M Z Naser

List of Publications by Year
in descending order

92 papers	2,751 citations	147566 31 h-index	197535 49 g-index
93 all docs	93 docs citations	93 times ranked	1280 citing authors

#	Article	IF	Citations
1	Fiber-reinforced polymer composites in strengthening reinforced concrete structures: A critical review. Engineering Structures, 2019, 198, 109542.	2.6	261
2	Machine learning framework for predicting failure mode and shear capacity of ultra high performance concrete beams. Engineering Structures, 2020, 224, 111221.	2.6	110
3	Modeling of insulated CFRP-strengthened reinforced concrete T-beam exposed to fire. Engineering Structures, 2009, 31, 3072-3079.	2.6	102
4	Finite element simulation of reinforced concrete beams externally strengthened with short-length CFRP plates. Composites Part B: Engineering, 2013, 45, 1722-1730.	5.9	95
5	Extraterrestrial construction materials. Progress in Materials Science, 2019, 105, 100577.	16.0	84
6	An engineer's guide to eXplainable Artificial Intelligence and Interpretable Machine Learning: Navigating causality, forced goodness, and the false perception of inference. Automation in Construction, 2021, 129, 103821.	4.8	81
7	Finite element modeling of reinforced concrete beams externally strengthened in flexure with side-bonded FRP laminates. Composites Part B: Engineering, 2019, 173, 106952.	5.9	79
8	Error Metrics and Performance Fitness Indicators for Artificial Intelligence and Machine Learning in Engineering and Sciences. Architecture, Structures and Construction, 2023, 3, 499-517.	0.7	72
9	Nonlinear finite element modeling of concrete deep beams with openings strengthened with externally-bonded composites. Materials & Design, 2012, 42, 378-387.	5.1	69
10	Deriving temperature-dependent material models for structural steel through artificial intelligence. Construction and Building Materials, 2018, 191, 56-68.	3.2	59
11	Materials and design concepts for space-resilient structures. Progress in Aerospace Sciences, 2018, 98, 74-90.	6.3	58
12	Mechanistically Informed Machine Learning and Artificial Intelligence in Fire Engineering and Sciences. Fire Technology, 2021, 57, 2741-2784.	1.5	57
13	Importance factor for design of bridges against fire hazard. Engineering Structures, 2013, 54, 207-220.	2.6	56
14	Fire resistance evaluation through artificial intelligence - A case for timber structures. Fire Safety Journal, 2019, 105, 1-18.	1.4	56
15	Modeling Strategies of Finite Element Simulation of Reinforced Concrete Beams Strengthened with FRP: A Review. Journal of Composites Science, 2021, 5, 19.	1.4	53
16	Thermal-stress analysis of RC beams reinforced with GFRP bars. Composites Part B: Engineering, 2012, 43, 2135-2142.	5.9	49
17	Nonlinear behavior of shear deficient RC beams strengthened with near surface mounted glass fiber reinforcement under cyclic loading. Materials & Design, 2014, 61, 16-25.	5.1	49
18	Bond Behavior of CFRP Cured Laminates: Experimental and Numerical Investigation. Journal of Engineering Materials and Technology, Transactions of the ASME, 2012, 134, .	0.8	48

#	ARTICLE	IF	CITATIONS
19	Strategies for enhancing fire performance of steel bridges. Engineering Structures, 2017, 131, 446-458.	2.6	47
20	Analysis of RC T-beams strengthened with CFRP plates under fire loading using ANN. Construction and Building Materials, 2012, 37, 301-309.	3.2	46
21	High temperature properties of fiber reinforced polymers and fire insulation for fire resistance modeling of strengthened concrete structures. Composites Part B: Engineering, 2019, 175, 107104.	5.9	46
22	A probabilistic assessment for classification of bridges against fire hazard. Fire Safety Journal, 2015, 76, 65-73.	1.4	45
23	Properties and material models for common construction materials at elevated temperatures. Construction and Building Materials, 2019, 215, 192-206.	3.2	44
24	Modeling the response of composite beamâ€"slab assemblies exposed to fire. Journal of Constructional Steel Research, 2013, 80, 163-173.	1.7	43
25	Evaluating structural response of concrete-filled steel tubular columns through machine learning. Journal of Building Engineering, 2021, 34, 101888.	1.6	43
26	AI-based cognitive framework for evaluating response of concrete structures in extreme conditions. Engineering Applications of Artificial Intelligence, 2019, 81, 437-449.	4.3	41
27	Properties and material models for modern construction materials at elevated temperatures. Computational Materials Science, 2019, 160, 16-29.	1.4	41
28	Heuristic machine cognition to predict fire-induced spalling and fire resistance of concrete structures. Automation in Construction, 2019, 106, 102916.	4.8	39
29	Designing steel bridges for fire safety. Journal of Constructional Steel Research, 2019, 156, 46-53.	1.7	39
30	Application of machine learning models for designing CFCFST columns. Journal of Constructional Steel Research, 2021, 185, 106856.	1.7	39
31	Effect of shear on fire response of steel beams. Journal of Constructional Steel Research, 2014, 97, 48-58.	1.7	32
32	Observational Analysis of Fire-Induced Spalling of Concrete through Ensemble Machine Learning and Surrogate Modeling. Journal of Materials in Civil Engineering, 2021, 33, .	1.3	32
33	Comparative fire behavior of composite girders under flexural and shear loading. Thin-Walled Structures, 2017, 116, 82-90.	2.7	31
34	Explainable machine learning using real, synthetic and augmented fire tests to predict fire resistance and spalling of RC columns. Engineering Structures, 2022, 253, 113824.	2.6	31
35	Fire hazard in transportation infrastructure: Review, assessment, and mitigation strategies. Frontiers of Structural and Civil Engineering, 2021, 15, 46-60.	1.2	30
36	Flexural behavior of RC beams externally bonded with polyethylene terephthalate (PET) fiber reinforced polymer (FRP) laminates. Engineering Structures, 2022, 256, 114036.	2.6	30

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37	Cognitive infrastructure - a modern concept for resilient performance under extreme events. Automation in Construction, 2018, 90, 253-264.	4.8	29
38	Boosting machines for predicting shear strength of CFS channels with staggered web perforations. Structures, 2021, 34, 3391-3403.	1.7	29
39	Effect of local instability on capacity of steel beams exposed to fire. Journal of Constructional Steel Research, 2015, 111, 31-42.	1.7	26
40	StructuresNet and FireNet: Benchmarking databases and machine learning algorithms in structural and fire engineering domains. Journal of Building Engineering, 2021, 44, 102977.	1.6	26
41	Egress Parameters Influencing Emergency Evacuation in High-Rise Buildings. Fire Technology, 2020, 56, 2035-2057.	1.5	25
42	Concrete under fire: an assessment through intelligent pattern recognition. Engineering With Computers, 2020, 36, 1915-1928.	3.5	24
43	Autonomous Fire Resistance Evaluation. Journal of Structural Engineering, 2020, 146, .	1.7	24
44	Approach for shear capacity evaluation of fire exposed steel and composite beams. Journal of Constructional Steel Research, 2018, 141, 91-103.	1.7	23
45	Properties and material models for construction materials post exposure to elevated temperatures. Mechanics of Materials, 2020, 142, 103293.	1.7	23
46	Thermal-Stress Finite Element Analysis of CFRP Strengthened Concrete Beam Exposed to Top Surface Fire Loading. Mechanics of Advanced Materials and Structures, 2011, 18, 172-180.	1.5	22
47	Temperature-induced instability in cold-formed steel beams with slotted webs subject to shear. Thin-Walled Structures, 2019, 136, 333-352.	2.7	20
48	Factors governing onset of local instabilities in fire exposed steel beams. Thin-Walled Structures, 2016, 98, 48-57.	2.7	19
49	Space-native construction materials for earth-independent and sustainable infrastructure. Acta Astronautica, 2019, 155, 264-273.	1.7	18
50	Fire performance of masonry under various testing methods. Construction and Building Materials, 2021, 289, 123183.	3.2	18
51	Effective medium crack classification on laboratory concrete specimens via competitive machine learning. Structures, 2022, 37, 858-870.	1.7	18
52	Performance of RC T-Beams Externally Strengthened with CFRP Laminates under Elevated Temperatures. Journal of Structural Fire Engineering, 2014, 5, 1-24.	0.4	17
53	Modeling the shear strength of concrete beams reinforced with CFRP bars under unsymmetrical loading. Mechanics of Advanced Materials and Structures, 2019, 26, 1290-1297.	1.5	17
54	Behavior of prestressed stayed steel columns under fire conditions. International Journal of Steel Structures, 2017, 17, 195-204.	0.6	14

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55	RAI: Rapid, Autonomous and Intelligent machine learning approach to identify fire-vulnerable bridges. Applied Soft Computing Journal, 2021, 113, 107896.	4.1	14
56	Investigation on concrete compressive strength mixed with sand contaminated by crude oil products. Construction and Building Materials, 2013, 47, 99-103.	3.2	13
57	Can past failures help identify vulnerable bridges to extreme events? A biomimetical machine learning approach. Engineering With Computers, 2021, 37, 1099-1131.	3.5	12
58	Effect of protective coating on axial resistance and residual capacity of self-compacting concrete columns exposed to standard fire. Engineering Structures, 2022, 264, 114444.	2.6	12
59	Autonomous and resilient infrastructure with cognitive and self-deployable load-bearing structural components. Automation in Construction, 2019, 99, 59-67.	4.8	11
60	Autonomous detection of concrete damage under fire conditions. Automation in Construction, 2022, 140, 104364.	4.8	11
61	Classifying bridges for the risk of fire hazard via competitive machine learning. Advances in Bridge Engineering, 2021, 2, .	0.8	10
62	Mapping functions: A physics-guided, data-driven and algorithm-agnostic machine learning approach to discover causal and descriptive expressions of engineering phenomena. Measurement: Journal of the International Measurement Confederation, 2021, 185, 110098.	2.5	10
63	Failure mode classification and deformability evaluation for concrete beams reinforced with FRP bars. Composite Structures, 2022, 292, 115651.	3.1	10
64	Predicting the response of continuous RC deep beams under varying levels of differential settlement. Frontiers of Structural and Civil Engineering, 2019, 13, 686-700.	1.2	9
65	Response of fire exposed composite girders under dominant flexural and shear loading. Journal of Structural Fire Engineering, 2018, 9, 108-125.	0.4	8
66	Experimental Investigation and Modeling of the Thermal Effect on the Mechanical Properties of Polyethylene-Terephthalate FRP Laminates. Journal of Materials in Civil Engineering, 2020, 32, .	1.3	8
67	Extraterrestrial Construction in Lunar and Martian Environments. , 2021, , .		8
68	Polymers in space exploration and commercialization. , 2020, , 457-484.		6
69	Special Issue on â€œSmart Systems in Fire Engineeringâ€• Fire Technology, 2021, 57, 2737-2740.	1.5	6
70	Hiding in plain sight: What can interpretable unsupervised machine learning and clustering analysis tell us about the fire behavior of reinforced concrete columns?. Structures, 2022, 40, 920-935.	1.7	6
71	Digital twin for next gen concretes: On-demand tuning of vulnerable mixtures through Explainable and Anomalous Machine Learning. Cement and Concrete Composites, 2022, 132, 104640.	4.6	6
72	Implementation of new elements and material models in OpenSees software to account for post-earthquacke fire damage. Structures, 2020, 27, 1777-1785.	1.7	5

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73	Quantitative evaluation of the relationship between physical parameters and building demolition or adaptation outcomes. Architecture, Structures and Construction, 2023, 3, 415-428.	0.7	5
74	Characterizing disability in fire evacuation: A progressive review. Journal of Building Engineering, 2022, 53, 104573.	1.6	5
75	A Facultyâ€™s Perspective on Infusing Artificial Intelligence into Civil Engineering Education. Journal of Civil Engineering Education, 2022, 148, .	0.8	5
76	Effect of Temperature-Induced Moment-Shear Interaction on Fire Resistance of Steel Beams. International Journal of Steel Structures, 2020, 20, 1540-1551.	0.6	4
77	Ceramic tiles as sustainable, functional and insulating materials to mitigate fire damage. Advances in Applied Ceramics, 2021, 120, 227-239.	0.6	4
78	Fire Protection and Materials Flammability Control by Artificial Intelligence. Fire Technology, 2022, 58, 1071-1073.	1.5	4
79	An opinion piece on the dos and donâ€™ts of artificial intelligence in civil engineering and charting a path from data-driven analysis to causal knowledge discovery. Civil Engineering and Environmental Systems, 2022, 39, 1-11.	0.4	4
80	Enabling cognitive and autonomous infrastructure in extreme events through computer vision. Innovative Infrastructure Solutions, 2020, 5, 1.	1.1	3
81	Machine Learning to Derive Unified Material Models for Steel Under Fire Conditions. Springer Transactions in Civil and Environmental Engineering, 2021, , 213-225.	0.3	3
82	Demystifying Ten Big Ideas and Rules Every Fire Scientist & Engineer Should Know About Blackbox, Whitebox and Causal Artificial Intelligence. Fire Technology, 2022, 58, 1075-1085.	1.5	3
83	CLEMSON: An Automated Machine-Learning Virtual Assistant for Accelerated, Simulation-Free, Transparent, Reduced-Order, and Inference-Based Reconstruction of Fire Response of Structural Members. Journal of Structural Engineering, 2022, 148, .	1.7	3
84	Application of Importance Factor for Classification of Bridges for Mitigating Fire Hazard. , 2015, , .		2
85	Systematic Integration of Artificial Intelligence Toward Evaluating Response of Materials and Structures in Extreme Conditions. Springer Transactions in Civil and Environmental Engineering, 2021, , 183-212.	0.3	2
86	AI modelling & mapping functions: a cognitive, physics-guided, simulation-free and instantaneous approach to fire evaluation. , 2020, , .		2
87	Generalized temperature-dependent material models for compressive strength of masonry using fire tests, statistical methods and artificial intelligence. Architecture, Structures and Construction, 2022, 2, 223-229.	0.7	2
88	Deriving mapping functions to tie anthropometric measurements to body mass index via interpretable machine learning. Machine Learning With Applications, 2022, 8, 100259.	3.0	2
89	Examining the behavior of concrete masonry units under fire and postâ€fire conditions. Fire and Materials, 2023, 47, 159-169.	0.9	2
90	Emerging Construction Materials for Energy Infrastructure. , 2017, , 113-122.		1

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91	Enhancing fire resistance of reinforced concrete beams through sacrificial reinforcement. Architecture, Structures and Construction, 0, , .	0.7	1
92	The Role of Computational Intelligence in Realizing Modern and Autonomous Fire Evaluation Methods. , 2020, , .		0