALE-FREE NETWORKS IN BIOLOGY. *Complex Systems and Interdisciplinary Science*, **2007**, 1-19		2
52	COMMUNITY DYNAMICS IN SOCIAL NETWORKS. *Fluctuation and Noise Letters*, **2007**, 07, L273-L287	1.2	8
51	The human disease network. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 8685-90	11.5	2380
50	Mechanisms and models of human dynamics (Reply). *Nature*, **2006**, 441, E5-E6	50.4	1
49	Sociology. Network theory--the emergence of the creative enterprise. *Science*, **2005**, 308, 639-41	33.3	102
48	The origin of bursts and heavy tails in human dynamics. *Nature*, **2005**, 435, 207-11	50.4	1527
47	The activity reaction core and plasticity of metabolic networks. *PLoS Computational Biology*, **2005**, 1, e68	5	105
46	Emergence of scaling in complex networks **2004**, 69-84		7
45	Network biology: understanding the cell's functional organization. *Nature Reviews Genetics*, **2004**, 5, 101-13	30.1	5439
44	Global organization of metabolic fluxes in the bacterium Escherichia coli. *Nature*, **2004**, 427, 839-43	50.4	535
43	Hot spots and universality in network dynamics. *European Physical Journal B*, **2004**, 38, 169-175	1.2	19
42	Nanoscale wire formation on sputter-eroded surfaces. *Applied Physics Letters*, **2002**, 81, 3654-3656	3.4	14

41	Statistical mechanics of complex networks. *Reviews of Modern Physics*, **2002**, 74, 47-97	40.5	13246
40	Lethality and centrality in protein networks. *Nature*, **2001**, 411, 41-2	50.4	3743
39	Parasitic computing. *Nature*, **2001**, 412, 894-7	50.4	48
38	Modeling relaxation and jamming in granular media. *Physical Review E*, **2001**, 64, 051303	2.4	10
37	Quantum dot and hole formation in sputter erosion. *Applied Physics Letters*, **2001**, 78, 805-807	3.4	115
36	Spatial ordering of stacked quantum dots. *Applied Physics Letters*, **2001**, 78, 984-986	3.4	26
35	Granular drag on a discrete object: shape effects on jamming. *Physical Review E*, **2001**, 64, 061303	2.4	113
34	Bose-Einstein condensation in complex networks. *Physical Review Letters*, **2001**, 86, 5632-5	7.4	445
33	The sound of many hands clapping. *Nature*, **2000**, 403, 849-50	50.4	501
32	Error and attack tolerance of complex networks. *Nature*, **2000**, 406, 378-82	50.4	5753
31	The large-scale organization of metabolic networks. *Nature*, **2000**, 407, 651-4	50.4	3619
30	An Experimental Study of the Fluctuations in Granular Drag. *Materials Research Society Symposia Proceedings*, **2000**, 627, 1		
29	Jamming and fluctuations in granular drag. *Physical Review Letters*, **2000**, 84, 5122-5	7.4	121
28	Dynamics of Ripple Formation in Sputter Erosion: Nonlinear Phenomena. *Physical Review Letters*, **1999**, 83, 3486-3489	7.4	171
27	Reducing vortex density in superconductors using the ratchet effect. *Nature*, **1999**, 400, 337-340	50.4	225
26	Diameter of the World-Wide Web. *Nature*, **1999**, 401, 130-131	50.4	2869
25	Liquid-induced transitions in granular media. *Physical Review E*, **1999**, 60, 5823-6	2.4	55
24	Shape Transition in Growth of Strained Islands. *Physical Review Letters*, **1999**, 82, 2753-2756	7.4	180

23	Emergence of scaling in random networks. *Science*, **1999**, 286, 509-12	33.3	22075
22	Collective Motion of Self-Propelled Particles: Kinetic Phase Transition in One Dimension. *Physical Review Letters*, **1999**, 82, 209-212	7.4	187
21	Nonlinear Ripple Formation in Sputter Erosion. *Materials Research Society Symposia Proceedings*, **1999**, 585, 297		
20	Ratchet Effect in Surface Electromigration: Smoothing Surfaces by an ac Field. *Physical Review Letters*, **1998**, 80, 1473-1476	7.4	89
19	Equilibrium phase diagrams for dislocation free self-assembled quantum dots. *Applied Physics Letters*, **1998**, 72, 2102-2104	3.4	63
18	Effect of surface roughness on the secondary ion yield in ion sputtering. *Applied Physics Letters*, **1998**, 73, 1445-1447	3.4	11
17	Dynamics of Ripening of Self-Assembled II-VI Semiconductor Quantum Dots. *Physical Review Letters* , **1998**, 81, 3479-3482	7.4	85
16	Effect of surface roughness on the secondary ion yield in ion sputtering. *Applied Physics Letters*, **1998**, 73, 2209-2211	3.4	3
15	Spatial ordering of islands grown on patterned surfaces. *Applied Physics Letters*, **1998**, 73, 2651-2653	3.4	40
14	Secondary ion yield changes on rippled interfaces. *Applied Physics Letters*, **1998**, 72, 906-908	3.4	21
13	Low Temperature Ripple Formation: Ion-Induced Effective Surface Diffusion in Ion Sputtering. *Materials Research Society Symposia Proceedings*, **1998**, 540, 249		0
12	Self-organized superlattice formation in II□V and III□V semiconductors. *Applied Physics Letters*, **1997**, 70, 764-766	3.4	23
11	Self-assembled island formation in heteroepitaxial growth. *Applied Physics Letters*, **1997**, 70, 2565-2567	3.4	237
10	Ion-induced effective surface diffusion in ion sputtering. *Applied Physics Letters*, **1997**, 71, 2800-2802	3.4	211
9	What keeps sandcastles standing?. *Nature*, **1997**, 387, 765-765	50.4	230
8	A FRACTAL MODEL FOR THE FIRST STAGES OF THIN FILM GROWTH. *Fractals*, **1996**, 04, 321-329	3.2	10
7	Fractal and Non-Fractal Surfaces in Ion Sputtering. *Materials Research Society Symposia Proceedings*, **1995**, 407, 259		
6	Why are computer simulations of growth useful?. *Materials Research Society Symposia Proceedings*, **1995**, 407, 391		2

5	Uncovering the genetic blueprint of theC. elegansnervous system	2
4	Exploring Food Contents in Scientific Literature with FoodMine	2
3	Network-based prediction of protein interactions	7
2	Predicting perturbation patterns from the topology of biological networks	3
1	Machine Learning Prediction of Food Processing	2