Albert-LÃ¡szlÃ³ BarabÃ¡si

List of Publications by Year
in descending order

187 papers	131,951 citations	1793 106 h-index	4414 178 g-index
198 all docs	198 docs citations	198 times ranked	80438 citing authors

#	Article	IF	Citations
1	Quantifying NFT-driven networks in crypto art. Scientific Reports, 2022, 12, 2769.	1.6	54
2	Recovery coupling in multilayer networks. Nature Communications, 2022, 13, 955.	5.8	30
3	Dynamics of ranking. Nature Communications, 2022, 13, 1646.	5.8	29
4	Network-medicine framework for studying disease trajectories in U.S. veterans. Scientific Reports, 2022, 12, .	1.6	5
5	Isotopy and energy of physical networks. Nature Physics, 2021, 17, 216-222.	6.5	13
6	A wealth of discovery built on the Human Genome Project â€" by the numbers. Nature, 2021, 590, 212-215.	13.7	60
7	Network medicine framework shows that proximity of polyphenol targets and disease proteins predicts therapeutic effects of polyphenols. Nature Food, 2021, 2, 143-155.	6.2	57
8	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, .	3.3	245
9	The unmapped chemical complexity of our diet. Nature Food, 2020, 1, 33-37.	6.2	177
10	A Genetic Model of the Connectome. Neuron, 2020, 105, 435-445.e5.	3.8	35
11	A global network for network medicine. Npj Systems Biology and Applications, 2020, 6, 29.	1.4	19
12	Uncovering the genetic blueprint of the <i>C. elegans</i> nervous system. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 33570-33577.	3.3	23
13	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.	3.3	474
14	The exposome and health: Where chemistry meets biology. Science, 2020, 367, 392-396.	6.0	499
15	Discovering the genes mediating the interactions between chronic respiratory diseases in the human interactome. Nature Communications, 2020, 11, 811.	5.8	25
16	Network Medicine Framework for Identifying Drug Repurposing Opportunities for COVID-19. ArXiv Org, 2020, , .	1.2	4
17	Network-based prediction of protein interactions. Nature Communications, 2019, 10, 1240.	5.8	293
18	Network-based prediction of drug combinations. Nature Communications, 2019, 10, 1197.	5.8	437

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19	The universal decay of collective memory and attention. Nature Human Behaviour, 2019, 3, 82-91.	6.2	86
20	Science of science. Science, 2018, 359, .	6.0	701
21	Success in books: a big data approach to bestsellers. EPJ Data Science, 2018, 7, .	1.5	27
22	A structural transition in physical networks. Nature, 2018, 563, 676-680.	13.7	37
23	The chaperone effect in scientific publishing. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12603-12607.	3.3	84
24	<i>Caenorhabditis elegans</i> and the network control frameworkâ€"FAQs. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170372.	1.8	23
25	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.	1.4	25
26	Network-based approach to prediction and population-based validation of in silico drug repurposing. Nature Communications, 2018, 9, 2691.	5.8	351
27	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.	3.3	198
28	Trade-offs between driving nodes and time-to-control in complex networks. Scientific Reports, 2017, 7, 39978.	1.6	20
29	Fundamental limitations of network reconstruction from temporal data. Journal of the Royal Society Interface, 2017, 14, 20160966.	1.5	51
30	Integrating personalized gene expression profiles into predictive disease-associated gene pools. Npj Systems Biology and Applications, 2017, 3, 10.	1.4	54
31	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.	1.8	114
32	Identifying and modeling the structural discontinuities of human interactions. Scientific Reports, 2017, 7, 46677.	1.6	38
33	Viva Europa, a Land of Excellence in Research and Innovation for Health and Wellbeing. Progress in Preventive Medicine (New York, N Y), 2017, 2, e006.	0.7	6
34	From comorbidities of chronic obstructive pulmonary disease to identification of shared molecular mechanisms by data integration. BMC Bioinformatics, 2016, 17, 441.	1.2	20
35	An interâ€species proteinâ€"protein interaction network across vast evolutionary distance. Molecular Systems Biology, 2016, 12, 865.	3.2	42
36	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, 4976-4981.	3.3	249

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37	Control principles of complex systems. Reviews of Modern Physics, 2016, 88, .	16.4	452
38	Controllability of multiplex, multi-time-scale networks. Physical Review E, 2016, 94, 032316.	0.8	53
39	Tissue Specificity of Human Disease Module. Scientific Reports, 2016, 6, 35241.	1.6	99
40	PARP9 and PARP14 cross-regulate macrophage activation via STAT1 ADP-ribosylation. Nature Communications, 2016, 7, 12849.	5.8	214
41	Endophenotype Network Models: Common Core of Complex Diseases. Scientific Reports, 2016, 6, 27414.	1.6	72
42	Network-based in silico drug efficacy screening. Nature Communications, 2016, 7, 10331.	5.8	394
43	Quantifying the evolution of individual scientific impact. Science, 2016, 354, .	6.0	390
44	Scaling identity connects human mobility and social interactions. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7047-7052.	3.3	75
45	Universal resilience patterns in complex networks. Nature, 2016, 530, 307-312.	13.7	754
46	Constructing minimal models for complex system dynamics. Nature Communications, 2015, 6, 7186.	5.8	69
47	Uncovering disease-disease relationships through the incomplete interactome. Science, 2015, 347, 1257601.	6.0	1,219
48	A disease module in the interactome explains disease heterogeneity, drug response and captures novel pathways and genes in asthma. Human Molecular Genetics, 2015, 24, 3005-3020.	1.4	162
49	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.	1.5	310
50	Destruction perfected. Nature, 2015, 524, 38-39.	13.7	36
51	Quantifying Information Flow During Emergencies. Scientific Reports, 2015, 4, 3997.	1.6	46
52	Widespread Macromolecular Interaction Perturbations in Human Genetic Disorders. Cell, 2015, 161, 647-660.	13.5	482
53	A century of physics. Nature Physics, 2015, 11, 791-796.	6.5	117
54	Spectrum of controlling and observing complexÂ networks. Nature Physics, 2015, 11, 779-786.	6.5	212

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55	Returners and explorers dichotomy in human mobility. Nature Communications, 2015, 6, 8166.	5.8	300
56	Modules, networks and systems medicine for understanding disease and aiding diagnosis. Genome Medicine, 2014, 6, 82.	3.6	169
57	A diVIsive Shuffling Approach (VIStA) for gene expression analysis to identify subtypes in Chronic Obstructive Pulmonary Disease. BMC Systems Biology, 2014, 8, S8.	3.0	24
58	Target control of complex networks. Nature Communications, 2014, 5, 5415.	5.8	311
59	Response to Comment on â€œQuantifying long-term scientific impactâ€. Science, 2014, 345, 149-149.	6.0	6
60	A Proteome-Scale Map of the Human Interactome Network. Cell, 2014, 159, 1212-1226.	13.5	1,199
61	Collective credit allocation in science. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12325-12330.	3.3	155
62	Human symptomsâ€“disease network. Nature Communications, 2014, 5, 4212.	5.8	557
63	A network framework of cultural history. Science, 2014, 345, 558-562.	6.0	151
64	Systems Medicine: from molecular features and models to the clinic in COPD. Journal of Translational Medicine, 2014, 12, S4.	1.8	23
65	Computational Models of Mobility: A Perspective from Mobile Phone Data. , 2014, , 110-124.		2
66	A genetic epidemiology approach to cyber-security. Scientific Reports, 2014, 4, 5659.	1.6	18
67	Career on the Move: Geography, Stratification and Scientific Impact. Scientific Reports, 2014, 4, 4770.	1.6	128
68	Network link prediction by global silencing of indirect correlations. Nature Biotechnology, 2013, 31, 720-725.	9.4	224
69	Understanding the spread of malicious mobile-phone programs and their damage potential. International Journal of Information Security, 2013, 12, 383-392.	2.3	18
70	Quantifying Long-Term Scientific Impact. Science, 2013, 342, 127-132.	6.0	604
71	Universality in network dynamics. Nature Physics, 2013, 9, 673-681.	6.5	253
72	Observability of complex systems. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2460-2465.	3.3	407

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73	Network science. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120375.	1.6	332
74	Graph Theory Properties of Cellular Networks. , 2013, , 177-193.		3
75	Emergence of bimodality in controlling complex networks. Nature Communications, 2013, 4, 2002.	5.8	187
76	Control Capacity and A Random Sampling Method in Exploring Controllability of Complex Networks. Scientific Reports, 2013, 3, 2354.	1.6	118
77	Network-based Analysis of Genome Wide Association Data Provides Novel Candidate Genes for Lipid and Lipoprotein Traits. Molecular and Cellular Proteomics, 2013, 12, 3398-3408.	2.5	28
78	Effect of correlations on network controllability. Scientific Reports, 2013, 3, 1067.	1.6	155
79	Uncovering the role of elementary processes in network evolution. Scientific Reports, 2013, 3, 2920.	1.6	48
80	Viral Perturbations of Host Networks Reflect Disease Etiology. PLoS Computational Biology, 2012, 8, e1002531.	1.5	102
81	Universal features of correlated bursty behaviour. Scientific Reports, 2012, 2, 397.	1.6	237
82	Sex differences in intimate relationships. Scientific Reports, 2012, 2, 370.	1.6	80
83	MicroRNA-21 Integrates Pathogenic Signaling to Control Pulmonary Hypertension. Circulation, 2012, 125, 1520-1532.	1.6	246
84	Luck or reason. Nature, 2012, 489, 507-508.	13.7	98
85	Dynamics of Ranking Processes in Complex Systems. Physical Review Letters, 2012, 109, 128701.	2.9	54
86	The network takeover. Nature Physics, 2012, 8, 14-16.	6.5	412
87	Handful of papers dominates citation. Nature, 2012, 491, 40-40.	13.7	33
88	Control Centrality and Hierarchical Structure in Complex Networks. PLoS ONE, 2012, 7, e44459.	1.1	242
89	Interpreting cancer genomes using systematic host network perturbations by tumour virus proteins. Nature, 2012, 487, 491-495.	13.7	349
90	A universal model for mobility and migration patterns. Nature, 2012, 484, 96-100.	13.7	1,027

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91	Human mobility, social ties, and link prediction. , 2011, , .		452
92	Evidence for Network Evolution in an <i>Arabidopsis</i> Interactome Map. Science, 2011, 333, 601-607.	6.0	838
93	Collective Response of Human Populations to Large-Scale Emergencies. PLoS ONE, 2011, 6, e17680.	1.1	233
94	Ranking stability and super-stable nodes in complex networks. Nature Communications, 2011, 2, 394.	5.8	151
95	Interactome Networks and Human Disease. Cell, 2011, 144, 986-998.	13.5	1,543
96	Flavor network and the principles of food pairing. Scientific Reports, 2011, 1, 196.	1.6	300
97	Geographic Constraints on Social Network Groups. PLoS ONE, 2011, 6, e16939.	1.1	245
98	Network medicine: a network-based approach to human disease. Nature Reviews Genetics, 2011, 12, 56-68.	7.7	3,987
99	Controllability of complex networks. Nature, 2011, 473, 167-173.	13.7	2,633
100	Systems biology and the future of medicine. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2011, 3, 619-627.	6.6	239
101	Liu et al. reply. Nature, 2011, 478, E4-E5.	13.7	17
102	Comparison of an expanded ataxia interactome with patient medical records reveals a relationship between macular degeneration and ataxia. Human Molecular Genetics, 2011, 20, 510-527.	1.4	45
103	Information spreading in context. , 2011, , .		72
104	Limits of Predictability in Human Mobility. Science, 2010, 327, 1018-1021.	6.0	2,561
105	Time to CARE: a collaborative engine for practical disease prediction. Data Mining and Knowledge Discovery, 2010, 20, 388-415.	2.4	113
106	Modelling the scaling properties of human mobility. Nature Physics, 2010, 6, 818-823.	6.5	931
107	A Dynamic Network Approach for the Study of Human Phenotypes. PLoS Computational Biology, 2009, 5, e1000353.	1.5	527
108	An empirical framework for binary interactome mapping. Nature Methods, 2009, 6, 83-90.	9.0	800

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109	The impact of cellular networks on disease comorbidity. Molecular Systems Biology, 2009, 5, 262.	3.2	220
110	Understanding the Spreading Patterns of Mobile Phone Viruses. Science, 2009, 324, 1071-1076.	6.0	407
111	Scale-Free Networks: A Decade and Beyond. Science, 2009, 325, 412-413.	6.0	1,644
112	Computational Social Science. Science, 2009, 323, 721-723.	6.0	2,516
113	Social Group Dynamics in Networks. Understanding Complex Systems, 2009, , 11-38.	0.3	39
114	Understanding individual human mobility patterns. Nature, 2008, 453, 779-782.	13.7	4,884
115	Impact of the solvent capacity constraint on E. coli metabolism. BMC Systems Biology, 2008, 2, 7.	3.0	106
116	High-Quality Binary Protein Interaction Map of the Yeast Interactome Network. Science, 2008, 322, 104-110.	6.0	1,297
117	Uncovering individual and collective human dynamics from mobile phone records. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 224015.	0.7	447
118	Predicting individual disease risk based on medical history. , 2008, , .		72
119	Predicting synthetic rescues in metabolic networks. Molecular Systems Biology, 2008, 4, 168.	3.2	123
120	SCALE-FREE NETWORKS IN BIOLOGY. Complex Systems and Interdisciplinary Science, 2007, , 1-19.	0.2	6
121	COMMUNITY DYNAMICS IN SOCIAL NETWORKS. Fluctuation and Noise Letters, 2007, 07, L273-L287.	1.0	11
122	The human disease network. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 8685-8690.	3.3	2,924
123	Transcription factor modularity in a gene-centered C. elegans core neuronal protein-DNA interaction network. Genome Research, 2007, 17, 1061-1071.	2.4	87
124	Distribution of node characteristics in complex networks. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 17916-17920.	3.3	111
125	Human disease classification in the postgenomic era: A complex systems approach to human pathobiology. Molecular Systems Biology, 2007, 3, 124.	3.2	489
126	Analysis of a large-scale weighted network of one-to-one human communication. New Journal of Physics, 2007, 9, 179-179.	1.2	297

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127	Community dynamics in social networks. , 2007, , .		5
128	The Architecture of Complexity. IEEE Control Systems, 2007, 27, 33-42.	1.0	135
129	Impact of Non-Poissonian Activity Patterns on Spreading Processes. Physical Review Letters, 2007, 98, 158702.	2.9	284
130	Network Medicine â€" From Obesity to the â€œDiseasomeâ€. New England Journal of Medicine, 2007, 357, 404-407.	13.9	463
131	Drugâ€"target network. Nature Biotechnology, 2007, 25, 1119-1126.	9.4	1,584
132	From data to models. Nature Physics, 2007, 3, 224-225.	6.5	48
133	Quantifying social group evolution. Nature, 2007, 446, 664-667.	13.7	1,405
134	The Architecture of Biological Networks. , 2006, , 165-181.		43
135	A Proteinâ€"Protein Interaction Network for Human Inherited Ataxias and Disorders of Purkinje Cell Degeneration. Cell, 2006, 125, 801-814.	13.5	714
136	Modeling bursts and heavy tails in human dynamics. Physical Review E, 2006, 73, 036127.	0.8	502
137	Stable evolutionary signal in a yeast protein interaction network. BMC Evolutionary Biology, 2006, 6, 8.	3.2	59
138	Power Laws in Biological Networks. , 2006, , 1-11.		15
139	THE ARCHITECTURE OF COMPLEXITY: FROM WWW TO CELLULAR METABOLISM. , 2006, , 107-125.		2
140	Taming complexity. Nature Physics, 2005, 1, 68-70.	6.5	68
141	The origin of bursts and heavy tails in human dynamics. Nature, 2005, 435, 207-211.	13.7	1,896
142	Darwin and Einstein correspondence patterns. Nature, 2005, 437, 1251-1251.	13.7	307
143	Metabolic Networks. , 2005, , 243-264.		0
144	Inhomogeneous evolution of subgraphs and cycles in complex networks. Physical Review E, 2005, 71, 025103.	0.8	21

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145	SOCIOLOGY: Network Theory-the Emergence of the Creative Enterprise. Science, 2005, 308, 639-641.	6.0	121
146	Reverse engineering of linking preferences from network restructuring. Physical Review E, 2004, 70, 046115.	0.8	1
147	Emergence of scaling in complex networks. , 2004, , 69-84.		19
148	Network biology: understanding the cell's functional organization. Nature Reviews Genetics, 2004, 5, 101-113.	7.7	6,726
149	Effect of surface morphology on the sputtering yields. II. Ion sputtering from rippled surfaces. Nuclear Instruments & Methods in Physics Research B, 2004, 222, 335-354.	0.6	28
150	Aggregation of topological motifs in the Escherichia coli transcriptional regulatory network. BMC Bioinformatics, 2004, 5, 10.	1.2	206
151	Functional and topological characterization of protein interaction networks. Proteomics, 2004, 4, 928-942.	1.3	563
152	Hierarchical organization in complex networks. Physical Review E, 2003, 67, 026112.	0.8	1,604
153	Bioinformatics Analysis of Experimentally Determined Protein Complexes in the Yeast Saccharomyces cerevisiae. Genome Research, 2003, 13, 2450-2454.	2.4	113
154	Modeling the Internet's large-scale topology. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 13382-13386.	3.3	520
155	SYSTEMS BIOLOGY: Life's Complexity Pyramid. Science, 2002, 298, 763-764.	6.0	444
156	Statistical mechanics of complex networks. Reviews of Modern Physics, 2002, 74, 47-97.	16.4	16,492
157	Halting viruses in scale-free networks. Physical Review E, 2002, 65, 055103.	0.8	479
158	Two degrees of separation in complex food webs. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 12913-12916.	3.3	324
159	Morphology of ion-sputtered surfaces. Nuclear Instruments & Methods in Physics Research B, 2002, 197, 185-227.	0.6	446
160	Bose-Einstein Condensation in Complex Networks. Physical Review Letters, 2001, 86, 5632-5635.	2.9	593
161	Deterministic scale-free networks. Physica A: Statistical Mechanics and Its Applications, 2001, 299, 559-564.	1.2	381
162	Spectra of â€œreal-worldâ€•graphs: Beyond the semicircle law. Physical Review E, 2001, 64, 026704.	0.8	354

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163	The physics of the Web. Physics World, 2001, 14, 33-38.	0.0	71
164	Scale-free characteristics of random networks: the topology of the world-wide web. Physica A: Statistical Mechanics and Its Applications, 2000, 281, 69-77.	1.2	1,062
165	Error and attack tolerance of complex networks. Nature, 2000, 406, 378-382.	13.7	7,006
166	Dynamics of Complex Systems: Scaling Laws for the Period of Boolean Networks. Physical Review Letters, 2000, 84, 5660-5663.	2.9	217
167	Topology of Evolving Networks: Local Events and Universality. Physical Review Letters, 2000, 85, 5234-5237.	2.9	1,054
168	Thermodynamic and kinetic mechanisms in self-assembled quantum dot formation. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1999, 67, 23-30.	1.7	18
169	Mean-field theory for scale-free random networks. Physica A: Statistical Mechanics and Its Applications, 1999, 272, 173-187.	1.2	1,861
170	Diameter of the World-Wide Web. Nature, 1999, 401, 130-131.	13.7	3,527
171	Emergence of Scaling in Random Networks. Science, 1999, 286, 509-512.	6.0	28,383
172	Equilibrium phase diagrams for dislocation free self-assembled quantum dots. Applied Physics Letters, 1998, 72, 2102-2104.	1.5	63
173	Spatial ordering of islands grown on patterned surfaces. Applied Physics Letters, 1998, 73, 2651-2653.	1.5	44
174	Secondary ion yield changes on rippled interfaces. Applied Physics Letters, 1998, 72, 906-908.	1.5	21
175	Dislocation-Free Island Formation in Heteroepitaxial Growth: A Study at Equilibrium. Physical Review Letters, 1997, 79, 3708-3711.	2.9	325
176	Self-assembled island formation in heteroepitaxial growth. Applied Physics Letters, 1997, 70, 2565-2567.	1.5	244
177	Ion-induced effective surface diffusion in ion sputtering. Applied Physics Letters, 1997, 71, 2800-2802.	1.5	228
178	Roughening of growing surfaces: Kinetic models and continuum theories. Computational Materials Science, 1996, 6, 127-134.	1.4	13
179	Avalanches in the Lung: A Statistical Mechanical Model. Physical Review Letters, 1996, 76, 2192-2195.	2.9	52
180	Dynamic Scaling of Ion-Sputtered Surfaces. Physical Review Letters, 1995, 74, 4746-4749.	2.9	476

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181	Controlling nanostructures. Nature, 1994, 368, 22-22.	13.7	49
182	Avalanches and power-law behaviour in lung inflation. Nature, 1994, 368, 615-618.	13.7	267
183	SURFACTANT-MEDIATED SURFACE GROWTH: NONEQUILIBRIUM THEORY. , 1994, , 472-485.		0
184	SURFACTANT-MEDIATED SURFACE GROWTH: NONEQUILIBRIUM THEORY. Fractals, 1993, 01, 846-859.	1.8	2
185	Multifractality of growing surfaces. Physical Review A, 1992, 45, R6951-R6954.	1.0	62
186	Multifractality of self-affine fractals. Physical Review A, 1991, 44, 2730-2733.	1.0	333
187	Characteristics of Biological Networks. Lecture Notes in Physics, 0, , 443-457.	0.3	6