

Jose Emmanuel Ramirez Marquez

List of Publications by Year in descending order

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147
papers

6,225
citations

94269

37
h-index

74018

75
g-index

149
all docs

149
docs citations

149
times ranked

3668
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of definitions and measures of system resilience. Reliability Engineering and System Safety, 2016, 145, 47-61.	5.1	1,127
2	Generic metrics and quantitative approaches for system resilience as a function of time. Reliability Engineering and System Safety, 2012, 99, 114-122.	5.1	635
3	Resilience-based network component importance measures. Reliability Engineering and System Safety, 2013, 117, 89-97.	5.1	300
4	A Monte-Carlo simulation approach for approximating multi-state two-terminal reliability. Reliability Engineering and System Safety, 2005, 87, 253-264.	5.1	260
5	Composite Importance Measures for Multi-State Systems with Multi-State Components. IEEE Transactions on Reliability, 2005, 54, 517-529.	3.5	158
6	A heuristic for solving the redundancy allocation problem for multi-state series-parallel systems. Reliability Engineering and System Safety, 2004, 83, 341-349.	5.1	151
7	Stochastic measures of resilience and their application to container terminals. Computers and Industrial Engineering, 2014, 70, 183-194.	3.4	150
8	Importance measures for inland waterway network resilience. Transportation Research, Part E: Logistics and Transportation Review, 2014, 62, 55-67.	3.7	118
9	Stochastic Measures of Network Resilience: Applications to Waterway Commodity Flows. Risk Analysis, 2014, 34, 1317-1335.	1.5	117
10	A generic method for estimating system reliability using Bayesian networks. Reliability Engineering and System Safety, 2009, 94, 542-550.	5.1	115
11	On the optimal selection of process alternatives in a Six Sigma implementation. International Journal of Production Economics, 2008, 111, 456-467.	5.1	106
12	Multidimensional approach to complex system resilience analysis. Reliability Engineering and System Safety, 2016, 149, 34-43.	5.1	104
13	Redundancy allocation for series-parallel systems using a max-min approach. IIE Transactions, 2004, 36, 891-898.	2.1	96
14	Resiliency as a component importance measure in network reliability. Reliability Engineering and System Safety, 2009, 94, 1685-1693.	5.1	96
15	Multi-state component criticality analysis for reliability improvement in multi-state systems. Reliability Engineering and System Safety, 2007, 92, 1608-1619.	5.1	91
16	Using social media data for assessing children's exposure to violence during the COVID-19 pandemic. Child Abuse and Neglect, 2021, 116, 104747.	1.3	80
17	Flow-based vulnerability measures for network component importance: Experimentation with preparedness planning. Reliability Engineering and System Safety, 2016, 145, 62-73.	5.1	79
18	A generalized multistate-based path vector approach to multistate two-terminal reliability. IIE Transactions, 2006, 38, 477-488.	2.1	71

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19	Extracting and evaluating conversational patterns in social media: A socio-semantic analysis of customers' reactions to the launch of new products using Twitter streams. <i>International Journal of Information Management</i> , 2015, 35, 490-503.	10.5	70
20	Two-terminal reliability analyses for a mobile ad hoc wireless network. <i>Reliability Engineering and System Safety</i> , 2007, 92, 821-829.	5.1	68
21	Stochastic network interdiction optimization via capacitated network reliability modeling and probabilistic solution discovery. <i>Reliability Engineering and System Safety</i> , 2009, 94, 913-921.	5.1	67
22	All-terminal network reliability optimization via probabilistic solution discovery. <i>Reliability Engineering and System Safety</i> , 2008, 93, 1689-1697.	5.1	65
23	Inherent Costs and Interdependent Impacts of Infrastructure Network Resilience. <i>Risk Analysis</i> , 2015, 35, 642-662.	1.5	61
24	Defining resilience analytics for interdependent cyber-physical-social networks. <i>Sustainable and Resilient Infrastructure</i> , 2017, 2, 59-67.	1.7	61
25	Optimization of system reliability in the presence of common cause failures. <i>Reliability Engineering and System Safety</i> , 2007, 92, 1421-1434.	5.1	60
26	Protecting critical infrastructures against intentional attacks: a two-stage game with incomplete information. <i>IIE Transactions</i> , 2013, 45, 244-258.	2.1	60
27	On the Impacts of Power Outages during Hurricane Sandy: A Resilience-Based Analysis. <i>Systems Engineering</i> , 2016, 19, 59-75.	1.6	60
28	A bi-objective approach for shortest-path network interdiction. <i>Computers and Industrial Engineering</i> , 2010, 59, 232-240.	3.4	52
29	Critical infrastructure protection using secrecy: A discrete simultaneous game. <i>European Journal of Operational Research</i> , 2015, 242, 212-221.	3.5	51
30	System Development Planning via System Maturity Optimization. <i>IEEE Transactions on Engineering Management</i> , 2009, 56, 533-548.	2.4	49
31	Assessing the Vulnerability of a Power System Through a Multiple Objective Contingency Screening Approach. <i>IEEE Transactions on Reliability</i> , 2011, 60, 394-403.	3.5	49
32	Port-of-entry safety via the reliability optimization of container inspection strategy through an evolutionary approach. <i>Reliability Engineering and System Safety</i> , 2008, 93, 1698-1709.	5.1	48
33	New insights on multi-state component criticality and importance. <i>Reliability Engineering and System Safety</i> , 2006, 91, 894-904.	5.1	46
34	Element substitution algorithm for general two-terminal network reliability analyses. <i>IIE Transactions</i> , 2007, 39, 265-275.	2.1	46
35	Vulnerability metrics and analysis for communities in complex networks. <i>Reliability Engineering and System Safety</i> , 2011, 96, 1360-1366.	5.1	45
36	Quantifying the resilience of community structures in networks. <i>Reliability Engineering and System Safety</i> , 2018, 169, 466-474.	5.1	41

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37	A new resilience-based component importance measure for multi-state networks. Reliability Engineering and System Safety, 2020, 193, 106591.	5.1	39
38	Deterministic network interdiction optimization via an evolutionary approach. Reliability Engineering and System Safety, 2009, 94, 568-576.	5.1	37
39	Optimal protection of general source-sink networks via evolutionary techniques. Reliability Engineering and System Safety, 2009, 94, 1676-1684.	5.1	37
40	Mobility and reliability modeling for a mobile ad hoc network. IIE Transactions, 2008, 41, 23-31.	2.1	36
41	A holistic method for reliability performance assessment and critical components detection in complex networks. IIE Transactions, 2011, 43, 661-675.	2.1	36
42	Reliability analysis of cluster-based ad-hoc networks. Reliability Engineering and System Safety, 2008, 93, 1512-1522.	5.1	33
43	Optimal network protection against diverse interdictor strategies. Reliability Engineering and System Safety, 2011, 96, 374-382.	5.1	31
44	Social network analysis via multi-state reliability and conditional influence models. Reliability Engineering and System Safety, 2013, 109, 99-109.	5.1	31
45	Combining structure, content and meaning in online social networks: The analysis of public's early reaction in social media to newly launched movies. Technological Forecasting and Social Change, 2016, 109, 35-49.	6.2	31
46	Locating and protecting facilities from intentional attacks using secrecy. Reliability Engineering and System Safety, 2018, 169, 51-62.	5.1	31
47	A Classification Tree Based Approach for the Development of Minimal Cut and Path Vectors of a Capacitated Network. IEEE Transactions on Reliability, 2007, 56, 474-487.	3.5	30
48	Robust facility location: Hedging against failures. Reliability Engineering and System Safety, 2014, 123, 73-80.	5.1	30
49	Quantifying the risk of project delays with a genetic algorithm. International Journal of Production Economics, 2015, 170, 34-44.	5.1	30
50	Bi and tri-objective optimization in the deterministic network interdiction problem. Reliability Engineering and System Safety, 2010, 95, 887-896.	5.1	29
51	A probabilistic approach to system maturity assessment. Systems Engineering, 2011, 14, 279-293.	1.6	29
52	An automated method for estimating reliability of grid systems using Bayesian networks. Reliability Engineering and System Safety, 2012, 104, 96-105.	5.1	28
53	Detecting urban identity perception via newspaper topic modeling. Cities, 2019, 93, 72-83.	2.7	28
54	Algorithm for estimating reliability confidence bounds of multi-state systems. Reliability Engineering and System Safety, 2008, 93, 1231-1243.	5.1	27

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55	On Improved Confidence Bounds for System Reliability. IEEE Transactions on Reliability, 2006, 55, 26-36.	3.5	25
56	A Community Perspective on Resilience Analytics: A Visual Analysis of Community Mood. Risk Analysis, 2017, 37, 1566-1579.	1.5	25
57	Fusing pattern discovery and visual analytics approaches in tweet propagation. Information Fusion, 2019, 46, 91-101.	11.7	25
58	Quantitative approaches for optimization of user experience based on network resilience for wireless service provider networks. Reliability Engineering and System Safety, 2020, 193, 106606.	5.1	25
59	Uncertainty propagation and sensitivity analysis in system reliability assessment via unscented transformation. Reliability Engineering and System Safety, 2014, 132, 176-185.	5.1	24
60	Visual analytics for identifying product disruptions and effects via social media. International Journal of Production Economics, 2019, 208, 544-559.	5.1	24
61	A GOAL PROGRAMMING MODEL FOR OPTIMIZING RELIABILITY, MAINTAINABILITY AND SUPPORTABILITY UNDER PERFORMANCE BASED LOGISTICS. International Journal of Reliability, Quality and Safety Engineering, 2007, 14, 251-261.	0.4	23
62	Evolutionary optimization technique for multi-state two-terminal reliability allocation in multi-objective problems. IIE Transactions, 2010, 42, 539-552.	2.1	23
63	Confidence bounds for the reliability of binary capacitated two-terminal networks. Reliability Engineering and System Safety, 2006, 91, 905-914.	5.1	22
64	Vulnerability based robust protection strategy selection in service networks. Computers and Industrial Engineering, 2012, 63, 235-242.	3.4	22
65	Towards computational discourse analysis: A methodology for mining Twitter backchanneling conversations. Computers in Human Behavior, 2016, 64, 782-792.	5.1	22
66	Optimal placement of public-access AEDs in urban environments. Computers and Industrial Engineering, 2015, 90, 269-280.	3.4	21
67	Optimal design of cluster-based ad-hoc networks using probabilistic solution discovery. Reliability Engineering and System Safety, 2009, 94, 218-228.	5.1	19
68	Improving the computational efficiency of metric-based spares algorithms. European Journal of Operational Research, 2012, 219, 324-334.	3.5	19
69	A bi-objective formulation for robust defense strategies in multi-commodity networks. Reliability Engineering and System Safety, 2018, 176, 154-161.	5.1	18
70	Innovative approaches for addressing old challenges in component importance measures. Reliability Engineering and System Safety, 2012, 108, 123-130.	5.1	17
71	Scheduling multi-component maintenance with a greedy heuristic local search algorithm. Soft Computing, 2020, 24, 351-366.	2.1	17
72	An evolutionary algorithm for port-of-entry security optimization considering sensor thresholds. Reliability Engineering and System Safety, 2010, 95, 255-266.	5.1	16

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73	Interval-valued availability framework for supplier selection based on component importance. International Journal of Production Research, 2015, 53, 6083-6096.	4.9	16
74	Analyzing Component Importance in Multifunction Multicapability Systems Developmental Maturity Assessment. IEEE Transactions on Engineering Management, 2011, 58, 275-294.	2.4	15
75	DNS-ADVP: A Machine Learning Anomaly Detection and Visual Platform to Protect Top-Level Domain Name Servers Against DDoS Attacks. IEEE Access, 2019, 7, 116358-116369.	2.6	15
76	Quantitative metrics to analyze supply chain resilience and associated costs. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2019, 233, 186-199.	0.6	14
77	System development planning using readiness levels in a cost of development minimization model. Systems Engineering, 2010, 13, 311-323.	1.6	13
78	Assessment of the transition-rates importance of Markovian systems at steady state using the unscented transformation. Reliability Engineering and System Safety, 2015, 142, 212-220.	5.1	13
79	Some features speak loud, but together they all speak louder: A study on the correlation between classification error and feature usage in decision-tree classification ensembles. Engineering Applications of Artificial Intelligence, 2018, 67, 270-282.	4.3	13
80	Evaluating and Visualizing the Economic Impact of Commercial Districts Due to an Electric Power Network Disruption. Risk Analysis, 2019, 39, 2032-2053.	1.5	13
81	Systemigram Modeling of the Small Vessel Security Strategy for Developing Enterprise Resilience. Marine Technology Society Journal, 2011, 45, 88-102.	0.3	13
82	Multiobjective Optimization in Multifunction Multicapability System Development Planning. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 785-800.	5.9	12
83	Pattern-Based and Visual Analytics for Visitor Analysis on Websites. Applied Sciences (Switzerland), 2019, 9, 3840.	1.3	12
84	A Serious Video Game To Support Decision Making On Refugee Aid Deployment Policy. Procedia Computer Science, 2017, 108, 205-214.	1.2	11
85	FiToViz: A Visualisation Approach for Real-Time Risk Situation Awareness. IEEE Transactions on Affective Computing, 2018, 9, 372-382.	5.7	11
86	Integrating uncertain user-generated demand data when locating facilities for disaster response commodity distribution. Socio-Economic Planning Sciences, 2018, 62, 84-103.	2.5	11
87	Optimization of container inspection strategy via a genetic algorithm. Annals of Operations Research, 2011, 187, 229-247.	2.6	10
88	Identification of top contributors to system vulnerability via an ordinal optimization based method. Reliability Engineering and System Safety, 2013, 114, 92-98.	5.1	10
89	Optimal staffing strategies for points of dispensing. Computers and Industrial Engineering, 2015, 83, 172-183.	3.4	9
90	Robustness in network community detection under links weights uncertainties. Reliability Engineering and System Safety, 2016, 153, 88-95.	5.1	9

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91	Social Cohesion: Mitigating Societal Risk in Case Studies of Digital Media in Hurricanes Harvey, Irma, and Maria. <i>Risk Analysis</i> , 2022, 42, 1686-1703.	1.5	9
92	TEST PLAN ALLOCATION TO MINIMIZE SYSTEM RELIABILITY ESTIMATION VARIABILITY. <i>International Journal of Reliability, Quality and Safety Engineering</i> , 2004, 11, 257-272.	0.4	8
93	Recent Research on the Reliability Analysis Methods for Mobile Ad-hoc Networks. <i>Systems Research Forum</i> , 2007, 02, 35-41.	0.1	8
94	Optimal design of container inspection strategies considering multiple objectives via an evolutionary approach. <i>Annals of Operations Research</i> , 2012, 196, 167-187.	2.6	8
95	Node ranking for network topology-based cascade models – An Ordered Weighted Averaging operators' approach. <i>Reliability Engineering and System Safety</i> , 2016, 155, 115-123.	5.1	8
96	Effects of multi-state links in network community detection. <i>Reliability Engineering and System Safety</i> , 2017, 163, 46-56.	5.1	8
97	Engineering Management Models for Urban Security. <i>IEEE Transactions on Engineering Management</i> , 2017, 64, 29-41.	2.4	8
98	Community detection and resilience in multi-source, multi-terminal networks. <i>Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability</i> , 2018, 232, 616-626.	0.6	8
99	Resilience of Smart Power Grids to False Pricing Attacks in the Social Network. <i>IEEE Access</i> , 2019, 7, 80491-80505.	2.6	8
100	A systems perspective on contact centers and customer service reliability modeling. <i>Systems Engineering</i> , 2020, 23, 221-236.	1.6	7
101	The Integration of Protection, Restoration, and Adaptive Flow Redistribution in Building Resilient Networked Critical Infrastructures Against Intentional Attacks. <i>IEEE Systems Journal</i> , 2021, 15, 2959-2970.	2.9	7
102	Optimal component substitution within system evolution planning considering multiple-vendor, functionally equivalent commercial products. <i>Technology Analysis and Strategic Management</i> , 2011, 23, 509-526.	2.0	6
103	Bi-objective evolutionary approach to the design of patrolling schemes for improved border security. <i>Computers and Industrial Engineering</i> , 2017, 107, 74-84.	3.4	6
104	A framework for probabilistic model-based engineering and data synthesis. <i>Reliability Engineering and System Safety</i> , 2020, 193, 106679.	5.1	6
105	Analyzing the influence of Zeroth Responders on resilience of the Maritime Port Enterprise. , 2011, , .		5
106	Bi-Objective Vulnerability-Reduction Formulation for a Network under Diverse Attacks. <i>ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering</i> , 2017, 3, .	1.1	5
107	Dissecting Twitter Discussion Threads with Topic-Aware Network Visualization. , 2019, , .		5
108	A mathematical framework for passenger screening optimization via a multi-objective evolutionary approach. <i>Computers and Industrial Engineering</i> , 2012, 62, 839-850.	3.4	4

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109	Complementing Solutions to Optimization Problems via Crowdsourcing on Video Game Plays. Applied Sciences (Switzerland), 2020, 10, 8410.	1.3	4
110	Content-Aware Galaxies: Digital Fingerprints of Discussions on Social Media. IEEE Transactions on Computational Social Systems, 2021, 8, 294-307.	3.2	4
111	Decision-Making Approach for Catastrophic Scenario Selection in Disaster Recovery Planning. International Journal of Decision Support System Technology, 2009, 1, 36-51.	0.4	4
112	Holistic reliability analysis of weighted voting systems from a multi-state perspective. IIE Transactions, 2007, 40, 122-132.	2.1	3
113	Evaluation of full and degraded mission reliability and mission dependability for intermittently operated, multi-functional systems. Reliability Engineering and System Safety, 2007, 92, 1274-1280.	5.1	3
114	Multi-objective network interdiction using evolutionary algorithms. Reliability and Maintainability Symposium (RAMS), Annual, 2009, , .	0.0	3
115	System Element Obsolescence Replacement Optimization via Life Cycle Cost Forecasting. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 1394-1401.	1.4	3
116	Introduction to Resilience Analytics for Cyber-Physical-Social Networks. Risk Analysis, 2019, 39, 1867-1869.	1.5	3
117	Using Deductive Reasoning to Identify Unhappy Communities. Social Indicators Research, 2020, 152, 581-605.	1.4	3
118	Machine learning approaches for network resiliency optimization for service provider networks. Computers and Industrial Engineering, 2020, 146, 106519.	3.4	3
119	Content-based user classifier to uncover information exchange in disaster-motivated networks. PLoS ONE, 2021, 16, e0259342.	1.1	3
120	Capacitated Reliability for Ad-hoc Networks. , 2007, , .		2
121	7.3.2 Monte-Carlo Simulation Approach for System Readiness Level Estimation. In cose International Symposium, 2009, 19, 1154-1166.	0.2	2
122	Optimization of inspection for dual contraband using a genetic algorithm. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2012, 226, 508-525.	0.6	2
123	A Non-Parametric Aggregation Technique for Identifying Critical Nodes in a Network, Using Three Topology-Based Cascade Models. , 2014, , .		2
124	Countering improvised explosive devices with adaptive sensor networks. , 2016, , .		2
125	Patient-provider geographic map: An interactive visualization tool of patients' selection of health care providers. , 2017, , .		2
126	Multiobjective Formulation for Protection Allocation in Interdependent Infrastructure Networks Using an Attack-Diffusion Model. Journal of Infrastructure Systems, 2018, 24, .	1.0	2

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127	Characterizing negative sentiments in at-risk populations via crowd computing: a computational social science approach. <i>International Journal of Data Science and Analytics</i> , 2019, 7, 165-177.	2.4	2
128	A Quantitative and Content-Based Approach for Evaluating the Impact of Counter Narratives on Affective Polarization in Online Discussions. <i>IEEE Transactions on Computational Social Systems</i> , 2022, 9, 914-925.	3.2	2
129	Understanding collective action through social media-based disaster data analytics. , 2021, , 297-318.		2
130	New Approaches for Reliability Design in Multistate Systems. , 2008, , 465-476.		2
131	Reliability for cluster-based Ad-hoc Networks. , 2008, , .		1
132	1.1.1 Development of Patrolling Schemes for Improved Border Security Performance through an Evolutionary Approach. <i>Incose International Symposium</i> , 2012, 22, 1-12.	0.2	1
133	Measures of Inland Waterway Network Resilience. <i>Incose International Symposium</i> , 2013, 23, 1354-1367.	0.2	1
134	Analysis of the Vulnerability of Smart Grids to Social Network-Based Attacks. , 2018, , .		1
135	Contact Center Operations Management Systems Architecture and Reliability. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
136	Social media analytics to connect system performability and quality of experience, with an application to Citibike. <i>Computers and Industrial Engineering</i> , 2020, 139, 106146.	3.4	1
137	Systems Engineersâ€™ Effectiveness in an Organization: Text and Visual Analytics Approach. <i>IEEE Systems Journal</i> , 2020, 14, 5049-5060.	2.9	1
138	The adaptable Pareto set problem for facility location: A video game approach. <i>Expert Systems With Applications</i> , 2021, 186, 115682.	4.4	1
139	WINS: Web Interface for Network Science via Natural Language Distributed Representations. <i>Communications in Computer and Information Science</i> , 2020, , 614-621.	0.4	1
140	5.2.1 The Facility Location for Emergency Response â€“A Multiâ€œObjective Approach. <i>Incose International Symposium</i> , 2012, 22, 678-692.	0.2	0
141	Network vulnerability assessment via bi-objective optimization with a fragmentation approach as proxy. <i>Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability</i> , 2013, 227, 576-585.	0.6	0
142	Interactive visualization for optimal placement of public-access AEDs. , 2014, , .		0
143	Nar-A-Viz: A methodology to visually extract the narrative structure of text. <i>Computer Speech and Language</i> , 2019, 57, 81-97.	2.9	0
144	A Video Game-Crowdsourcing Approach to Discover a Playerâ€™s Strategy for Problem Solution to Housing Development. <i>IEEE Access</i> , 2021, 9, 114870-114883.	2.6	0

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145	Characterizing community resilience through mood novelty., 2017, , .		0
146	Combining Quality of Service and Quality of Experience to Visualize and Analyze City Services. Lecture Notes in Mechanical Engineering, 2021, , 46-54.	0.3	0
147	Impacts of workâ€atâ€home policies on systems engineers and the general population. Systems Engineering, 0, , .	1.6	0