Miguel Romance

List of Publications by Year
in descending order

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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	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
2	Vector centrality in hypergraphs. Chaos, Solitons and Fractals, 2022, 162, 112397.	2.5	11
3	Enriched line graph: A new structure for searching language collocations. Chaos, Solitons and Fractals, 2021, 142, 110509.	2.5	4
4	Stability of synchronization in simplicial complexes. Nature Communications, 2021, 12, 1255.	5.8	117
5	Identity and Access Management Resilience against Intentional Risk for Blockchain-Based IOT Platforms. Electronics (Switzerland), 2021, 10, 378.	1.8	7
6	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
7	Using complex networks to identify patterns in specialty mathematical language: a new approach. Social Network Analysis and Mining, 2020, 10, 1.	1.9	5
8	Parametric controllability of the personalized PageRank: Classic model vs biplex approach. Chaos, 2020, 30, 023115.	1.0	3
9	On PageRank versatility for multiplex networks: properties and some useful bounds. Mathematical Methods in the Applied Sciences, 2020, 43, 8158-8176.	1.2	4
10	Non-backtracking PageRank: From the classic model to hashimoto matrices. Chaos, Solitons and Fractals, 2019, 126, 283-291.	2.5	15
11	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
12	Sharp estimates for the personalized Multiplex PageRank. Journal of Computational and Applied Mathematics, 2018, 330, 1030-1040.	1.1	12
13	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
14	On the spectrum of two-layer approach and Multiplex PageRank. Journal of Computational and Applied Mathematics, 2018, 344, 161-172.	1.1	1
15	Credit Card Fraud Detection through Parenclitic Network Analysis. Complexity, 2018, 2018, 1-9.	0.9	38
16	On the edgesâ€™ PageRank and line graphs. Chaos, 2018, 28, 075503.	1.0	8
17	Line graphs for a multiplex network. Chaos, 2016, 26, 065309.	1.0	10
18	A biplex approach to PageRank centrality: From classic to multiplex networks. Chaos, 2016, 26, 065301.	1.0	44

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19	Introduction to Focus Issue: Complex Dynamics in Networks, Multilayered Structures and Systems. Chaos, 2016, 26, 065101.	1.0	3
20	The topology of card transaction money flows. Physica A: Statistical Mechanics and Its Applications, 2016, 462, 134-140.	1.2	8
21	Optimal distributions for multiplex logistic networks. Chaos, 2016, 26, 065312.	1.0	1
22	On graphs associated to sets of rankings. Journal of Computational and Applied Mathematics, 2016, 291, 497-508.	1.1	5
23	Synchronization in dynamical networks with unconstrained structure switching. Physical Review E, 2015, 92, 062819.	0.8	16
24	Intentional Risk Management through Complex Networks Analysis. SpringerBriefs in Optimization, 2015, , .	0.3	12
25	Mathematical Foundations: Complex Networks and Graphs (A Review). SpringerBriefs in Optimization, 2015, , 9-36.	0.3	3
26	Random Walkers. SpringerBriefs in Optimization, 2015, , 37-51.	0.3	0
27	Editorial on â€œMultiplex networks: Structure, dynamics and applicationsâ€• Chaos, Solitons and Fractals, 2015, 72, 1-3.	2.5	4
28	A Perronâ€“Frobenius theory for block matrices associated to a multiplex network. Chaos, Solitons and Fractals, 2015, 72, 77-89.	2.5	16
29	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
30	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
31	Towards the Implementation of the Model. SpringerBriefs in Optimization, 2015, , 103-120.	0.3	0
32	Intentional Risk and Cyber-Security: A Motivating Introduction. SpringerBriefs in Optimization, 2015, , 1-8.	0.3	0
33	The Role of Accessibility in the Static and Dynamic Risk Computation. SpringerBriefs in Optimization, 2015, , 53-63.	0.3	0
34	Mathematical Model II: Dynamic Intentional Risk. SpringerBriefs in Optimization, 2015, , 99-102.	0.3	0
35	Mathematical Model I: Static Intentional Risk. SpringerBriefs in Optimization, 2015, , 65-98.	0.3	0
36	Preface: "New trends, models and applications in complex and multiplex networks". Networks and Heterogeneous Media, 2015, 10, .	0.5	0

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37	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
38	The structure and dynamics of multilayer networks. Physics Reports, 2014, 544, 1-122.	10.3	2,469
39	Eigenvector centrality of nodes in multiplex networks. Chaos, 2013, 23, 033131.	1.0	207
40	On the localization of the personalized PageRank of complex networks. Linear Algebra and Its Applications, 2013, 439, 640-652.	0.4	18
41	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
42	Emergence of network features from multiplexity. Scientific Reports, 2013, 3, 1344.	1.6	396
43	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
44	Controlling centrality in complex networks. Scientific Reports, 2012, 2, 218.	1.6	60
45	A mathematical model for networks with structures in the mesoscale. International Journal of Computer Mathematics, 2012, 89, 291-309.	1.0	47
46	Structural Vulnerability and Robustness in Complex Networks: Different Approaches and Relationships Between them. Springer Optimization and Its Applications, 2012, , 3-36.	0.6	15
47	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
48	Interest point detection in images using complex network analysis. Journal of Computational and Applied Mathematics, 2012, 236, 2975-2980.	1.1	9
49	Structural properties of the line-graphs associated to directed networks. Networks and Heterogeneous Media, 2012, 7, 373-384.	0.5	7
50	Preface: Mesoscales and evolution in complex networks: Applications and related topics. Networks and Heterogeneous Media, 2012, 7, i-iii.	0.5	0
51	Evolutionary games defined at the network mesoscale: The Public Goods game. Chaos, 2011, 21, 016113.	1.0	105
52	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
53	Local estimates for eigenvector-like centralities of complex networks. Journal of Computational and Applied Mathematics, 2011, 235, 1868-1874.	1.1	3
54	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

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55	(Ïˆ,p,q)-vulnerabilities: A unified approach to network robustness. Chaos, 2009, 19, 013133.	1.0	3
56	Improvements in performance and security for complex networks. International Journal of Computer Mathematics, 2009, 86, 209-218.	1.0	4
57	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
58	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
59	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
60	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
61	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
62	Multiscale vulnerability of complex networks. Chaos, 2007, 17, 043110.	1.0	62
63	Asymptotic estimates for efficiency, vulnerability and cost for random networks. Journal of Computational and Applied Mathematics, 2007, 204, 166-171.	1.1	4
64	Optimal communication schemes in a complex network: From trees to bottleneck networks. European Physical Journal: Special Topics, 2007, 146, 145-154.	1.2	3
65	From John to Gaussâ€“John positions via dual mixed volumes. Journal of Mathematical Analysis and Applications, 2007, 328, 550-566.	0.5	7
66	New results on computable efficiency and its stability for complex networks. Journal of Computational and Applied Mathematics, 2006, 192, 59-74.	1.1	30
67	Random vectors satisfying Khinchine-Kahane type inequalities for linear and quadratic forms. Mathematische Nachrichten, 2005, 278, 1015-1024.	0.4	2
68	Effective measurement of network vulnerability under random and intentional attacks. Mathematical Modelling and Algorithms, 2005, 4, 307-316.	0.5	43
69	Positions of convex bodies associated to extremal problems and isotropic measures. Advances in Mathematics, 2004, 184, 64-88.	0.5	30
70	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
71	An integral inequality concerning isotropic measures on the unit circle. Journal of Mathematical Analysis and Applications, 2004, 293, 564-577.	0.5	0
72	John's Decomposition of the Identity in the Non-Convex Case. Positivity, 2002, 6, 1-16.	0.3	27

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73	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
74	Relations between the Centrality of a Network and its Line Graph through Irregularity Measures. , 0, , .		1
75	Controlling centrality: The inverse ranking problem for spectral centralities of complex networks. Mathematical Methods in the Applied Sciences, 0, , .	1.2	1