

# Babak Moaveni

## List of Publications by Year in descending order

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74  
papers

2,527  
citations

172207

29  
h-index

197535

49  
g-index

82  
all docs

82  
docs citations

82  
times ranked

1435  
citing authors

#	ARTICLE	IF	CITATIONS
1	Environmental effects on the identified natural frequencies of the Dowling Hall Footbridge. <i>Mechanical Systems and Signal Processing</i> , 2011, 25, 2336-2357.	4.4	199
2	Hierarchical Bayesian model updating for structural identification. <i>Mechanical Systems and Signal Processing</i> , 2015, 64-65, 360-376.	4.4	182
3	Damage identification study of a seven-story full-scale building slice tested on the UCSD-NEES shake table. <i>Structural Safety</i> , 2010, 32, 347-356.	2.8	131
4	Uncertainty and Sensitivity Analysis of Damage Identification Results Obtained Using Finite Element Model Updating. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2009, 24, 320-334.	6.3	129
5	System Identification Study of a 7-Story Full-Scale Building Slice Tested on the UCSD-NEES Shake Table. <i>Journal of Structural Engineering</i> , 2011, 137, 705-717.	1.7	110
6	Probabilistic identification of simulated damage on the Dowling Hall footbridge through Bayesian finite element model updating. <i>Structural Control and Health Monitoring</i> , 2015, 22, 463-483.	1.9	105
7	Effects of changing ambient temperature on finite element model updating of the Dowling Hall Footbridge. <i>Engineering Structures</i> , 2012, 43, 58-68.	2.6	95
8	Crowdsensing Framework for Monitoring Bridge Vibrations Using Moving Smartphones. <i>Proceedings of the IEEE</i> , 2018, 106, 577-593.	16.4	94
9	Accounting for environmental variability, modeling errors, and parameter estimation uncertainties in structural identification. <i>Journal of Sound and Vibration</i> , 2016, 374, 92-110.	2.1	90
10	Finite-Element Model Updating for Assessment of Progressive Damage in a 3-Story Infilled RC Frame. <i>Journal of Structural Engineering</i> , 2013, 139, 1665-1674.	1.7	75
11	Dynamic Testing of Alfred Zampa Memorial Bridge. <i>Journal of Structural Engineering</i> , 2008, 134, 1006-1015.	1.7	72
12	System Identification of Alfred Zampa Memorial Bridge Using Dynamic Field Test Data. <i>Journal of Structural Engineering</i> , 2009, 135, 54-66.	1.7	72
13	Adaptive Kalman filters for nonlinear finite element model updating. <i>Mechanical Systems and Signal Processing</i> , 2020, 143, 106837.	4.4	68
14	Damage Identification of a Composite Beam Using Finite Element Model Updating. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2008, 23, 339-359.	6.3	63
15	Modal Identification Study of Vincent Thomas Bridge Using Simulated Wind-Induced Ambient Vibration Data. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2008, 23, 373-388.	6.3	54
16	Uncertainty Quantification in the Assessment of Progressive Damage in a 7-Story Full-Scale Building Slice. <i>Journal of Engineering Mechanics - ASCE</i> , 2013, 139, 1818-1830.	1.6	51
17	Performance of Medium-to-High Rise Reinforced Concrete Frame Buildings with Masonry Infill in the 2015 Gorkha, Nepal, Earthquake. <i>Earthquake Spectra</i> , 2017, 33, 197-218.	1.6	49
18	An application of finite element model updating for damage assessment of a two-story reinforced concrete building and comparison with lidar. <i>Structural Health Monitoring</i> , 2018, 17, 1129-1150.	4.3	49

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19	Design and Deployment of a Continuous Monitoring System for the Dowling Hall Footbridge. <i>Experimental Techniques</i> , 2013, 37, 15-26.	0.9	44
20	Nonlinear finite element model updating of an infilled frame based on identified time-varying modal parameters during an earthquake. <i>Journal of Sound and Vibration</i> , 2014, 333, 6057-6073.	2.1	43
21	Accounting for amplitude of excitation in model updating through a hierarchical Bayesian approach: Application to a two-story reinforced concrete building. <i>Mechanical Systems and Signal Processing</i> , 2019, 123, 68-83.	4.4	43
22	General Realization Algorithm for Modal Identification of Linear Dynamic Systems. <i>Journal of Engineering Mechanics - ASCE</i> , 2008, 134, 712-722.	1.6	42
23	Deterministic-stochastic subspace identification method for identification of nonlinear structures as time-varying linear systems. <i>Mechanical Systems and Signal Processing</i> , 2012, 31, 40-55.	4.4	42
24	Probabilistic damage identification of a designed 9-story building using modal data in the presence of modeling errors. <i>Engineering Structures</i> , 2017, 131, 542-552.	2.6	41
25	Damage assessment through structural identification of a three-story large-scale precast concrete structure. <i>Earthquake Engineering and Structural Dynamics</i> , 2014, 43, 61-76.	2.5	40
26	Uncertainty analysis of system identification results obtained for a seven-story building slice tested on the UCSD-NEES shake table. <i>Structural Control and Health Monitoring</i> , 2014, 21, 466-483.	1.9	37
27	Effects of variability in ambient vibration data on model updating and damage identification of a 10-story building. <i>Engineering Structures</i> , 2017, 151, 540-553.	2.6	36
28	Bayesian seismic strong-motion response and damage estimation with application to a full-scale seven story shear wall structure. <i>Engineering Structures</i> , 2019, 186, 146-160.	2.6	35
29	Nonlinear model calibration of a shear wall building using time and frequency data features. <i>Mechanical Systems and Signal Processing</i> , 2017, 85, 236-251.	4.4	34
30	System identification and modeling of a dynamically tested and gradually damaged 10-story reinforced concrete building. <i>Earthquake Engineering and Structural Dynamics</i> , 2018, 47, 25-47.	2.5	28
31	Bayesian model updating of nonlinear systems using nonlinear normal modes. <i>Structural Control and Health Monitoring</i> , 2018, 25, e2258.	1.9	28
32	Uncertainty quantification and propagation in dynamic models using ambient vibration measurements, application to a 10-story building. <i>Mechanical Systems and Signal Processing</i> , 2018, 107, 502-514.	4.4	25
33	Mechanics-based model updating for identification and virtual sensing of an offshore wind turbine using sparse measurements. <i>Structural Control and Health Monitoring</i> , 2021, 28, e2647.	1.9	24
34	Hierarchical Bayesian modeling framework for model updating and robust predictions in structural dynamics using modal features. <i>Mechanical Systems and Signal Processing</i> , 2022, 170, 108784.	4.4	23
35	Special Issue on Real-World Applications of Structural Identification and Health Monitoring Methodologies. <i>Journal of Structural Engineering</i> , 2013, 139, 1637-1638.	1.7	22
36	Structural Identification of an 18-Story RC Building in Nepal Using Post-Earthquake Ambient Vibration and Lidar Data. <i>Frontiers in Built Environment</i> , 2017, 3, .	1.2	22

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37	Modeling Error Estimation and Response Prediction of a 10-Story Building Model Through a Hierarchical Bayesian Model Updating Framework. <i>Frontiers in Built Environment</i> , 2019, 5, .	1.2	22
38	Accounting for Modeling Errors and Inherent Structural Variability through a Hierarchical Bayesian Model Updating Approach: An Overview. <i>Sensors</i> , 2020, 20, 3874.	2.1	22
39	Nonlinear model updating through a hierarchical Bayesian modeling framework. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022, 392, 114646.	3.4	20
40	Optimal sensor placement for parameter estimation and virtual sensing of strains on an offshore wind turbine considering sensor installation cost. <i>Mechanical Systems and Signal Processing</i> , 2022, 169, 108787.	4.4	18
41	Bayesian model updating and class selection of a wing-engine structure with nonlinear connections using nonlinear normal modes. <i>Mechanical Systems and Signal Processing</i> , 2022, 165, 108337.	4.4	17
42	Post-earthquake damage identification of an RC school building in Nepal using ambient vibration and point cloud data. <i>Engineering Structures</i> , 2021, 227, 111413.	2.6	16
43	Estimation of blade forces in wind turbines using blade root strain measurements with OpenFAST verification. <i>Renewable Energy</i> , 2022, 184, 662-676.	4.3	14
44	Strain predictions at unmeasured locations of a substructure using sparse response-only vibration measurements. <i>Journal of Civil Structural Health Monitoring</i> , 2021, 11, 1113-1136.	2.0	12
45	Nonlinear dynamic tests of a reinforced concrete frame building at different damage levels. <i>Earthquake Engineering and Structural Dynamics</i> , 2020, 49, 924-945.	2.5	9
46	Joint parameter-input estimation for virtual sensing on an offshore platform using output-only measurements. <i>Mechanical Systems and Signal Processing</i> , 2022, 170, 108814.	4.4	9
47	Vibration Monitoring of Two Long-Span Floors Equipped with Tuned Mass Dampers. <i>International Journal of Structural Stability and Dynamics</i> , 2019, 19, 1950101.	1.5	6
48	Detecting Demolished Buildings after a Natural Hazard Using High Resolution RGB Satellite Imagery and Modified U-Net Convolutional Neural Networks. <i>Remote Sensing</i> , 2021, 13, 2176.	1.8	6
49	Nonlinear Structural Identification of a Three-Story Infilled Frame Using Instantaneous Modal Parameters. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2012, , 669-674.	0.3	5
50	Real-time damage assessment using fiber optic grating sensors. , 2003, 5278, 110.		4
51	System Identification of a Three-Story Infilled RC Frame Tested on the UCSD-NEES Shake Table. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011, , 135-143.	0.3	4
52	Damage Identification of a Three-Story Infilled RC Frame Tested on the UCSD-NEES Shake Table. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011, , 145-154.	0.3	4
53	Probabilistic Damage Identification of the Dowling Hall Footbridge Using Bayesian FE Model Updating. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013, , 43-51.	0.3	4
54	Nonlinear Identification of a Seven-Story Shear Wall Building Based on Numerically Simulated Seismic Data. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014, , 245-254.	0.3	4

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55	Bayesian FE Model Updating in the Presence of Modeling Errors. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 119-133.	0.3	4
56	Adaptive Bayesian Inference Framework for Joint Model and Noise Identification. Journal of Engineering Mechanics - ASCE, 2022, 148, .	1.6	4
57	Nonlinear Finite Element Model Updating of a Large-Scale Infilled Frame Structures Based on Instantaneous Modal Parameters. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 85-90.	0.3	2
58	System and Damage Identification of Civil Structures. , 2014, , 1-9.		2
59	Structural Identification for Dynamic Strain Estimation in Wind Turbine Towers. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 239-245.	0.3	2
60	Estimating Fatigue in the Main Bearings of Wind Turbines Using Experimental Data. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 163-171.	0.3	2
61	Full-scale testing results of structural damage detection using long-gage fiber Bragg gratings and modal analysis. , 2003, 5057, 467.		1
62	Structural Identification of a Five-Story Reinforced Concrete Office Building in Nepal. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 235-237.	0.3	1
63	Model Updating and Damage Assessment of a RC Structure Using an Iterative Eigenvalue Problem. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 355-358.	0.3	1
64	Bayesian Model Updating of a Damaged School Building in Sankhu, Nepal. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 235-244.	0.3	1
65	Comparative Study on Modal Identification of a 10 Story RC Structure Using Free, Ambient and Forced Vibration Data. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 267-276.	0.3	1
66	Hierarchical Bayesian Calibration and Response Prediction of a 10-Story Building Model. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 153-165.	0.3	1
67	Post-earthquake Field Measurement-Based System Identification and Finite Element Modeling of an 18-Story Masonry-Infilled RC Building. Lecture Notes in Civil Engineering, 2018, , 746-757.	0.3	1
68	Experimental Modal Analysis of a Full-Scale Seven-Story Shear Wall Based on Nonlinear Seismic Response. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 369-373.	0.3	0
69	A Bayesian Inversion Approach for Site Characterization Using Surface Wave Measurements. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 159-161.	0.3	0
70	Augmented Sequential Bayesian Filtering for Parameter and Modeling Error Estimation of Linear Dynamic Systems. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 163-165.	0.3	0
71	Bayesian FE Model Updating of the Dowling Hall Footbridge. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 283-285.	0.3	0
72	System and Damage Identification of Civil Structures. , 2015, , 3732-3740.		0

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73	Model Updating of a Wing-Engine Structure with Nonlinear Connections. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 373-374.	0.3	0
74	Nonlinear Model Updating Using Recursive and Batch Bayesian Methods. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 279-286.	0.3	0