Francesco Di Maio

List of Publications by Year
in descending order

97 papers	1,953 citations	279798 23 h-index	276875 41 g-index
97 all docs	97 docs citations	97 times ranked	1486 citing authors

#	Article	IF	Citations
1	A Modeling and Analysis Framework for Integrated Energy Systems Exposed to Climate Change-Induced NaTech Accidental Scenarios. Sustainability, 2022, 14, 786.	3.2	7
2	A Simulation-Based Framework for the Adequacy Assessment of Integrated Energy Systems Exposed to Climate Change. , 2022, , 1-35.		3
3	Parallel density scanned adaptive Kriging to improve local tsunami hazard assessment for coastal infrastructures. Reliability Engineering and System Safety, 2022, 222, 108441.	8.9	2
4	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.	2.9	3
5	The Contribution of Small Modular Reactors to the Resilience of Power Supply. Journal of Nuclear Engineering, 2022, 3, 152-162.	1.6	6
6	Guest Editorial: special issue of ESREL2020 PSAM15. Environment Systems and Decisions, 2022, 42, 147-148.	3.4	0
7	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.	3.9	2
8	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.	3.3	3
9	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.	8.9	21
10	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.	0.7	2
11	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.	0.7	1
12	Identification of LOFA precursors in ITER superconducting magnet cryogenic cooling circuit. Reliability Engineering and System Safety, 2021, 209, 107426.	8.9	3
13	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.	3.1	8
14	Reliability Assessment of Passive Safety Systems for Nuclear Energy Applications: State-of-the-Art and Open Issues. Energies, 2021, 14, 4688.	3.1	13
15	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.	1.7	14
16	Metamodeling and On-Line Clustering for Loss-of-Flow Accident Precursors Identification in a Superconducting Magnet Cryogenic Cooling Circuit. Energies, 2021, 14, 5552.	3.1	1
17	Guest Editorial: Special Issue of ESREL2020 PSAM15. European Journal for Security Research, 2021, 6, 121.	1.9	0
18	Dynamic Reliability Assessment of Cyber-Physical Energy Systems (CPEs) by GTST-MLD. , 2021, , .		1

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19	Quantification of Uncertainty in CFD Simulation of Accidental Gas Release for O & G Quantitative Risk Assessment. Energies, 2021, 14, 8117.	3.1	5
20	Risk Analysis of Cyber-Physical Systems by GTST-MLD. IEEE Systems Journal, 2020, 14, 1333-1340.	4.6	5
21	A Hydrocarbon Production System Multi-Objective Optimization. , 2020, , .		0
22	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.	8.9	7
23	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.	8.9	11
24	An efficient method of key parameter screening for PCCS under SLB accident in AP1000. Progress in Nuclear Energy, 2020, 122, 103283.	2.9	4
25	An efficient method for passive safety systems reliability assessment. Annals of Nuclear Energy, 2020, 141, 107347.	1.8	2
26	Adversarial Risk Analysis to Allocate Optimal Defense Resources for Protecting Cyberâ€"Physical Systems from Cyber Attacks. Risk Analysis, 2019, 39, 2766-2785.	2.7	13
27	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.	8.9	14
28	VoI-Based Optimal Sensors Positioning and the Sub-Modularity Issue. , 2019, , .		4
29	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.	0.5	2
30	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.	8.9	40
31	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.	0.7	4
32	A Regional Sensitivity Analysis-based Expert System for safety margins control. Nuclear Engineering and Design, 2018, 330, 400-408.	1.7	6
33	Hybrid fuzzy-PID control of a nuclear Cyber-Physical System working under varying environmental conditions. Nuclear Engineering and Design, 2018, 331, 54-67.	1.7	17
34	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.	0.7	4
35	Condition-based probabilistic safety assessment of a spontaneous steam generator tube rupture accident scenario. Nuclear Engineering and Design, 2018, 326, 41-54.	1.7	16
36	Failure Modes Detection of Nuclear Systems Using Machine Learning. , 2018, , .		1

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37	Homogeneous Continuous-Time, Finite-State Hidden Semi-Markov Modeling for Enhancing Empirical Classification System Diagnostics of Industrial Components. Machines, 2018, 6, 34.	2.2	8
38	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.	7.2	19
39	Hybrid Probabilisticâ€"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, .	1.1	2
40	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
41	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.	1.8	8
42	Safety margin sensitivity analysis for model selection in nuclear power plant probabilistic safety assessment. Reliability Engineering and System Safety, 2017, 162, 122-138.	8.9	18
43	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.	0.7	12
44	Prediction of industrial equipment Remaining Useful Life by fuzzy similarity and belief function theory. Expert Systems With Applications, 2017, 83, 226-241.	7.6	23
45	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.	0.7	8
46	Three-loop Monte Carlo simulation approach to Multi-State Physics Modeling for system reliability assessment. Reliability Engineering and System Safety, 2017, 167, 276-289.	8.9	27
47	Optimization of a dynamic uncertain causality graph for fault diagnosis in nuclear power plant. Nuclear Science and Techniques/Hewuli, 2017, 28, 1.	3.4	16
48	A Systematic Semi-Supervised Self-adaptable Fault Diagnostics approach in an evolving environment. Mechanical Systems and Signal Processing, 2017, 88, 413-427.	8.0	25
49	A benchmark of dynamic reliability methods for probabilistic safety assessment. , 2017, , .		2
50	A hybrid Monte Carlo and possibilistic approach to estimate non-suppression probability in fire probabilistic safety analysis. , 2017, , .		4
51	Postprocessing of Accidental Scenarios by Semi-Supervised Self-Organizing Maps. Science and Technology of Nuclear Installations, 2017, 2017, 1-14.	0.8	3
52	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.	0.7	0
53	Genetic Algorithm Optimization of a Dynamic Uncertain Causality Graph (DUCG) for Fault Diagnosis in Nuclear Power Plants. , 2016, , .		1
54	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.	1.8	14

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55	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.	8.9	14
56	Remaining useful life estimation in heterogeneous fleets working under variable operating conditions. Reliability Engineering and System Safety, 2016, 156, 109-124.	8.9	52
57	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.	8.1	96
58	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.	2.9	8
59	Online Performance Assessment Method<?Pub _newline ?>for a Model-Based Prognostic Approach. IEEE Transactions on Reliability, 2016, 65, 718-735.	4.6	52
60	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.	8.9	30
61	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.	8.9	7
62	Transient identification by clustering based on Integrated Deterministic and Probabilistic Safety Analysis outcomes. Annals of Nuclear Energy, 2016, 87, 217-227.	1.8	9
63	A Computational Framework for Prime Implicants Identification in Noncoherent Dynamic Systems. Risk Analysis, 2015, 35, 142-156.	2.7	14
64	Risk-Based Clustering for Near Misses Identification in Integrated Deterministic and Probabilistic Safety Analysis. Science and Technology of Nuclear Installations, 2015, 2015, 1-29.	0.8	10
65	Integrated Deterministic and Probabilistic Safety Analysis for Safety Assessment of Nuclear Power Plants. Science and Technology of Nuclear Installations, 2015, 2015, 1-2.	0.8	10
66	A Compacted Object Sample Extraction (COMPOSE)-based method for fault diagnostics in evolving environment. , 2015, , .		3
67	Clustering for unsupervised fault diagnosis in nuclear turbine shut-down transients. Mechanical Systems and Signal Processing, 2015, 58-59, 160-178.	8.0	34
68	Finite mixture models for sensitivity analysis of thermal hydraulic codes for passive safety systems analysis. Nuclear Engineering and Design, 2015, 289, 144-154.	1.7	13
69	A Visual Interactive Method for Prime Implicants Identification. IEEE Transactions on Reliability, 2015, 64, 539-549.	4.6	7
70	Unsupervised clustering of vibration signals for identifying anomalous conditions in a nuclear turbine. Journal of Intelligent and Fuzzy Systems, 2015, 28, 1723-1731.	1.4	14
71	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.	8.0	33
72	A Multi-State Physics Modeling approach for the reliability assessment of Nuclear Power Plants piping systems. Annals of Nuclear Energy, 2015, 80, 151-165.	1.8	22

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73	Comparison of Data-Driven Reconstruction Methods For Fault Detection. IEEE Transactions on Reliability, 2015, 64, 852-860.	4.6	44
74	A Bayesian ensemble of sensitivity measures for severe accident modeling. Nuclear Engineering and Design, 2015, 295, 182-191.	1.7	10
75	A particle filtering and kernel smoothing-based approach for new design component prognostics. Reliability Engineering and System Safety, 2015, 134, 19-31.	8.9	89
76	Reconstruction of missing data in multidimensional time series by fuzzy similarity. Applied Soft Computing Journal, 2015, 26, 1-9.	7.2	31
77	Hierarchical differential evolution for minimal cut sets identification: Application to nuclear safety systems. European Journal of Operational Research, 2014, 238, 645-652.	5.7	23
78	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.	1.8	18
79	A novel fault detection system taking into account uncertainties in the reconstructed signals. Annals of Nuclear Energy, 2014, 73, 131-144.	1.8	7
80	Fault Detection in Nuclear Power Plants Components by a Combination of Statistical Methods. IEEE Transactions on Reliability, 2013, 62, 833-845.	4.6	57
81	FAILURE PROGNOSTICS BY A DATA-DRIVEN SIMILARITY-BASED APPROACH. International Journal of Reliability, Quality and Safety Engineering, 2013, 20, 1350001.	0.6	15
82	Unsupervised Clustering for Fault Diagnosis in Nuclear Power Plant Components. International Journal of Computational Intelligence Systems, 2013, 6, 764.	2.7	35
83	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.	0.7	7
84	Unsupervised clustering for fault diagnosis. , 2012, , .		3
85	Combining Relevance Vector Machines and exponential regression for bearing residual life estimation. Mechanical Systems and Signal Processing, 2012, 31, 405-427.	8.0	128
86	Ensemble-approaches for clustering health status of oil sand pumps. Expert Systems With Applications, 2012, 39, 4847-4859.	7.6	43
87	Fatigue crack growth estimation by relevance vector machine. Expert Systems With Applications, 2012, 39, 10681-10692.	7.6	67
88	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.	4.6	24
89	Variance Decomposition Sensitivity Analysis of a Passive Residual Heat Removal System Model. Procedia, Social and Behavioral Sciences, 2010, 2, 7772-7773.	0.5	4
90	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.	8.9	256

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91	Safety margins confidence estimation for a passive residual heat removal system. Reliability Engineering and System Safety, 2010, 95, 828-836.	8.9	39
92	A data-driven approach for predicting failure scenarios in nuclear systems. Annals of Nuclear Energy, 2010, 37, 482-491.	1.8	64
93	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.	1.8	45
94	Quantifying uncertainties in the estimation of safety parameters by using bootstrapped artificial neural networks. Annals of Nuclear Energy, 2008, 35, 2338-2350.	1.8	46
95	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.	0.8	19
96	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.	0.7	5
97	A neural-network-based variance decomposition sensitivity analysis. International Journal of Nuclear Knowledge Management, 2007, 2, 299.	0.3	11