Sujith Mangalathu

List of Publications by Year
in descending order

62 papers	3,251 citations	185998 28 h-index	149479 56 g-index
63 all docs	63 docs citations	63 times ranked	1274 citing authors

#	Article	IF	Citations
1	Failure mode and effects analysis of RC members based on machine-learning-based SHapley Additive exPlanations (SHAP) approach. Engineering Structures, 2020, 219, 110927.	2.6	354
2	Classification of failure mode and prediction of shear strength for reinforced concrete beam-column joints using machine learning techniques. Engineering Structures, 2018, 160, 85-94.	2.6	205
3	Artificial neural network based multi-dimensional fragility development of skewed concrete bridge classes. Engineering Structures, 2018, 162, 166-176.	2.6	170
4	Data-driven machine-learning-based seismic failure mode identification of reinforced concrete shear walls. Engineering Structures, 2020, 208, 110331.	2.6	170
5	Machine Learningâ€"Based Failure Mode Recognition of Circular Reinforced Concrete Bridge Columns: Comparative Study. Journal of Structural Engineering, 2019, 145, .	1.7	158
6	Interpretable XGBoost-SHAP Machine-Learning Model for Shear Strength Prediction of Squat RC Walls. Journal of Structural Engineering, 2021, 147, .	1.7	151
7	Implementing ensemble learning methods to predict the shear strength of RC deep beams with/without web reinforcements. Engineering Structures, 2021, 235, 111979.	2.6	147
8	Data-driven shear strength prediction of steel fiber reinforced concrete beams using machine learning approach. Engineering Structures, 2021, 233, 111743.	2.6	143
9	Classifying earthquake damage to buildings using machine learning. Earthquake Spectra, 2020, 36, 183-208.	1.6	135
10	Rapid seismic damage evaluation of bridge portfolios using machine learning techniques. Engineering Structures, 2019, 201, 109785.	2.6	113
11	Critical uncertainty parameters influencing seismic performance of bridges using Lasso regression. Earthquake Engineering and Structural Dynamics, 2018, 47, 784-801.	2.5	111
12	Predicting the dissolution kinetics of silicate glasses using machine learning. Journal of Non-Crystalline Solids, 2018, 487, 37-45.	1.5	100
13	Stripeâ€based fragility analysis of multispan concrete bridge classes using machine learning techniques. Earthquake Engineering and Structural Dynamics, 2019, 48, 1238-1255.	2.5	80
14	ANCOVA-based grouping of bridge classes for seismic fragility assessment. Engineering Structures, 2016, 123, 379-394.	2.6	66
15	Deep learning-based classification of earthquake-impacted buildings using textual damage descriptions. International Journal of Disaster Risk Reduction, 2019, 36, 101111.	1.8	64
16	Machine-learning interpretability techniques for seismic performance assessment of infrastructure systems. Engineering Structures, 2022, 250, 112883.	2.6	61
17	Parameterized Seismic Fragility Curves for Curved Multi-frame Concrete Box-Girder Bridges Using Bayesian Parameter Estimation. Journal of Earthquake Engineering, 2019, 23, 954-979.	1.4	57
18	Permeable piles: An alternative to improve the performance of driven piles. Computers and Geotechnics, 2017, 84, 78-87.	2.3	55

#	Article	IF	Citations
19	Fragility analysis of gray iron pipelines subjected to tunneling induced ground settlement. Tunnelling and Underground Space Technology, 2018, 76, 133-144.	3.0	54
20	Bridge classes for regional seismic risk assessment: Improving HAZUS models. Engineering Structures, 2017, 148, 755-766.	2.6	53
21	Review of strength models for masonry spandrels. Bulletin of Earthquake Engineering, 2013, 11, 521-542.	2.3	51
22	Explainable machine learning models for punching shear strength estimation of flat slabs without transverse reinforcement. Journal of Building Engineering, 2021, 39, 102300.	1.6	49
23	Dataâ€driven rapid damage evaluation for lifeâ€cycle seismic assessment of regional reinforced concrete bridges. Earthquake Engineering and Structural Dynamics, 2022, 51, 2730-2751.	2.5	49
24	Fragility analysis of continuous pipelines subjected to transverse permanent ground deformation. Soils and Foundations, 2018, 58, 1400-1413.	1.3	48
25	Machine learning-based approaches for seismic demand and collapse of ductile reinforced concrete building frames. Journal of Building Engineering, 2021, 34, 101905.	1.6	41
26	Laboratory investigation of pore pressure dissipation in clay around permeable piles. Canadian Geotechnical Journal, 2018, 55, 1257-1267.	1.4	37
27	Ground Motion-Dependent Rapid Damage Assessment of Structures Based on Wavelet Transform and Image Analysis Techniques. Journal of Structural Engineering, 2020, 146, .	1.7	35
28	Displacement-Dependent Lateral Earth Pressure Models. Journal of Engineering Mechanics - ASCE, 2018, 144, .	1.6	32
29	Enhanced fragility analysis of buried pipelines through Lasso regression. Acta Geotechnica, 2020, 15, 471-487.	2.9	28
30	Performanceâ€based grouping methods of bridge classes for regional seismic risk assessment: Application of <scp>ANOVA</scp>, <scp>ANCOVA</scp>, and nonâ€parametric approaches. Earthquake Engineering and Structural Dynamics, 2017, 46, 2587-2602.	2.5	27
31	A comparative analytical study on the fragility assessment of box-girder bridges with various column shapes. Engineering Structures, 2017, 153, 460-478.	2.6	27
32	Simplified evaluation of pipe strains crossing a normal fault through the dissipated energy method. Engineering Structures, 2018, 167, 393-406.	2.6	27
33	Skew Adjustment Factors for Fragilities of California Box-Girder Bridges Subjected to near-Fault and Far-Field Ground Motions. Journal of Bridge Engineering, 2019, 24, .	1.4	25
34	Regional Seismic Risk Assessment of Infrastructure Systems through Machine Learning: Active Learning Approach. Journal of Structural Engineering, 2020, 146, .	1.7	25
35	Probabilistic Seismic Vulnerability Assessment of Tall Horizontally Curved Concrete Bridges in California. Journal of Performance of Constructed Facilities, 2018, 32, .	1.0	23
36	Stochastic response of reinforced concrete buildings using high dimensional model representation. Engineering Structures, 2019, 179, 412-422.	2.6	21

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37	Numerical Study on the Peak Strength of Masonry Spandrels with Arches. Journal of Earthquake Engineering, 2014, 18, 169-186.	1.4	20
38	Compressive and flexural behaviour of reinforced concrete permeable piles. Engineering Structures, 2017, 147, 316-327.	2.6	20
39	Explainable Machine learning on New Zealand strong motion for PGV and PGA. Structures, 2021, 34, 4977-4985.	1.7	20
40	Seismic fragility curves for California concrete bridges with flared two-column bents. Bulletin of Earthquake Engineering, 2019, 17, 4299-4319.	2.3	18
41	Time period estimation of masonry infilled RC frames using machine learning techniques. Structures, 2021, 34, 1560-1566.	1.7	17
42	Effectiveness Assessment of TMDs in Bridges under Strong Winds Incorporating Machine-Learning Techniques. Journal of Performance of Constructed Facilities, 2022, 36, .	1.0	15
43	Seismic robustness assessment of steel moment resisting frames employing material uncertainty incorporated incremental dynamic analysis. Journal of Constructional Steel Research, 2022, 191, 107200.	1.7	14
44	Estimation of economic seismic loss of steel moment-frame buildings using a machine learning algorithm. Engineering Structures, 2022, 254, 113877.	2.6	13
45	Estimating under-reporting of COVID-19 cases in Indian states: an approach using a delay-adjusted case fatality ratio. BMJ Open, 2021, 11, e042584.	0.8	12
46	Bridge fragilities to network fragilities in seismic scenarios: An integrated approach. Engineering Structures, 2021, 237, 112212.	2.6	12
47	Seismic damage state predictions of reinforced concrete structures using stacked long short-term memory neural networks. Journal of Building Engineering, 2022, 46, 103737.	1.6	12
48	Quantifying the effects of longâ€duration earthquake ground motions on the financial losses of steel moment resisting frame buildings of varying design risk category. Earthquake Engineering and Structural Dynamics, 2021, 50, 1451-1468.	2.5	11
49	The effect of rupture directivity, distance and skew angle on the collapse fragilities of bridges. Bulletin of Earthquake Engineering, 2021, 19, 5843-5869.	2.3	11
50	Fragility functions for highway RC bridge under various flood scenarios. Engineering Structures, 2022, 260, 114244.	2.6	11
51	Reliability analysis and design of cantilever RC retaining walls against sliding failure. International Journal of Geotechnical Engineering, 2011, 5, 131-141.	1.1	10
52	Control equation of feasible pre-stresses and feasibility of new types of rotating surface cable domes. Engineering Structures, 2021, 246, 113000.	2.6	10
53	Adjustment Factors to Account for the Effect of Bridge Deck Horizontal Curvature on the Seismic Response of Concrete Box-Girder Bridges in California. Earthquake Spectra, 2018, 34, 893-914.	1.6	8
54	Machine Learningâ€"Based Seismic Reliability Assessment of Bridge Networks. Journal of Structural Engineering, 2022, 148, .	1.7	8

#	Article	IF	Citations
55	Diaphragm abutment Californian bridges subjected to UCERF2 rupture scenarios: Complete damage state evolution with improvements to seismic codes. Soil Dynamics and Earthquake Engineering, 2022, 155, 107204.	1.9	4
56	Seismic Resilience of Concrete Bridges with Flared Columns. Procedia Engineering, 2017, 199, 3065-3070.	1.2	3
57	Basin effects on tall bridges in Seattle from M9 Cascadia scenarios. Engineering Structures, 2022, 260, 114252.	2.6	3
58	The effect of ground motion characteristics on the fragility analysis of reinforced concrete frame buildings in Australia. Structures, 2021, 34, 3583-3595.	1.7	2
59	Effect of material variability on the seismic response of reinforced concrete box-girder bridges for different pier heights. Materials Today: Proceedings, 2022, , .	0.9	2
60	Material Uncertainty Based Seismic Robustness Assessment of Steel Moment-Resisting Frames. Lecture Notes in Civil Engineering, 2022, , 485-494.	0.3	1
61	Focal Mechanism Influence with Azimuth Using Near-Field Simulated Ground Motion: Application to a Multispan Continuous Concrete Single-Frame Box-Girder Bridge. Journal of Bridge Engineering, 2022, 27, .	1.4	0
62	High-Dimensional Model Approach for Stochastic Response of Multispan Box Girder Bridges. Journal of Bridge Engineering, 2022, 27, .	1.4	0