Miguel Romance

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2040637/publications.pdf

Version: 2024-02-01

75 papers	4,355 citations	394286 19 h-index	110317 64 g-index
79 all docs	79 docs citations	79 times ranked	3350 citing authors

#	Article	IF	Citations
1	The structure and dynamics of multilayer networks. Physics Reports, 2014, 544, 1-122.	10.3	2,469
2	Emergence of network features from multiplexity. Scientific Reports, 2013, 3, 1344.	1.6	396
3	Modeling the multi-layer nature of the European Air Transport Network: Resilience and passengers re-scheduling under random failures. European Physical Journal: Special Topics, 2013, 215, 23-33.	1.2	226
4	Eigenvector centrality of nodes in multiplex networks. Chaos, 2013, 23, 033131.	1.0	207
5	Stability of synchronization in simplicial complexes. Nature Communications, 2021, 12, 1255.	5.8	117
6	Evolutionary games defined at the network mesoscale: The Public Goods game. Chaos, 2011, 21, 016113.	1.0	105
7	Multiscale vulnerability of complex networks. Chaos, 2007, 17, 043110.	1.0	62
8	Controlling centrality in complex networks. Scientific Reports, 2012, 2, 218.	1.6	60
9	A mathematical model for networks with structures in the mesoscale. International Journal of Computer Mathematics, 2012, 89, 291-309.	1.0	47
10	A biplex approach to PageRank centrality: From classic to multiplex networks. Chaos, 2016, 26, 065301.	1.0	44
11	Effective measurement of network vulnerability under random and intentional attacks. Mathematical Modelling and Algorithms, 2005, 4, 307-316.	0.5	43
12	Credit Card Fraud Detection through Parenclitic Network Analysis. Complexity, 2018, 2018, 1-9.	0.9	38
13	EFFICIENCY, VULNERABILITY AND COST: AN OVERVIEW WITH APPLICATIONS TO SUBWAY NETWORKS WORLDWIDE. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 2289-2301.	0.7	36
14	HYPERSTRUCTURES, A NEW APPROACH TO COMPLEX SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 877-883.	0.7	34
15	Positions of convex bodies associated to extremal problems and isotropic measures. Advances in Mathematics, 2004, 184, 64-88.	0.5	30
16	New results on computable efficiency and its stability for complex networks. Journal of Computational and Applied Mathematics, 2006, 192, 59-74.	1.1	30
17	A new method for comparing rankings through complex networks: Model and analysis of competitiveness of major European soccer leagues. Chaos, 2013, 23, 043114.	1.0	29
18	John's Decomposition of the Identity in the Non-Convex Case. Positivity, 2002, 6, 1-16.	0.3	27

#	Article	IF	Citations
19	Centralities of a network and its line graph: an analytical comparison by means of their irregularity. International Journal of Computer Mathematics, 2014, 91, 304-314.	1.0	22
20	Analytical relationships between metric and centrality measures of a network and its dual. Journal of Computational and Applied Mathematics, 2011, 235, 1775-1780.	1.1	20
21	On eigenvector-like centralities for temporal networks: Discrete vs. continuous time scales. Journal of Computational and Applied Mathematics, 2018, 330, 1041-1051.	1.1	19
22	On the localization of the personalized PageRank of complex networks. Linear Algebra and Its Applications, 2013, 439, 640-652.	0.4	18
23	Synchronization in dynamical networks with unconstrained structure switching. Physical Review E, 2015, 92, 062819.	0.8	16
24	A Perronâ€“Frobenius theory for block matrices associated to a multiplex network. Chaos, Solitons and Fractals, 2015, 72, 77-89.	2.5	16
25	Efficient algorithms for estimating loss of information in a complex network: Applications to intentional risk analysis. Networks and Heterogeneous Media, 2015, 10, 195-208.	0.5	16
26	Structural Vulnerability and Robustness in Complex Networks: Different Approaches and Relationships Between them. Springer Optimization and Its Applications, 2012, , 3-36.	0.6	15
27	Non-backtracking PageRank: From the classic model to hashimoto matrices. Chaos, Solitons and Fractals, 2019, 126, 283-291.	2.5	15
28	Intentional Risk Management through Complex Networks Analysis. SpringerBriefs in Optimization, 2015, , .	0.3	12
29	Sharp estimates for the personalized Multiplex PageRank. Journal of Computational and Applied Mathematics, 2018, 330, 1030-1040.	1.1	12
30	Vector centrality in hypergraphs. Chaos, Solitons and Fractals, 2022, 162, 112397.	2.5	11
31	Line graphs for a multiplex network. Chaos, 2016, 26, 065309.	1.0	10
32	Inequalities for the Gamma function and estimates for the volume of sections of B^n_p. Proceedings of the American Mathematical Society, 2001, 130, 183-192.	0.4	9
33	Interest point detection in images using complex network analysis. Journal of Computational and Applied Mathematics, 2012, 236, 2975-2980.	1.1	9
34	VULNERABILITY AND FALL OF EFFICIENCY IN COMPLEX NETWORKS: A NEW APPROACH WITH COMPUTATIONAL ADVANTAGES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 727-735.	0.7	8
35	A NODE-BASED MULTISCALE VULNERABILITY OF COMPLEX NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 703-710.	0.7	8
36	A POST-PROCESSING METHOD FOR INTEREST POINT LOCATION IN IMAGES BY USING WEIGHTED LINE-GRAPH COMPLEX NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250163.	0.7	8

#	Article	IF	Citations
37	The topology of card transaction money flows. Physica A: Statistical Mechanics and Its Applications, 2016, 462, 134-140.	1.2	8
38	On the edgesâ€™ PageRank and line graphs. Chaos, 2018, 28, 075503.	1.0	8
39	From John to Gaussâ€“John positions via dual mixed volumes. Journal of Mathematical Analysis and Applications, 2007, 328, 550-566.	0.5	7
40	Identity and Access Management Resilience against Intentional Risk for Blockchain-Based IOT Platforms. Electronics (Switzerland), 2021, 10, 378.	1.8	7
41	Visibility Graph Analysis of IOTA and IoTeX Price Series: An Intentional Risk-Based Strategy to Use 5G for IoT. Electronics (Switzerland), 2021, 10, 2282.	1.8	7
42	Structural properties of the line-graphs associated to directed networks. Networks and Heterogeneous Media, 2012, 7, 373-384.	0.5	7
43	On graphs associated to sets of rankings. Journal of Computational and Applied Mathematics, 2016, 291, 497-508.	1.1	5
44	Using complex networks to identify patterns in specialty mathematical language: a new approach. Social Network Analysis and Mining, 2020, 10, 1.	1.9	5
45	Asymptotic estimates for efficiency, vulnerability and cost for random networks. Journal of Computational and Applied Mathematics, 2007, 204, 166-171.	1.1	4
46	Improvements in performance and security for complex networks. International Journal of Computer Mathematics, 2009, 86, 209-218.	1.0	4
47	Editorial on â€œMultiplex networks: Structure, dynamics and applicationsâ€• Chaos, Solitons and Fractals, 2015, 72, 1-3.	2.5	4
48	On PageRank versatility for multiplex networks: properties and some useful bounds. Mathematical Methods in the Applied Sciences, 2020, 43, 8158-8176.	1.2	4
49	Enriched line graph: A new structure for searching language collocations. Chaos, Solitons and Fractals, 2021, 142, 110509.	2.5	4
50	Optimal communication schemes in a complex network: From trees to bottleneck networks. European Physical Journal: Special Topics, 2007, 146, 145-154.	1.2	3
51	(Ï^,p,q)-vulnerabilities: A unified approach to network robustness. Chaos, 2009, 19, 013133.	1.0	3
52	Local estimates for eigenvector-like centralities of complex networks. Journal of Computational and Applied Mathematics, 2011, 235, 1868-1874.	1.1	3
53	Mathematical Foundations: Complex Networks and Graphs (A Review). SpringerBriefs in Optimization, 2015, , 9-36.	0.3	3
54	Introduction to Focus Issue: Complex Dynamics in Networks, Multilayered Structures and Systems. Chaos, 2016, 26, 065101.	1.0	3

#	Article	IF	Citations
55	Parametric controllability of the personalized PageRank: Classic model vs biplex approach. Chaos, 2020, 30, 023115.	1.0	3
56	Comparing series of rankings with ties by using complex networks: An analysis of the Spanish stock market (IBEX-35 index). Networks and Heterogeneous Media, 2015, 10, 101-125.	0.5	3
57	A characterization of theMM*-position of a convex body in terms of covariance matrices. Israel Journal of Mathematics, 2004, 141, 145-156.	0.4	2
58	Random vectors satisfying Khinchine-Kahane type inequalities for linear and quadratic forms. Mathematische Nachrichten, 2005, 278, 1015-1024.	0.4	2
59	Probabilistic analysis of efficiency and vulnerability in the ErdÃ¶sâ€“RÃ©nji model. International Journal of Computer Mathematics, 2008, 85, 411-419.	1.0	2
60	Analytical estimates and proof of the scale-free character of efficiency and improvement in BarabÃ¡siâ€“Albert trees. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 838-843.	0.9	2
61	On the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" id="d1e140" altimg="si5.gif"><mml:mi>Î±</mml:mi></mml:math>-nonbacktracking centrality for complex networks: Existence and limit cases. Journal of Computational and Applied Mathematics, 2019, 350, 35-45.	1.1	2
62	Modeling Bitcoin plus Ethereum as an Open System of Systems of Public Blockchains to Improve Their Resilience against Intentional Risk. Electronics (Switzerland), 2022, 11, 241.	1.8	2
63	Optimal distributions for multiplex logistic networks. Chaos, 2016, 26, 065312.	1.0	1
64	On the spectrum of two-layer approach and Multiplex PageRank. Journal of Computational and Applied Mathematics, 2018, 344, 161-172.	1.1	1
65	Relations between the Centrality of a Network and its Line Graph through Irregularity Measures. , 0, , .		1
66	Controlling centrality: The inverse ranking problem for spectral centralities of complex networks. Mathematical Methods in the Applied Sciences, 0, , .	1.2	1
67	An integral inequality concerning isotropic measures on the unit circle. Journal of Mathematical Analysis and Applications, 2004, 293, 564-577.	0.5	0
68	Random Walkers. SpringerBriefs in Optimization, 2015, , 37-51.	0.3	0
69	Preface: Mesoscales and evolution in complex networks: Applications and related topics. Networks and Heterogeneous Media, 2012, 7, i-iii.	0.5	0
70	Towards the Implementation of the Model. SpringerBriefs in Optimization, 2015, , 103-120.	0.3	0
71	Intentional Risk and Cyber-Security: A Motivating Introduction. SpringerBriefs in Optimization, 2015, , 1-8.	0.3	0
72	The Role of Accessibility in the Static and Dynamic Risk Computation. SpringerBriefs in Optimization, 2015, , 53-63.	0.3	0

#	Article	IF	Citations
73	Mathematical Model II: Dynamic Intentional Risk. SpringerBriefs in Optimization, 2015, , 99-102.	0.3	0
74	Mathematical Model I: Static Intentional Risk. SpringerBriefs in Optimization, 2015, , 65-98.	0.3	0
75	Preface: "New trends, models and applications in complex and multiplex networks". Networks and Heterogeneous Media, 2015, 10, .	0.5	0