Hussam N Mahmoud

List of Publications by Year
in descending order

93 papers	1,633 citations	279701 23 h-index	395590 33 g-index
97 all docs	97 docs citations	97 times ranked	1153 citing authors

#	Article	IF	Citations
1	The Role of Urban Growth in Resilience of Communities Under Flood Risk. Earth's Future, 2020, 8, e2019EF001382.	2.4	63
2	Full functionality and recovery assessment framework for a hospital subjected to a scenario earthquake event. Engineering Structures, 2019, 188, 165-177.	2.6	56
3	New Model for Ductile Fracture of Metal Alloys. I: Monotonic Loading. Journal of Engineering Mechanics - ASCE, 2016, 142, .	1.6	51
4	An integrated socio-technical approach for post-earthquake recovery of interdependent healthcare system. Reliability Engineering and System Safety, 2020, 201, 106953.	5.1	51
5	Seismic behavior of double steel plate–HSC composite walls. Engineering Structures, 2015, 102, 1-12.	2.6	48
6	Analytical case study on the seismic performance of a curved and skewed reinforced concrete bridge under vertical ground motion. Engineering Structures, 2015, 100, 128-136.	2.6	47
7	Minimal Building Fragility Portfolio for Damage Assessment of Communities Subjected to Tornadoes. Journal of Structural Engineering, 2018, 144, .	1.7	47
8	Propagation rate of large cracks in stiffened panels under tension loading. Marine Structures, 2005, 18, 265-288.	1.6	46
9	Hybrid Simulation for Earthquake Response of Semirigid Partial-Strength Steel Frames. Journal of Structural Engineering, 2013, 139, 1134-1148.	1.7	45
10	Post-earthquake fire performance of moment resisting frames with reduced beam section connections. Journal of Constructional Steel Research, 2014, 103, 215-229.	1.7	43
11	Spatial and Temporal Quantification of Community Resilience: Gotham City under Attack. Computer-Aided Civil and Infrastructure Engineering, 2018, 33, 353-372.	6.3	42
12	Simulation of block shear fracture in bolted connections. Journal of Constructional Steel Research, 2017, 134, 1-16.	1.7	41
13	Near-optimal planning using approximate dynamic programming to enhance post-hazard community resilience management. Reliability Engineering and System Safety, 2019, 181, 116-126.	5.1	40
14	Wildfire impacts on schools and hospitals following the 2018 California Camp Fire. Natural Hazards, 2020, 104, 901-925.	1.6	36
15	Hybrid Tuned Mass Damper and Isolation Floor Slab System Optimized for Vibration Control. Journal of Earthquake Engineering, 2015, 19, 1197-1221.	1.4	35
16	Performance of steel moment resisting frames with RBS connections under fire loading. Engineering Structures, 2014, 75, 126-138.	2.6	33
17	The design and seismic performance of low-rise long-span frames with semi-rigid connections. Journal of Constructional Steel Research, 2011, 67, 114-126.	1.7	31
18	Seismic performance of skewed and curved reinforced concrete bridges in mountainous states. Engineering Structures, 2014, 70, 158-167.	2.6	29

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19	Collapse performance of composite steel frames under fire. Engineering Structures, 2019, 183, 662-676.	2.6	28
20	Framework for Lifecycle Cost Assessment of Steel Buildings under Seismic and Wind Hazards. Journal of Structural Engineering, 2017, 143, .	1.7	27
21	Numerical evaluation of tsunami debris impact loading on wooden structural walls. Engineering Structures, 2013, 56, 1249-1261.	2.6	26
22	New Model for Ductile Fracture of Metal Alloys. II: Reverse Loading. Journal of Engineering Mechanics - ASCE, 2016, 142, .	1.6	25
23	Multihazard Assessment of Wind Turbine Towers under Simultaneous Application of Wind, Operation, and Seismic Loads. Journal of Performance of Constructed Facilities, 2016, 30, .	1.0	25
24	Unraveling the Complexity of Wildland Urban Interface Fires. Scientific Reports, 2018, 8, 9315.	1.6	24
25	Probabilistic framework for evaluating food security of households in the aftermath of a disaster. Structure and Infrastructure Engineering, 2019, 15, 1060-1074.	2.0	24
26	A combinatorial optimization approach for multi-hazard design of building systems with suspended floor slabs under wind and seismic hazards. Engineering Structures, 2017, 137, 268-284.	2.6	23
27	Impact of multiple waves of COVID-19 on healthcare networks in the United States. PLoS ONE, 2021, 16, e0247463.	1.1	23
28	A framework for estimating immediate interdependent functionality reduction of a steel hospital following a seismic event. Engineering Structures, 2018, 168, 669-683.	2.6	22
29	Response of building systems with suspended floor slabs under dynamic excitations. Engineering Structures, 2015, 104, 155-173.	2.6	19
30	Vulnerability of seaports to hurricanes and sea level rise in a changing climate: A case study for mobile, AL. Coastal Engineering, 2021, 167, 103884.	1.7	19
31	Shaping urbanization to achieve communities resilient to floods. Environmental Research Letters, 2021, 16, 094033.	2.2	19
32	Unraveling the complexity of human behavior and urbanization on community vulnerability to floods. Scientific Reports, 2021, 11, 20085.	1.6	19
33	Fatigue reliability of a single stiffened ship hull panel. Engineering Structures, 2014, 66, 89-99.	2.6	18
34	Using artificial neural networks to forecast economic impact of multi-hazard hurricane-based events. Sustainable and Resilient Infrastructure, 2016, 1, 63-83.	1.7	18
35	De-aggregation of community resilience goals to obtain minimum performance objectives for buildings under tornado hazards. Structural Safety, 2018, 70, 82-92.	2.8	18
36	Hindcasting community-level building damage for the 2011 Joplin EF5 tornado. Natural Hazards, 2018, 93, 1295-1316.	1.6	18

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37	Healthcare and education networks interaction as an indicator of social services stability following natural disasters. Scientific Reports, 2021, 11, 1664.	1.6	18
38	Orchestrating performance of healthcare networks subjected to the compound events of natural disasters and pandemic. Nature Communications, 2021, 12, 1338.	5.8	17
39	Hindcasting Community-Level Damage to the Interdependent Buildings and Electric Power Network after the 2011 Joplin, Missouri, Tornado. Natural Hazards Review, 2019, 20, .	0.8	16
40	Validation of Time-Dependent Repair Recovery of the Building Stock Following the 2011 Joplin Tornado. Natural Hazards Review, 2020, 21, 04020038.	0.8	16
41	Framework for a performance-based analysis of fires following earthquakes. Engineering Structures, 2018, 171, 794-805.	2.6	15
42	Fatigue and fracture life-cycle cost assessment of a Miter gate with multiple cracks. Engineering Failure Analysis, 2018, 83, 57-74.	1.8	13
43	System-Level Biomechanical Approach for the Evaluation of Term and Preterm Pregnancy Maintenance. Journal of Biomechanical Engineering, 2013, 135, 021009.	0.6	12
44	Fatigue Life Fragilities and Performance-Based Design of Wind Turbine Tower Base Connections. Journal of Structural Engineering, 2015, 141, 04014183.	1.7	12
45	Distortion-Induced Fatigue Crack Growth. Journal of Bridge Engineering, 2016, 21, .	1.4	12
46	Response of Steel Reduced Beam Section Connections Exposed to Fire. Journal of Structural Engineering, 2016, 142, .	1.7	12
47	Resilience of School Systems Following Severe Earthquakes. Earth's Future, 2020, 8, e2020EF001518.	2.4	12
48	Barriers to gauging built environment climate vulnerability. Nature Climate Change, 2020, 10, 482-485.	8.1	12
49	Performance and risk to light-framed wood residential buildings subjected to tornadoes. Structural Safety, 2018, 70, 35-47.	2.8	11
50	Understanding Community Resilience from a PRA Perspective Using Binary Decision Diagrams. Risk Analysis, 2019, 39, 2127-2142.	1.5	11
51	Life-cycle cost and carbon footprint analysis for light-framed residential buildings subjected to tornado hazard. Journal of Building Engineering, 2020, 32, 101657.	1.6	11
52	Assessing post-hazard damage costs to a community's residential buildings exposed to tropical cyclones. Structure and Infrastructure Engineering, 2021, 17, 443-453.	2.0	11
53	Automated site-specific assessment of steel structures through integrating machine learning and fracture mechanics. Automation in Construction, 2022, 133, 104022.	4.8	11
54	Seismic Performance of Semirigid Moment-Resisting Frames under Far and Near Field Records. Journal of Structural Engineering, 2012, 138, 157-169.	1.7	10

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55	Hybrid Simulation of Small-Scale Steel Braced Frame Subjected to Fire and Fire Following Earthquake. Journal of Structural Engineering, 2020, 146, 04019182.	1.7	10
56	Spatial and temporal variations in resilience to tropical cyclones along the United States coastline as determined by the multi-hazard hurricane impact level model. Palgrave Communications, 2017, 3, .	4.7	9
57	Real-time Application of the Multihazard Hurricane Impact Level Model for the Atlantic Basin. Frontiers in Built Environment, 2017, 3, .	1.2	9
58	Fatigue repair of underwater navigation steel structures using Carbon Fiber Reinforced Polymer (CFRP). Engineering Structures, 2018, 173, 718-728.	2.6	9
59	Probabilistic analysis of a simple composite blast protection wall system. Engineering Structures, 2020, 203, 109836.	2.6	9
60	Structural performance of a wood-sand-wood wall for blast protection. Engineering Structures, 2020, 219, 110954.	2.6	9
61	Interpreting the socio-technical interactions within a wind damage–artificial neural network model for community resilience. Royal Society Open Science, 2020, 7, 200922.	1.1	9
62	Modeling resolution effects on the seismic response of a hospital steel building. Journal of Constructional Steel Research, 2017, 139, 254-271.	1.7	8
63	A New Approach to Predict Cyclic Response and Fracture of Shear Links and Eccentrically Braced Frames. Frontiers in Built Environment, 2018, 4, .	1.2	8
64	Mixed-Mode Fatigue and Fracture Assessment of a Steel Twin Box-Girder Bridge. Journal of Bridge Engineering, 2019, 24, .	1.4	8
65	Response of semi-rigid steel frames to sequential earthquakes. Journal of Constructional Steel Research, 2020, 173, 106272.	1.7	8
66	Assessing wildland–urban interface fire risk. Royal Society Open Science, 2020, 7, 201183.	1.1	8
67	Time-Dependent Reliability Analysis of Reinforced Concrete Beams Subjected to Uniform and Pitting Corrosion and Brittle Fracture. Materials, 2021, 14, 1820.	1.3	8
68	A Probabilistic Cellular Automata Framework for Assessing the Impact of WUI Fires on Communities. Procedia Engineering, 2017, 198, 1111-1122.	1.2	7
69	Solving Markov decision processes for network-level post-hazard recovery via simulation optimization and rollout. , 2018, , .		7
70	Multi-resolution analysis of the SAC steel frames with RBS connections under fire. Fire Safety Journal, 2018, 98, 90-108.	1.4	7
71	Impact of climate change on the integrity of the superstructure of deteriorated U.S. bridges. PLoS ONE, 2019, 14, e0223307.	1.1	7
72	Blast response of a thin oriented strand board wall. Engineering Structures, 2019, 201, 109835.	2.6	7

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73	Achieving Residential Coastal Communities Resilient to Tropical Cyclones and Climate Change. Frontiers in Built Environment, 2021, 6, .	1.2	7
74	Life-cycle analysis (LCA) to restore community building portfolios by building back better I: Building portfolio LCA. Structural Safety, 2020, 84, 101919.	2.8	6
75	Life-cycle analysis (LCA) to restore community building portfolios by building back better II: Decision formulation. Structural Safety, 2020, 84, 101921.	2.8	6
76	Preliminary Documented Recovery Patterns and Observations from Video Cataloged Data of the 2011 Joplin, Missouri, Tornado. Natural Hazards Review, 2021, 22, 05020015.	0.8	6
77	Review of Steel Bridges with Fracture-Critical Elements. Transportation Research Record, 2005, 1928, 74-82.	1.0	5
78	Seismic risk assessment of a steel building supported on helical pile groups. Acta Geotechnica, 2022, 17, 289-301.	2.9	5
79	Multi-Hazard Multi-Objective Optimization of Building Systems with Isolated Floors Under Seismic and Wind Demands. , 2016, , 141-164.		5
80	Predicting the Onset of Instability in Steel Columns Subjected to Earthquakes Followed by Nonuniform Longitudinal Temperature Profiles. Journal of Structural Engineering, 2018, 144, .	1.7	4
81	Multi-performance blast pressure-duration curves of laminated glass panes. International Journal of Protective Structures, 2021, 12, 226-244.	1.4	4
82	Life-cycle cost and sustainability analysis of light-frame wood residential communities exposed to tornadoes. Natural Hazards, 2021, 109, 523-544.	1.6	4
83	Strength Determination and Fracture Characteristics of Bolted Connections. Journal of Structural Engineering, 2021, 147, .	1.7	4
84	Approach-Span Failure of the Hoan Bridge as a Case Study for Engineering Students and Practicing Engineers. Journal of Performance of Constructed Facilities, 2014, 28, 341-348.	1.0	3
85	A Framework for Collapse Vulnerability Assessment of Steel Beams Subjected to Increasing Loads and Nonuniform Longitudinal Temperature. Journal of Structural Engineering, 2019, 145, 04019017.	1.7	3
86	Hindcasting Loss and Evaluating Implications of Track Location for the 2011 Joplin, Missouri Tornado. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2020, 6, .	0.7	3
87	Block Shear Strength of Coped Beam Connections with Double Bolt Lines. Journal of Structural Engineering, 2022, 148, .	1.7	2
88	Concluding the 2017 Hurricane Season: Evaluation of Impact Level Forecasts with Varied Meteorological Hazards. Natural Hazards Review, 2020, 21, 04019011.	0.8	1
89	Framework for Post-Wildfire Investigation of Buildings: Integrating LiDAR Data and Numerical Modeling. Fire Technology, 2021, 57, 2407-2432.	1.5	1
90	Seismic Collapse Risk Assessment of Braced Frames under Near-Fault Earthquakes. Metals, 2021, 11, 1271.	1.0	1

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91	Challenges and alternative approaches for simulating the response of steel structures exposed to fire. , 2015, , .		1
92	Update article: applicability of artificial neural networks to integrate socio-technical drivers of buildings recovery following extreme wind events. Royal Society Open Science, 2021, 8, 211014.	1.1	1
93	Recommendations on Achieving Healthcare Resilience Following Extreme Events. , 2022, , 211-233.		0