Piet Van Mieghem

List of Publications by Year
in descending order

80 papers	6,090 citations	201674 27 h-index	79698 73 g-index
83 all docs	83 docs citations	83 times ranked	4990 citing authors

#	Article	IF	Citations
1	Comparing the accuracy of several network-based COVID-19 prediction algorithms. International Journal of Forecasting, 2022, 38, 489-504.	6.5	33
2	Accuracy of predicting epidemic outbreaks. Physical Review E, 2022, 105, 014302.	2.1	1
3	Epidemic models characterize seizure propagation and the effects of epilepsy surgery in individualized brain networks based on MEG and invasive EEG recordings. Scientific Reports, 2022, 12, 4086.	3.3	8
4	Analysis of continuous-time Markovian <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>É</mml:mi></mml:math> -SIS epidemics on networks. Physical Review E, 2022, 105, .	2.1	2
5	Predicting timeâ€resolved electrophysiological brain networks from structural eigenmodes. Human Brain Mapping, 2022, 43, 4475-4491.	3.6	17
6	Origin of the fractional derivative and fractional non-Markovian continuous-time processes. Physical Review Research, 2022, 4, .	3.6	3
7	Robustness assessment of multimodal freight transport networks. Reliability Engineering and System Safety, 2021, 207, 107315.	8.9	47
8	Interlayer connectivity reconstruction for multilayer brain networks using phase oscillator models. New Journal of Physics, 2021, 23, 063065.	2.9	9
9	Clustering for epidemics on networks: A geometric approach. Chaos, 2021, 31, 063115.	2.5	10
10	Reachability-Based Robustness of Controllability in Sparse Communication Networks. IEEE Transactions on Network and Service Management, 2021, 18, 2764-2775.	4.9	8
11	Optimization of epilepsy surgery through virtual resections on individual structural brain networks. Scientific Reports, 2021, 11, 19025.	3.3	13
12	The Viral State Dynamics of the Discrete-Time NIMFA Epidemic Model. IEEE Transactions on Network Science and Engineering, 2020, 7, 1667-1674.	6.4	9
13	Prevalence expansion in NIMFA. Physica A: Statistical Mechanics and Its Applications, 2020, 540, 123220.	2.6	2
14	Network-inference-based prediction of the COVID-19 epidemic outbreak in the Chinese province Hubei. Applied Network Science, 2020, 5, 35.	1.5	39
15	Time-dependent solution of the NIMFA equations around the epidemic threshold. Journal of Mathematical Biology, 2020, 81, 1299-1355.	1.9	19
16	Linear processes on complex networks. Journal of Complex Networks, 2020, 8, .	1.8	1
17	Network-based prediction of COVID-19 epidemic spreading in Italy. Applied Network Science, 2020, 5, 91.	1.5	16
18	Network Reconstruction and Prediction of Epidemic Outbreaks for General Group-Based Compartmental Epidemic Models. IEEE Transactions on Network Science and Engineering, 2020, 7, 2755-2764.	6.4	27

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19	Classification of link-breaking and link-creation updating rules in susceptible-infected-susceptible epidemics on adaptive networks. Physical Review E, 2020, 101, 052302.	2.1	9
20	Time dependence of susceptible-infected-susceptible epidemics on networks with nodal self-infections. Physical Review E, 2020, 101, 052310.	2.1	2
21	Explosive phase transition in susceptible-infected-susceptible epidemics with arbitrary small but nonzero self-infection rate. Physical Review E, 2020, 101, 032303.	2.1	4
22	Local Electrodynamics of a Disordered Conductor Model System Measured with a Microwave Impedance Microscope. Physical Review Applied, 2020, 13, .	3.8	1
23	Inferring network properties based on the epidemic prevalence. Applied Network Science, 2019, 4, .	1.5	6
24	Optimal Induced Spreading of SIS Epidemics in Networks. IEEE Transactions on Control of Network Systems, 2019, 6, 1344-1353.	3.7	2
25	The road ahead in clinical network neuroscience. Network Neuroscience, 2019, 3, 969-993.	2.6	37
26	The simplex geometry of graphs. Journal of Complex Networks, 2019, 7, 469-490.	1.8	19
27	Exact Network Reconstruction from Complete SIS Nodal State Infection Information Seems Infeasible. IEEE Transactions on Network Science and Engineering, 2019, 6, 748-759.	6.4	7
28	Tighter spectral bounds for the cut size, based on Laplacian eigenvectors. Linear Algebra and Its Applications, 2019, 572, 68-91.	0.9	1
29	Network Localization Is Unalterable by Infections in Bursts. IEEE Transactions on Network Science and Engineering, 2019, 6, 983-989.	6.4	7
30	Quantifying the Robustness of Network Controllability. , 2019, , .		8
31	Topological Approach to Measure Network Recoverability. , 2019, , .		4
32	Structural transition in interdependent networks with regular interconnections. Physical Review E, 2019, 99, 012311.	2.1	1
33	Burst of virus infection and a possibly largest epidemic threshold of non-Markovian susceptible-infected-susceptible processes on networks. Physical Review E, 2018, 97, 022309.	2.1	15
34	The spreading time in SIS epidemics on networks. Physica A: Statistical Mechanics and Its Applications, 2018, 494, 317-330.	2.6	6
35	A Topological Investigation of Power Flow. IEEE Systems Journal, 2018, 12, 2524-2532.	4.6	30
36	Comparing multilayer brain networks between groups: Introducing graph metrics and recommendations. NeuroImage, 2018, 166, 371-384.	4.2	44

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37	Nodal vulnerability to targeted attacks in power grids. Applied Network Science, 2018, 3, 34.	1.5	40
38	Optimal curing policy for epidemic spreading over a community network with heterogeneous population. Journal of Complex Networks, 2018, 6, 800-829.	1.8	17
39	Reply to â€œComment on â€˜Nodal infection in Markovian susceptible-infected-susceptible and susceptible-infected-removed epidemics on networks are non-negatively correlated'Ââ€• Physical Review E, 2018, 98, 026302.	2.1	3
40	The fastest spreader in SIS epidemics on networks. European Physical Journal B, 2018, 91, 1.	1.5	0
41	Autocorrelation of the susceptible-infected-susceptible process on networks. Physical Review E, 2018, 97, 062309.	2.1	3
42	Evaluation of an analytic, approximate formula for the time-varying SIS prevalence in different networks. Physica A: Statistical Mechanics and Its Applications, 2017, 471, 325-336.	2.6	9
43	Ranking of Nodal Infection Probability in Susceptible-Infected-Susceptible Epidemic. Scientific Reports, 2017, 7, 9233.	3.3	12
44	Brain network clustering with information flow motifs. Applied Network Science, 2017, 2, 25.	1.5	18
45	Integrating cross-frequency and within band functional networks in resting-state MEG: A multi-layer network approach. NeuroImage, 2016, 142, 324-336.	4.2	104
46	Modeling region-based interconnection for interdependent networks. Physical Review E, 2016, 94, 042315.	2.1	8
47	A Mapping Between Structural and Functional Brain Networks. Brain Connectivity, 2016, 6, 298-311.	1.7	127
48	Exact coupling threshold for structural transition reveals diversified behaviors in interconnected networks. Physical Review E, 2015, 92, 040801.	2.1	29
49	Epidemic processes in complex networks. Reviews of Modern Physics, 2015, 87, 925-979.	45.6	2,484
50	From epidemics to information propagation: Striking differences in structurally similar adaptive network models. Physical Review E, 2015, 92, 030801.	2.1	15
51	Survival time of the susceptible-infected-susceptible infection process on a graph. Physical Review E, 2015, 92, 032806.	2.1	14
52	Hierarchical clustering in minimum spanning trees. Chaos, 2015, 25, 023107.	2.5	47
53	The Union of Shortest Path Trees of Functional Brain Networks. Brain Connectivity, 2015, 5, 575-581.	1.7	24
54	Correlation between centrality metrics and their application to the opinion model. European Physical Journal B, 2015, 88, 1.	1.5	87

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55	ILIGRA: An Efficient Inverse Line Graph Algorithm. Mathematical Modelling and Algorithms, 2015, 14, 13-33.	0.5	9
56	Time to Metastable State in SIS Epidemics on Graphs. , 2014, , .		4
57	Domination-time dynamics in susceptible-infected-susceptible virus competition on networks. Physical Review E, 2014, 89, 042818.	2.1	10
58	Improving robustness of complex networks via the effective graph resistance. European Physical Journal B, 2014, 87, 1.	1.5	63
59	Epidemic threshold and topological structure of susceptible-infectious-susceptible epidemics in adaptive networks. Physical Review E, 2013, 88, 042802.	2.1	64
60	Generalized Epidemic Mean-Field Model for Spreading Processes Over Multilayer Complex Networks. IEEE/ACM Transactions on Networking, 2013, 21, 1609-1620.	3.8	193
61	Epidemic threshold in directed networks. Physical Review E, 2013, 88, 062802.	2.1	37
62	Susceptible-infected-susceptible model: A comparison of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>N</mml:mi></mml:math>-intertwined and heterogeneous mean-field approximations. Physical Review E, 2012, 86, 026116.	2.1	84
63	Epidemics in networks with nodal self-infection and the epidemic threshold. Physical Review E, 2012, 86, 016116.	2.1	67
64	The viral conductance of a network. Computer Communications, 2012, 35, 1494-1506.	5.1	31
65	Bounds for the spectral radius of a graph when nodes are removed. Linear Algebra and Its Applications, 2012, 437, 319-323.	0.9	18
66	Optimization of network protection against virus spread. , 2011, , .		34
67	The N-intertwined SIS epidemic network model. Computing (Vienna/New York), 2011, 93, 147-169.	4.8	198
68	Modeling gossip-based content dissemination and search in distributed networking. Computer Communications, 2011, 34, 765-779.	5.1	18
69	Decreasing the spectral radius of a graph by link removals. Physical Review E, 2011, 84, 016101.	2.1	128
70	Weight of a link in a shortest path tree and the Dedekind Eta function. Random Structures and Algorithms, 2010, 36, 341-371.	1.1	1
71	Virus Spread in Networks. IEEE/ACM Transactions on Networking, 2009, 17, 1-14.	3.8	787
72	IPv6 delay and loss performance evolution. International Journal of Communication Systems, 2008, 21, 643-663.	2.5	15

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73	The Weight and Hopcount of the Shortest Path in the Complete Graph with Exponential Weights. Combinatorics Probability and Computing, 2008, 17, 537-548.	1.3	5
74	Searching with Multiple Random Walk Queries. , 2007, , .		5
75	The weight of the shortest path tree. Random Structures and Algorithms, 2007, 30, 359-379.	1.1	6
76	Size and Weight of Shortest Path Trees with Exponential Link Weights. Combinatorics Probability and Computing, 2006, 15, 903.	1.3	18
77	Distances in random graphs with finite variance degrees. Random Structures and Algorithms, 2005, 27, 76-123.	1.1	81
78	Link-disjoint paths for reliable QoS routing. International Journal of Communication Systems, 2003, 16, 779-798.	2.5	91
79	FIRST-PASSAGE PERCOLATION ON THE RANDOM GRAPH. Probability in the Engineering and Informational Sciences, 2001, 15, 225-237.	0.8	50
80	Theory of band tails in heavily doped semiconductors. Reviews of Modern Physics, 1992, 64, 755-793.	45.6	205