Matthias Dehmer

List of Publications by Year
in descending order

107 papers	3,128 citations	218677 26 h-index	175258 52 g-index
134 all docs	134 docs citations	134 times ranked	2244 citing authors

#	Article	IF	Citations
1	A Novel Chaotic Fractional-Order Beetle Swarm Optimization Algorithm and Its Application for Load-Frequency Active Disturbance Rejection Control. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 1267-1271.	3.0	8
2	Comparison of Text Mining Models for Food and Dietary Constituent Named-Entity Recognition. Machine Learning and Knowledge Extraction, 2022, 4, 254-275.	5.0	11
3	The usefulness of topological indices. Information Sciences, 2022, 606, 143-151.	6.9	8
4	Novel results on partial hosoya polynomials: An application in chemistry. Applied Mathematics and Computation, 2022, 433, 127379.	2.2	0
5	Properties of Commuting Graphs over Semidihedral Groups. Symmetry, 2021, 13, 103.	2.2	5
6	Power System Load Frequency Active Disturbance Rejection Control via Reinforcement Learning-Based Memetic Particle Swarm Optimization. IEEE Access, 2021, 9, 116194-116206.	4.2	7
7	Prognostic gene expression signatures of breast cancer are lacking a sensible biological meaning. Scientific Reports, 2021, 11, 156.	3.3	26
8	Fluid-Structure Interaction Simulation and Accurate Dynamic Modeling of Parachute Warhead System Based on Impact Point Prediction. IEEE Access, 2021, 9, 104418-104428.	4.2	2
9	Analysis of the real number of infected people by COVID-19: A system dynamics approach. PLoS ONE, 2021, 16, e0245728.	2.5	5
10	Orbit Polynomial of Graphs versus Polynomial with Integer Coefficients. Symmetry, 2021, 13, 710.	2.2	4
11	Orbit Entropy and Symmetry Index Revisited. Mathematics, 2021, 9, 1086.	2.2	1
12	On the Roots of the Modified Orbit Polynomial of a Graph. Symmetry, 2021, 13, 972.	2.2	1
13	A Fall Posture Classification and Recognition Method Based on Wavelet Packet Transform and Support Vector Machine. Applied Sciences (Switzerland), 2021, 11, 5030.	2.5	1
14	Network Analyzing by the Aid of Orbit Polynomial. Symmetry, 2021, 13, 801.	2.2	3
15	Limitations of Explainability for Established Prognostic Biomarkers of Prostate Cancer. Frontiers in Genetics, 2021, 12, 649429.	2.3	5
16	Impact of information diffusion on epidemic spreading in partially mapping two-layered time-varying networks. Nonlinear Dynamics, 2021, 105, 3819-3833.	5.2	36
17	Relationships between symmetry-based graph measures. Information Sciences, 2021, 581, 291-303.	6.9	2
18	Are There Limits in Explainability of Prognostic Biomarkers? Scrutinizing Biological Utility of Established Signatures. Cancers, 2021, 13, 5087.	3.7	1

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19	Servo Health Monitoring Based on Feature Learning via Deep Neural Network. IEEE Access, 2021, 9, 160887-160896.	4.2	1
20	Automorphism Groups of Alkane Graphs. Croatica Chemica Acta, 2021, 94, .	0.4	0
21	On the Degeneracy of the Orbit Polynomial and Related Graph Polynomials. Symmetry, 2020, 12, 1643.	2.2	4
22	Distributed Event-Triggered Circular Formation Control for Multiple Anonymous Mobile Robots With Order Preservation and Obstacle Avoidance. IEEE Access, 2020, 8, 167288-167299.	4.2	9
23	Analysis of the Graovacâ€"Pisanski Index of Some Polyhedral Graphs Based on Their Symmetry Group. Symmetry, 2020, 12, 1411.	2.2	1
24	Named Entity Recognition and Relation Detection for Biomedical Information Extraction. Frontiers in Cell and Developmental Biology, 2020, 8, 673.	3.7	78
25	A Survey on Symmetry Group of Polyhedral Graphs. Symmetry, 2020, 12, 370.	2.2	5
26	Properties of Entropy-Based Topological Measures of Fullerenes. Mathematics, 2020, 8, 740.	2.2	10
27	Explainable artificial intelligence and machine learning: A reality rooted perspective. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2020, 10, e1368.	6.8	49
28	Relations and bounds for the zeros of graph polynomials using vertex orbits. Applied Mathematics and Computation, 2020, 380, 125239.	2.2	2
29	The networked cooperative dynamics of adjusting signal strength based on information quantity. Nonlinear Dynamics, 2020, 100, 831-847.	5.2	6
30	On the zeros of the partial Hosoya polynomial of graphs. Information Sciences, 2020, 524, 199-215.	6.9	6
31	The Orbit-Polynomial: A Novel Measure of Symmetry in Networks. IEEE Access, 2020, 8, 36100-36112.	4.2	12
32	An Introductory Review of Deep Learning for Prediction Models With Big Data. Frontiers in Artificial Intelligence, 2020, 3, 4.	3.4	316
33	A new coupled disease-awareness spreading model with mass media on multiplex networks. Information Sciences, 2019, 471, 185-200.	6.9	161
34	Graph entropy based on the number of spanning forests of c-cyclic graphs. Applied Mathematics and Computation, 2019, 363, 124616.	2.2	7
35	The Hosoya Entropy of Graphs Revisited. Symmetry, 2019, 11, 1013.	2.2	14
36	Measuring the complexity of directed graphs: A polynomial-based approach. PLoS ONE, 2019, 14, e0223745.	2.5	7

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37	Introduction to Survival Analysis in Practice. Machine Learning and Knowledge Extraction, 2019, 1, 1013-1038.	5.0	53
38	A Generalized Predictive Control-Based Path Following Method for Parafoil Systems in Wind Environments. IEEE Access, 2019, 7, 42586-42595.	4.2	24
39	On Properties of Distance-Based Entropies on Fullerene Graphs. Entropy, 2019, 21, 482.	2.2	13
40	Path following control for towing system of cylindrical drilling platform in presence of disturbances and uncertainties. ISA Transactions, 2019, 95, 185-193.	5.7	25
41	Evaluation of Regression Models: Model Assessment, Model Selection and Generalization Error. Machine Learning and Knowledge Extraction, 2019, 1, 521-551.	5.0	59
42	Hosoya entropy of fullerene graphs. Applied Mathematics and Computation, 2019, 352, 88-98.	2.2	16
43	Prostate Cancer Gene Regulatory Network Inferred from RNA-Seq Data. Current Genomics, 2019, 20, 38-48.	1.6	12
44	A comprehensive survey of error measures for evaluating binary decision making in data science. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2019, 9, e1303.	6.8	40
45	A Note on Graphs with Prescribed Orbit Structure. Entropy, 2019, 21, 1118.	2.2	2
46	Towards detecting structural branching and cyclicity in graphs: A polynomial-based approach. Information Sciences, 2019, 471, 19-28.	6.9	7
47	New inequalities for network distance measures by using graph spectra. Discrete Applied Mathematics, 2019, 252, 17-27.	0.9	5
48	Graph operations based on using distance-based graph entropies. Applied Mathematics and Computation, 2018, 333, 547-555.	2.2	14
49	Properties of graph distance measures by means of discrete inequalities. Applied Mathematical Modelling, 2018, 59, 739-749.	4.2	4
50	Graph measures with high discrimination power revisited: A random polynomial approach. Information Sciences, 2018, 467, 407-414.	6.9	6
51	Comments to â€œQuantification of network structural dissimilaritiesâ€•published by Schieber et al. Mathematical Methods in the Applied Sciences, 2018, 41, 5711-5713.	2.3	1
52	A hybrid binomial inverse hypergeometric probability distribution: Theory and applications. Applied Mathematics and Computation, 2018, 338, 44-54.	2.2	2
53	Highly unique network descriptors based on the roots of the permanental polynomial. Information Sciences, 2017, 408, 176-181.	6.9	14
54	Computational prediction of therapeutic peptides based on graph index. Journal of Biomedical Informatics, 2017, 75, 63-69.	4.3	33

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55	Principal minor version of Matrix-Tree theorem for mixed graphs. Applied Mathematics and Computation, 2017, 309, 27-30.	2.2	4
56	Dynamic Modeling and Trajectory Tracking Control of Parafoil System in Wind Environments. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2736-2745.	5.8	38
57	Toward Measuring Network Aesthetics Based on Symmetry. Axioms, 2017, 6, 12.	1.9	4
58	sgnesR: An R package for simulating gene expression data from an underlying real gene network structure considering delay parameters. BMC Bioinformatics, 2017, 18, 325.	2.6	9
59	samExploreR: exploring reproducibility and robustness of RNA-seq results based on SAM files. Bioinformatics, 2016, 32, 3345-3347.	4.1	11
60	Comparison of module detection algorithms in protein networks and investigation of the biological meaning of predicted modules. BMC Bioinformatics, 2016, 17, 129.	2.6	28
61	A method for inferring inequalities for probability values applied to complex networks. Complexity, 2016, 21, 113-115.	1.6	0
62	A case study of cracks in the scientific enterprise: Response to the comments. Complexity, 2016, 21, 20-22.	1.6	0
63	A case study of cracks in the scientific enterprise: Reinvention of information€theoretic measures for graphs. Complexity, 2016, 21, 10-14.	1.6	1
64	Fifty years of graph matching, network alignment and network comparison. Information Sciences, 2016, 346-347, 180-197.	6.9	158
65	Structural Analysis of Treatment Cycles Representing Transitions between Nursing Organizational Units Inferred from Diabetes. PLoS ONE, 2015, 10, e0127152.	2.5	0
66	Discrimination Power of Polynomial-Based Descriptors for Graphs by Using Functional Matrices. PLoS ONE, 2015, 10, e0139265.	2.5	2
67	Connections between generalized graph entropies and graph energy. Complexity, 2015, 21, 35-41.	1.6	27
68	The Hosoya Entropy of a Graph. Entropy, 2015, 17, 1054-1062.	2.2	15
69	Graph distance measures based on topological indices revisited. Applied Mathematics and Computation, 2015, 266, 623-633.	2.2	23
70	Discrimination power of graph measures based on complex zeros of the partial Hosoya polynomial. Applied Mathematics and Computation, 2015, 250, 352-355.	2.2	18
71	Structural Differentiation of Graphs Using Hosoya-Based Indices. PLoS ONE, 2014, 9, e102459.	2.5	19
72	Interrelations of Graph Distance Measures Based on Topological Indices. PLoS ONE, 2014, 9, e94985.	2.5	49

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73	A Note on Distance-based Graph Entropies. Entropy, 2014, 16, 5416-5427.	2.2	117
74	Large-scale analysis of structural branching measures. Journal of Mathematical Chemistry, 2014, 52, 805-819.	1.5	11
75	NetBioV: an R package for visualizing large network data in biology and medicine. Bioinformatics, 2014, 30, 2834-2836.	4.1	44
76	The Uniqueness of -Matrix Graph Invariants. PLoS ONE, 2014, 9, e83868.	2.5	13
77	Numerical Evaluation and Comparison of Kalantari's Zero Bounds for Complex Polynomials. PLoS ONE, 2014, 9, e110540.	2.5	0
78	An efficient heuristic approach to detecting graph isomorphism based on combinations of highly discriminating invariants. Advances in Computational Mathematics, 2013, 39, 311-325.	1.6	22
79	[COMMODE] a large-scale database of molecular descriptors using compounds from PubChem. Source Code for Biology and Medicine, 2013, 8, 22.	1.7	2
80	On structure-sensitivity of degree-based topological indices. Applied Mathematics and Computation, 2013, 219, 8973-8978.	2.2	121
81	The Discrimination Power of Structural SuperIndices. PLoS ONE, 2013, 8, e70551.	2.5	2
82	Large-Scale Evaluation of Molecular Descriptors by Means of Clustering. PLoS ONE, 2013, 8, e83956.	2.5	12
83	RMol: a toolset for transforming SD/Molfile structure information into R objects. Source Code for Biology and Medicine, 2012, 7, 12.	1.7	3
84	Location of Zeros of Wiener and Distance Polynomials. PLoS ONE, 2012, 7, e28328.	2.5	14
85	Information Indices with High Discriminative Power for Graphs. PLoS ONE, 2012, 7, e31214.	2.5	60
86	Recent Developments in Quantitative Graph Theory: Information Inequalities for Networks. PLoS ONE, 2012, 7, e31395.	2.5	11
87	Towards Information Inequalities for Generalized Graph Entropies. PLoS ONE, 2012, 7, e38159.	2.5	7
88	The Quality of Zero Bounds for Complex Polynomials. PLoS ONE, 2012, 7, e39537.	2.5	7
89	Structural Discrimination of Networks by Using Distance, Degree and Eigenvalue-Based Measures. PLoS ONE, 2012, 7, e38564.	2.5	15
90	Connections between Classical and Parametric Network Entropies. PLoS ONE, 2011, 6, e15733.	2.5	23

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91	Integrative Network Biology: Graph Prototyping for Co-Expression Cancer Networks. PLoS ONE, 2011, 6, e22843.	2.5	25
92	Network analysis using a novel highly discriminating topological index. Complexity, 2011, 16, 32-39.	1.6	18
93	Generalized graph entropies. Complexity, 2011, 17, 45-50.	1.6	34
94	A history of graph entropy measures. Information Sciences, 2011, 181, 57-78.	6.9	392
95	<tt>QuACN</tt>: an R package for analyzing complex biological networks quantitatively. Bioinformatics, 2011, 27, 140-141.	4.1	52
96	Inequalities for entropy-based measures of network information content. Applied Mathematics and Computation, 2010, 215, 4263-4271.	2.2	23
97	New Polynomial-Based Molecular Descriptors with Low Degeneracy. PLoS ONE, 2010, 5, e11393.	2.5	13
98	A Large Scale Analysis of Information-Theoretic Network Complexity Measures Using Chemical Structures. PLoS ONE, 2009, 4, e8057.	2.5	37
99	On Entropy-Based Molecular Descriptors: Statistical Analysis of Real and Synthetic Chemical Structures. Journal of Chemical Information and Modeling, 2009, 49, 1655-1663.	5.4	86
100	Information processing in complex networks: Graph entropy and information functionals. Applied Mathematics and Computation, 2008, 201, 82-94.	2.2	256
101	Structural information content of networks: Graph entropy based on local vertex functionals. Computational Biology and Chemistry, 2008, 32, 131-138.	2.3	35
102	A NOVEL METHOD FOR MEASURING THE STRUCTURAL INFORMATION CONTENT OF NETWORKS. Cybernetics and Systems, 2008, 39, 825-842.	2.5	31
103	The Structural Information Content of Chemical Networks. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2008, 63, 155-158.	1.5	8
104	Entropy Bounds for Hierarchical Molecular Networks. PLoS ONE, 2008, 3, e3079.	2.5	34
105	Structural similarity of directed universal hierarchical graphs: A low computational complexity approach. Applied Mathematics and Computation, 2007, 194, 7-20.	2.2	7
106	Finding Verified Edges in Genetic/Gene Networks: Bilayer Verification for Network Recovery in the Presence of Hidden Confounders. , 0, , 51-81.		0
107	Predicting Functional Modules Using Microarray and Protein Interaction Data. , 0, , 307-329.		0