Francesco Di Maio

List of Publications by Year
in descending order

97	1,953	279487	276539
papers	citations	23	41
		h-index	g-index

97	97	97	1486
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A data-driven fuzzy approach for predicting the remaining useful life in dynamic failure scenarios of a nuclear system. Reliability Engineering and System Safety, 2010, 95, 49-57.	5.1	256
2	Combining Relevance Vector Machines and exponential regression for bearing residual life estimation. Mechanical Systems and Signal Processing, 2012, 31, 405-427.	4.4	128
3	Hierarchical k-nearest neighbours classification and binary differential evolution for fault diagnostics of automotive bearings operating under variable conditions. Engineering Applications of Artificial Intelligence, 2016, 56, 1-13.	4.3	96
4	A particle filtering and kernel smoothing-based approach for new design component prognostics. Reliability Engineering and System Safety, 2015, 134, 19-31.	5.1	89
5	Fatigue crack growth estimation by relevance vector machine. Expert Systems With Applications, 2012, 39, 10681-10692.	4.4	67
6	A data-driven approach for predicting failure scenarios in nuclear systems. Annals of Nuclear Energy, 2010, 37, 482-491.	0.9	64
7	Fault Detection in Nuclear Power Plants Components by a Combination of Statistical Methods. IEEE Transactions on Reliability, 2013, 62, 833-845.	3.5	57
8	Remaining useful life estimation in heterogeneous fleets working under variable operating conditions. Reliability Engineering and System Safety, 2016, 156, 109-124.	5.1	52
9	Online Performance Assessment Method<?Pub _newline ?>for a Model-Based Prognostic Approach. IEEE Transactions on Reliability, 2016, 65, 718-735.	3.5	52
10	Quantifying uncertainties in the estimation of safety parameters by using bootstrapped artificial neural networks. Annals of Nuclear Energy, 2008, 35, 2338-2350.	0.9	46
11	Processing dynamic scenarios from a reliability analysis of a nuclear power plant digital instrumentation and control system. Annals of Nuclear Energy, 2009, 36, 1386-1399.	0.9	45
12	Comparison of Data-Driven Reconstruction Methods For Fault Detection. IEEE Transactions on Reliability, 2015, 64, 852-860.	3.5	44
13	Ensemble-approaches for clustering health status of oil sand pumps. Expert Systems With Applications, 2012, 39, 4847-4859.	4.4	43
14	A Monte Carlo-based exploration framework for identifying components vulnerable to cyber threats in nuclear power plants. Reliability Engineering and System Safety, 2018, 175, 24-37.	5.1	40
15	Safety margins confidence estimation for a passive residual heat removal system. Reliability Engineering and System Safety, 2010, 95, 828-836.	5.1	39
16	Unsupervised Clustering for Fault Diagnosis in Nuclear Power Plant Components. International Journal of Computational Intelligence Systems, 2013, 6, 764.	1.6	35
17	Clustering for unsupervised fault diagnosis in nuclear turbine shut-down transients. Mechanical Systems and Signal Processing, 2015, 58-59, 160-178.	4.4	34
18	Robust signal reconstruction for condition monitoring of industrial components via a modified Auto Associative Kernel Regression method. Mechanical Systems and Signal Processing, 2015, 60-61, 29-44.	4.4	33

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19	Reconstruction of missing data in multidimensional time series by fuzzy similarity. Applied Soft Computing Journal, 2015, 26, 1-9.	4.1	31
20	A dynamic probabilistic safety margin characterization approach in support of Integrated Deterministic and Probabilistic Safety Analysis. Reliability Engineering and System Safety, 2016, 145, 9-18.	5.1	30
21	Three-loop Monte Carlo simulation approach to Multi-State Physics Modeling for system reliability assessment. Reliability Engineering and System Safety, 2017, 167, 276-289.	5.1	27
22	A Systematic Semi-Supervised Self-adaptable Fault Diagnostics approach in an evolving environment. Mechanical Systems and Signal Processing, 2017, 88, 413-427.	4.4	25
23	Fuzzy C-Means Clustering of Signal Functional Principal Components for Post-Processing Dynamic Scenarios of a Nuclear Power Plant Digital Instrumentation and Control System. IEEE Transactions on Reliability, 2011, 60, 415-425.	3.5	24
24	Hierarchical differential evolution for minimal cut sets identification: Application to nuclear safety systems. European Journal of Operational Research, 2014, 238, 645-652.	3.5	23
25	Prediction of industrial equipment Remaining Useful Life by fuzzy similarity and belief function theory. Expert Systems With Applications, 2017, 83, 226-241.	4.4	23
26	A Multi-State Physics Modeling approach for the reliability assessment of Nuclear Power Plants piping systems. Annals of Nuclear Energy, 2015, 80, 151-165.	0.9	22
27	Time-dependent reliability analysis of the reactor building of a nuclear power plant for accounting of its aging and degradation. Reliability Engineering and System Safety, 2021, 205, 107173.	5.1	21
28	Bootstrap and Order Statistics for Quantifying Thermal-Hydraulic Code Uncertainties in the Estimation of Safety Margins. Science and Technology of Nuclear Installations, 2008, 2008, 1-9.	0.3	19
29	A framework for reconciliating data clusters from a fleet of nuclear power plants turbines for fault diagnosis. Applied Soft Computing Journal, 2018, 69, 213-231.	4.1	19
30	Ensemble-based sensitivity analysis of a Best Estimate Thermal Hydraulics model: Application to a Passive Containment Cooling System of an AP1000 Nuclear Power Plant. Annals of Nuclear Energy, 2014, 73, 200-210.	0.9	18
31	Safety margin sensitivity analysis for model selection in nuclear power plant probabilistic safety assessment. Reliability Engineering and System Safety, 2017, 162, 122-138.	5.1	18
32	Hybrid fuzzy-PID control of a nuclear Cyber-Physical System working under varying environmental conditions. Nuclear Engineering and Design, 2018, 331, 54-67.	0.8	17
33	Optimization of a dynamic uncertain causality graph for fault diagnosis in nuclear power plant. Nuclear Science and Techniques/Hewuli, 2017, 28, 1.	1.3	16
34	Condition-based probabilistic safety assessment of a spontaneous steam generator tube rupture accident scenario. Nuclear Engineering and Design, 2018, 326, 41-54.	0.8	16
35	FAILURE PROGNOSTICS BY A DATA-DRIVEN SIMILARITY-BASED APPROACH. International Journal of Reliability, Quality and Safety Engineering, 2013, 20, 1350001.	0.4	15
36	A Computational Framework for Prime Implicants Identification in Noncoherent Dynamic Systems. Risk Analysis, 2015, 35, 142-156.	1.5	14

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37	Unsupervised clustering of vibration signals for identifying anomalous conditions in a nuclear turbine. Journal of Intelligent and Fuzzy Systems, 2015, 28, 1723-1731.	0.8	14
38	Component- and system-level degradation modeling of digital Instrumentation and Control systems based on a Multi-State Physics Modeling Approach. Annals of Nuclear Energy, 2016, 95, 135-147.	0.9	14
39	Bootstrapped-ensemble-based Sensitivity Analysis of a trace thermal-hydraulic model based on a limited number of PWR large break loca simulations. Reliability Engineering and System Safety, 2016, 153, 122-134.	5.1	14
40	Condition-based probabilistic safety assessment for maintenance decision making regarding a nuclear power plant steam generator undergoing multiple degradation mechanisms. Reliability Engineering and System Safety, 2019, 191, 106583.	5.1	14
41	A Bayesian framework of inverse uncertainty quantification with principal component analysis and Kriging for the reliability analysis of passive safety systems. Nuclear Engineering and Design, 2021, 379, 111230.	0.8	14
42	Finite mixture models for sensitivity analysis of thermal hydraulic codes for passive safety systems analysis. Nuclear Engineering and Design, 2015, 289, 144-154.	0.8	13
43	Adversarial Risk Analysis to Allocate Optimal Defense Resources for Protecting Cyber–Physical Systems from Cyber Attacks. Risk Analysis, 2019, 39, 2766-2785.	1.5	13
44	Reliability Assessment of Passive Safety Systems for Nuclear Energy Applications: State-of-the-Art and Open Issues. Energies, 2021, 14, 4688.	1.6	13
45	A hierarchical decision-making framework for the assessment of the prediction capability of prognostic methods. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2017, 231, 36-52.	0.6	12
46	A neural-network-based variance decomposition sensitivity analysis. International Journal of Nuclear Knowledge Management, 2007, 2, 299.	0.3	11
47	Considering the human operator cognitive process for the interpretation of diagnostic outcomes related to component failures and cyber security attacks. Reliability Engineering and System Safety, 2020, 202, 107007.	5.1	11
48	Risk-Based Clustering for Near Misses Identification in Integrated Deterministic and Probabilistic Safety Analysis. Science and Technology of Nuclear Installations, 2015, 2015, 1-29.	0.3	10
49	Integrated Deterministic and Probabilistic Safety Analysis for Safety Assessment of Nuclear Power Plants. Science and Technology of Nuclear Installations, 2015, 2015, 1-2.	0.3	10
50	A Bayesian ensemble of sensitivity measures for severe accident modeling. Nuclear Engineering and Design, 2015, 295, 182-191.	0.8	10
51	Transient identification by clustering based on Integrated Deterministic and Probabilistic Safety Analysis outcomes. Annals of Nuclear Energy, 2016, 87, 217-227.	0.9	9
52	An approach based on Support Vector Machines and a K-D Tree search algorithm for identification of the failure domain and safest operating conditions in nuclear systems. Progress in Nuclear Energy, 2016, 88, 297-309.	1.3	8
53	Determination of prime implicants by differential evolution for the dynamic reliability analysis of non-coherent nuclear systems. Annals of Nuclear Energy, 2017, 102, 91-105.	0.9	8
54	A locally adaptive ensemble approach for data-driven prognostics of heterogeneous fleets. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2017, 231, 350-363.	0.6	8

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55	Homogeneous Continuous-Time, Finite-State Hidden Semi-Markov Modeling for Enhancing Empirical Classification System Diagnostics of Industrial Components. Machines, 2018, 6, 34.	1.2	8
56	Multi-State Reliability Assessment Model of Base-Load Cyber-Physical Energy Systems (CPES) during Flexible Operation Considering the Aging of Cyber Components. Energies, 2021, 14, 3241.	1.6	8
57	Condition monitoring of electrical power plant components during operational transients. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2012, 226, 568-583.	0.6	7
58	A novel fault detection system taking into account uncertainties in the reconstructed signals. Annals of Nuclear Energy, 2014, 73, 131-144.	0.9	7
59	A Visual Interactive Method for Prime Implicants Identification. IEEE Transactions on Reliability, 2015, 64, 539-549.	3.5	7
60	Invariant methods for an ensemble-based sensitivity analysis of a passive containment cooling system of an AP1000 nuclear power plant. Reliability Engineering and System Safety, 2016, 151, 12-19.	5.1	7
61	Integrated deterministic and probabilistic safety assessment of a superconducting magnet cryogenic cooling circuit for nuclear fusion applications. Reliability Engineering and System Safety, 2020, 201, 106945.	5.1	7
62	A Modeling and Analysis Framework for Integrated Energy Systems Exposed to Climate Change-Induced NaTech Accidental Scenarios. Sustainability, 2022, 14, 786.	1.6	7
63	A Regional Sensitivity Analysis-based Expert System for safety margins control. Nuclear Engineering and Design, 2018, 330, 400-408.	0.8	6
64	The Contribution of Small Modular Reactors to the Resilience of Power Supply. Journal of Nuclear Engineering, 2022, 3, 152-162.	0.7	6
65	Fusion of artificial neural networks and genetic algorithms for multi-objective system reliability design optimization. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2008, 222, 115-126.	0.6	5
66	Risk Analysis of Cyber-Physical Systems by GTST-MLD. IEEE Systems Journal, 2020, 14, 1333-1340.	2.9	5
67	Quantification of Uncertainty in CFD Simulation of Accidental Gas Release for O & G Quantitative Risk Assessment. Energies, 2021, 14, 8117.	1.6	5
68	Variance Decomposition Sensitivity Analysis of a Passive Residual Heat Removal System Model. Procedia, Social and Behavioral Sciences, 2010, 2, 7772-7773.	0.5	4
69	A hybrid Monte Carlo and possibilistic approach to estimate non-suppression probability in fire probabilistic safety analysis. , 2017, , .		4
70	A clustering approach for mining reliability big data for asset management. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2018, 232, 140-150.	0.6	4
71	Ensembles of climate change models for risk assessment of nuclear power plants. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2018, 232, 185-200.	0.6	4
72	VoI-Based Optimal Sensors Positioning and the Sub-Modularity Issue. , 2019, , .		4

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73	An efficient method of key parameter screening for PCCS under SLB accident in AP1000. Progress in Nuclear Energy, 2020, 122, 103283.	1.3	4
74	Unsupervised clustering for fault diagnosis. , 2012, , .		3
75	A Compacted Object Sample Extraction (COMPOSE)-based method for fault diagnostics in evolving environment. , 2015, , .		3
76	Postprocessing of Accidental Scenarios by Semi-Supervised Self-Organizing Maps. Science and Technology of Nuclear Installations, 2017, 2017, 1-14.	0.3	3
77	Identification of LOFA precursors in ITER superconducting magnet cryogenic cooling circuit. Reliability Engineering and System Safety, 2021, 209, 107426.	5.1	3
78	A Simulation-Based Framework for the Adequacy Assessment of Integrated Energy Systems Exposed to Climate Change. , 2022, , 1-35.		3
79	Passive safety systems analysis: A novel approach for inverse uncertainty quantification based on Stacked Sparse Autoencoders and Kriging metamodeling. Progress in Nuclear Energy, 2022, 148, 104209.	1.3	3
80	A dynamic event tree for a blowout accident in an oil deep-water well equipped with a managed pressure drilling condition monitoring and operation system. Journal of Loss Prevention in the Process Industries, 2022, 79, 104834.	1.7	3
81	A benchmark of dynamic reliability methods for probabilistic safety assessment. , 2017, , .		2
82	Hybrid Probabilistic–Possibilistic Treatment of Uncertainty in Building Energy Models: A Case Study of Sizing Peak Cooling Loads. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2018, 4, .	0.7	2
83	An efficient method for passive safety systems reliability assessment. Annals of Nuclear Energy, 2020, 141, 107347.	0.9	2
84	A method for fault diagnosis in evolving environment using unlabeled data. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2021, 235, 33-49.	0.6	2
85	A Non-parametric Cumulative Sum Approach for Online Diagnostics of Cyber Attacks to Nuclear Power Plants. Advanced Sciences and Technologies for Security Applications, 2019, , 195-228.	0.4	2
86	Parallel density scanned adaptive Kriging to improve local tsunami hazard assessment for coastal infrastructures. Reliability Engineering and System Safety, 2022, 222, 108441.	5.1	2
87	A heuristic features selection approach for scenario analysis in a regional seismic probabilistic tsunami hazard assessment. International Journal of Disaster Risk Reduction, 2022, 78, 103112.	1.8	2
88	Genetic Algorithm Optimization of a Dynamic Uncertain Causality Graph (DUCG) for Fault Diagnosis in Nuclear Power Plants. , 2016, , .		1
89	Failure Modes Detection of Nuclear Systems Using Machine Learning. , 2018, , .		1
90	Optimal sensor positioning on pressurized equipment based on Value of Information. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2021, 235, 533-544.	0.6	1

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91	Metamodeling and On-Line Clustering for Loss-of-Flow Accident Precursors Identification in a Superconducting Magnet Cryogenic Cooling Circuit. Energies, 2021, 14, 5552.	1.6	1
92	Dynamic Reliability Assessment of Cyber-Physical Energy Systems (CPEs) by GTST-MLD. , 2021, , .		1
93	Improving scheduled maintenance by missing data reconstruction: A double-loop Monte Carlo approach. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2016, 230, 502-511.	0.6	0
94	Dynamic Accident Scenario Generation, Modeling and Post-Processing for the Integrated Deterministic and Probabilistic Safety Analysis of Nuclear Power Plants. Modern Nuclear Energy Analysis Methods, 2018, , 477-504.	0.1	0
95	A Hydrocarbon Production System Multi-Objective Optimization. , 2020, , .		0
96	Guest Editorial: Special Issue of ESREL2020 PSAM15. European Journal for Security Research, 2021, 6, 121.	2.0	0
97	Guest Editorial: special issue of ESREL2020 PSAM15. Environment Systems and Decisions, 2022, 42, 147-148.	1.9	0