Babak Moaveni

List of Publications by Citations

77 papers	1,777 citations	25 h-index	41 g-index
82 ext. papers	2,160 ext. citations	3.3 avg, IF	5.23 L-index

#	Paper	IF	Citations
77	Environmental effects on the identified natural frequencies of the Dowling Hall Footbridge. *Mechanical Systems and Signal Processing*, **2011**, 25, 2336-2357	7.8	155
76	Hierarchical Bayesian model updating for structural identification. *Mechanical Systems and Signal Processing*, **2015**, 64-65, 360-376	7.8	118
75	Uncertainty and Sensitivity Analysis of Damage Identification Results Obtained Using Finite Element Model Updating. *Computer-Aided Civil and Infrastructure Engineering*, **2009**, 24, 320-334	8.4	118
74	Damage identification study of a seven-story full-scale building slice tested on the UCSD-NEES shake table. *Structural Safety*, **2010**, 32, 347-356	4.9	104
73	System Identification Study of a 7-Story Full-Scale Building Slice Tested on the UCSD-NEES Shake Table. *Journal of Structural Engineering*, **2011**, 137, 705-717	3	92
72	Effects of changing ambient temperature on finite element model updating of the Dowling Hall Footbridge. *Engineering Structures*, **2012**, 43, 58-68	4.7	78
71	Probabilistic identification of simulated damage on the Dowling Hall footbridge through Bayesian finite element model updating. *Structural Control and Health Monitoring*, **2015**, 22, 463-483	4.5	74
70	Dynamic Testing of Alfred Zampa Memorial Bridge. *Journal of Structural Engineering*, **2008**, 134, 1006-1015	3	63
69	System Identification of Alfred Zampa Memorial Bridge Using Dynamic Field Test Data. *Journal of Structural Engineering*, **2009**, 135, 54-66	3	62
68	Finite-Element Model Updating for Assessment of Progressive Damage in a 3-Story Infilled RC Frame. *Journal of Structural Engineering*, **2013**, 139, 1665-1674	3	59
67	Damage Identification of a Composite Beam Using Finite Element Model Updating. *Computer-Aided Civil and Infrastructure Engineering*, **2008**, 23, 339-359	8.4	58
66	Accounting for environmental variability, modeling errors, and parameter estimation uncertainties in structural identification. *Journal of Sound and Vibration*, **2016**, 374, 92-110	3.9	55
65	Crowdsensing Framework for Monitoring Bridge Vibrations Using Moving Smartphones. *Proceedings of the IEEE*, **2018**, 106, 577-593	14.3	54
64	Modal Identification Study of Vincent Thomas Bridge Using Simulated Wind-Induced Ambient Vibration Data. *Computer-Aided Civil and Infrastructure Engineering*, **2008**, 23, 373-388	8.4	49
63	Uncertainty Quantification in the Assessment of Progressive Damage in a 7-Story Full-Scale Building Slice. *Journal of Engineering Mechanics - ASCE*, **2013**, 139, 1818-1830	2.4	46
62	An application of finite element model updating for damage assessment of a two-story reinforced concrete building and comparison with lidar. *Structural Health Monitoring*, **2018**, 17, 1129-1150	4.4	36
61	Nonlinear finite element model updating of an infilled frame based on identified time-varying modal parameters during an earthquake. *Journal of Sound and Vibration*, **2014**, 333, 6057-6073	3.9	35

60	Design and Deployment of a Continuous Monitoring System for the Dowling Hall Footbridge. *Experimental Techniques*, **2013**, 37, 15-26	1.4	34
59	Damage assessment through structural identification of a three-story large-scale precast concrete structure. *Earthquake Engineering and Structural Dynamics*, **2014**, 43, 61-76	4	33
58	Probabilistic damage identification of a designed 9-story building using modal data in the presence of modeling errors. *Engineering Structures*, **2017**, 131, 542-552	4.7	32
57	Uncertainty analysis of system identification results obtained for a seven-story building slice tested on the UCSD-NEES shake table. *Structural Control and Health Monitoring*, **2014**, 21, 466-483	4.5	31
56	Performance of Medium-to-High Rise Reinforced Concrete Frame Buildings with Masonry Infill in the 2015 Gorkha, Nepal, Earthquake. *Earthquake Spectra*, **2017**, 33, 197-218	3.4	30
55	Deterministic-stochastic subspace identification method for identification of nonlinear structures as time-varying linear systems. *Mechanical Systems and Signal Processing*, **2012**, 31, 40-55	7.8	30
54	General Realization Algorithm for Modal Identification of Linear Dynamic Systems. *Journal of Engineering Mechanics - ASCE*, **2008**, 134, 712-722	2.4	28
53	Effects of variability in ambient vibration data on model updating and damage identification of a 10-story building. *Engineering Structures*, **2017**, 151, 540-553	4.7	25
52	System identification and modeling of a dynamically tested and gradually damaged 10-story reinforced concrete building. *Earthquake Engineering and Structural Dynamics*, **2018**, 47, 25-47	4	24
51	Adaptive Kalman filters for nonlinear finite element model updating. *Mechanical Systems and Signal Processing*, **2020**, 143, 106837	7.8	24
50	Nonlinear model calibration of a shear wall building using time and frequency data features. *Mechanical Systems and Signal Processing*, **2017**, 85, 236-251	7.8	23
49	Uncertainty quantification and propagation in dynamic models using ambient vibration measurements, application to a 10-story building. *Mechanical Systems and Signal Processing*, **2018**, 107, 502-514	7.8	21
48	Accounting for amplitude of excitation in model updating through a hierarchical Bayesian approach: Application to a two-story reinforced concrete building. *Mechanical Systems and Signal Processing*, **2019**, 123, 68-83	7.8	21
47	Bayesian model updating of nonlinear systems using nonlinear normal modes. *Structural Control and Health Monitoring*, **2018**, 25, e2258	4.5	20
46	Bayesian seismic strong-motion response and damage estimation with application to a full-scale seven story shear wall structure. *Engineering Structures*, **2019**, 186, 146-160	4.7	19
45	Special Issue on Real-World Applications of Structural Identification and Health Monitoring Methodologies. *Journal of Structural Engineering*, **2013**, 139, 1637-1638	3	17
44	Structural Identification of an 18-Story RC Building in Nepal Using Post-Earthquake Ambient Vibration and Lidar Data. *Frontiers in Built Environment*, **2017**, 3,	2.2	16
43	Modeling Error Estimation and Response Prediction of a 10-Story Building Model Through a Hierarchical Bayesian Model Updating Framework. *Frontiers in Built Environment*, **2019**, 5,	2.2	15

42	Mechanics-based model updating for identification and virtual sensing of an offshore wind turbine using sparse measurements. *Structural Control and Health Monitoring*, **2021**, 28, e2647	4.5	7
41	Post-earthquake damage identification of an RC school building in Nepal using ambient vibration and point cloud data. *Engineering Structures*, **2021**, 227, 111413	4.7	7
40	Effects of Prediction Error Bias on Model Calibration and Response Prediction of a 10-Story Building. *Conference Proceedings of the Society for Experimental Mechanics*, **2016**, 279-291	0.3	5
39	Accounting for Modeling Errors and Inherent Structural Variability through a Hierarchical Bayesian Model Updating Approach: An Overview. *Sensors*, **2020**, 20,	3.8	5
38	Hierarchical Bayesian Model Updating for Probabilistic Damage Identification. *Conference Proceedings of the Society for Experimental Mechanics*, **2015**, 55-66	0.3	4
37	Nonlinear dynamic tests of a reinforced concrete frame building at different damage levels. *Earthquake Engineering and Structural Dynamics*, **2020**, 49, 924-945	4	4
36	Nonlinear Identification of a Seven-Story Shear Wall Building Based on Numerically Simulated Seismic Data. *Conference Proceedings of the Society for Experimental Mechanics*, **2014**, 245-254	0.3	4
35	System Identification of a Three-Story Infilled RC Frame Tested on the UCSD-NEES Shake Table. *Conference Proceedings of the Society for Experimental Mechanics*, **2011**, 135-143	0.3	4
34	Damage Identification of a Three-Story Infilled RC Frame Tested on the UCSD-NEES Shake Table. *Conference Proceedings of the Society for Experimental Mechanics*, **2011**, 145-154	0.3	4
33	Probabilistic Damage Identification of the Dowling Hall Footbridge Using Bayesian FE Model Updating. *Conference Proceedings of the Society for Experimental Mechanics*, **2013**, 43-51	0.3	4
32	Vibration Monitoring of Two Long-Span Floors Equipped with Tuned Mass Dampers. *International Journal of Structural Stability and Dynamics*, **2019**, 19, 1950101	1.9	3
31	Bayesian FE Model Updating in the Presence of Modeling Errors. *Conference Proceedings of the Society for Experimental Mechanics*, **2014**, 119-133	0.3	3
30	Nonlinear Structural Identification of a Three-Story Infilled Frame Using Instantaneous Modal Parameters. *Conference Proceedings of the Society for Experimental Mechanics*, **2012**, 669-674	0.3	3
29	Structural Identification for Dynamic Strain Estimation in Wind Turbine Towers. *Conference Proceedings of the Society for Experimental Mechanics*, **2019**, 239-245	0.3	2
28	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
27	Hierarchical Bayesian modeling framework for model updating and robust predictions in structural dynamics using modal features. *Mechanical Systems and Signal Processing*, **2022**, 170, 108784	7.8	2
26	Strain predictions at unmeasured locations of a substructure using sparse response-only vibration measurements. *Journal of Civil Structural Health Monitoring*, **2021**, 11, 1113	2.9	2
25	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

24	Bayesian model updating and class selection of a wing-engine structure with nonlinear connections using nonlinear normal modes. *Mechanical Systems and Signal Processing*, **2022**, 165, 108337	7.8	2
23	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
22	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
21	Optimal sensor placement for parameter estimation and virtual sensing of strains on an offshore wind turbine considering sensor installation cost. *Mechanical Systems and Signal Processing*, **2022**, 169, 108787	7.8	1
20	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
19	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
18	Joint parameter-input estimation for virtual sensing on an offshore platform using output-only measurements. *Mechanical Systems and Signal Processing*, **2022**, 170, 108814	7.8	0
17	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	0
16	Detecting Demolished Buildings after a Natural Hazard Using High Resolution RGB Satellite Imagery and Modified U-Net Convolutional Neural Networks. *Remote Sensing*, **2021**, 13, 2176	5	0
15	Nonlinear model updating through a hierarchical Bayesian modeling framework. *Computer Methods in Applied Mechanics and Engineering*, **2022**, 392, 114646	5.7	0
14	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	
13	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	
12	Hierarchical Bayesian Model Updating for Nonlinear Structures Using Response Time Histories. *Conference Proceedings of the Society for Experimental Mechanics*, **2022**, 91-95	0.3	
11	Nonlinear Model Updating Using Recursive and Batch Bayesian Methods. *Conference Proceedings of the Society for Experimental Mechanics*, **2020**, 279-286	0.3	
10	Two-Stage Hierarchical Bayesian Framework for Finite Element Model Updating. *Conference Proceedings of the Society for Experimental Mechanics*, **2020**, 383-387	0.3	
9	Fatigue Life Analysis of Main Shaft Bearings in Wind Turbines Using Strain Measurements Collected on Blades. *Conference Proceedings of the Society for Experimental Mechanics*, **2021**, 185-192	0.3	
8	Model Updating of a Wing-Engine Structure with Nonlinear Connections. *Conference Proceedings of the Society for Experimental Mechanics*, **2019**, 373-374	0.3	
7	System and Damage Identification of Civil Structures **2015**, 3732-3740		

6	Bayesian FE Model Updating of the Dowling Hall Footbridge. *Conference Proceedings of the Society for Experimental Mechanics*, **2012**, 283-285	0.3
5	System Identification of a Three-Story Precast Concrete Parking Structure. *Conference Proceedings of the Society for Experimental Mechanics*, **2013**, 299-305	0.3
4	A Bayesian Inversion Approach for Site Characterization Using Surface Wave Measurements. *Conference Proceedings of the Society for Experimental Mechanics*, **2020**, 159-161	0.3
3	Bayesian Model Updating of a Five-Story Building Using Zero-Variance Sampling Method. *Conference Proceedings of the Society for Experimental Mechanics*, **2020**, 149-151	0.3
2	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
1	Digital Twinning of Modeling for Offshore Wind Turbine Drivetrain Monitoring: A Numerical Study. *Conference Proceedings of the Society for Experimental Mechanics*, **2023**, 135-137	0.3