Matthew J Whelan

List of Publications by Year
in descending order

51	563	933447 10	642732 23
papers	citations	h-index	g-index

53	53	53	598
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Real-time wireless vibration monitoring for operational modal analysis of an integral abutment highway bridge. Engineering Structures, 2009, 31, 2224-2235.	5.3	90
2	Design of a Robust, High-rate Wireless Sensor Network for Static and Dynamic Structural Monitoring. Journal of Intelligent Material Systems and Structures, 2009, 20, 849-863.	2.5	76
3	Damage detection in an experimental bridge model using Hilbert-Huang transform of transient vibrations. Structural Control and Health Monitoring, 2013, 20, 1-15.	4.0	67
4	Wireless Monitoring of a Multispan Bridge Superstructure for Diagnostic Load Testing and System Identification. Computer-Aided Civil and Infrastructure Engineering, 2011, 26, 560-579.	9.8	56
5	Highway Bridge Assessment Using an Adaptive Real-Time Wireless Sensor Network. IEEE Sensors Journal, 2009, 9, 1405-1413.	4.7	51
6	In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study. Journal of Bridge Engineering, 2010, 15, 597-607.	2.9	31
7	Dynamic identification of axial force and boundary restraints in tie rods and cables with uncertainty quantification using Set Inversion Via Interval Analysis. Journal of Sound and Vibration, 2018, 423, 401-420.	3.9	18
8	Structural Identification and Damage Characterization of a Masonry Infill Wall in a Full-Scale Building Subjected to Internal Blast Load. Journal of Structural Engineering, 2015, 141, .	3.4	14
9	Structural identification of a tied arch bridge using parallel genetic algorithms and ambient vibration monitoring with a wireless sensor network. Journal of Civil Structural Health Monitoring, 2018, 8, 315-330.	3.9	14
10	Characterising the effect of external factors on deterioration rates of bridge components using multivariate proportional hazards regression. Structure and Infrastructure Engineering, 2017, 13, 894-905.	3.7	12
11	Vibration-based damage detection with uncertainty quantification by structural identification using nonlinear constraint satisfaction with interval arithmetic. Structural Health Monitoring, 2019, 18, 1569-1589.	7.5	10
12	Wireless operational modal analysis of a multi-span prestressed concrete bridge for structural identification. Smart Structures and Systems, 2010, 6, 579-593.	1.9	10
13	Experimental characterization and diagnostics of the earlyâ€age behavior of a semiâ€integral abutment FRP deck bridge. Sensor Review, 2012, 32, 296-309.	1.8	9
14	Multivariable Proportional Hazards-Based Probabilistic Model for Bridge Deterioration Forecasting. Journal of Infrastructure Systems, 2020, 26, .	1.8	9
15	Development of a wireless bridge monitoring system for condition assessment using hybrid techniques. , 2007, , .		8
16	Deployment of a dense hybrid wireless sensing system for bridge assessment. Structure and Infrastructure Engineering, 2011, 7, 369-378.	3.7	8
17	Development of performance assessment tools for a highway bridge resulting from controlled progressive monitoring. Structure and Infrastructure Engineering, 2014, 10, 551-567.	3.7	8
18	Structural identification using a nonlinear constraint satisfaction processor with interval arithmetic and contractor programming. Computers and Structures, 2017, 188, 1-16.	4.4	8

#	Article	IF	Citations
19	Interface Stresses between Soil and Large Diameter Drilled Shaft under Lateral Loading. , 2004, , 816.		6
20	Field deployment of a dense wireless sensor network for condition assessment of a bridge superstructure. , 2008, , .		6
21	Wireless vibration monitoring for damage detection of highway bridges. , 2008, , .		6
22	Assessment of Simplified Linear Dynamic Analysis of a Multispan Skew Bridge on Steel-Reinforced Elastomeric Bearings. Journal of Bridge Engineering, 2012, 17, 151-160.	2.9	6
23	Influence of fire damage on the modal parameters of a prestressed concrete double-tee joist roof. Structural Control and Health Monitoring, 2014, 21, 1335-1346.	4.0	6
24	Post-Fire Nondestructive Evaluation of a Prestressed Concrete Double-Tee Joist Roof. Journal of Performance of Constructed Facilities, 2015, 29, 04014055.	2.0	6
25	Large scale remote sensing for environmental monitoring of infrastructure. Journal of Environmental Monitoring, 2008, 10, 812.	2.1	5
26	Effect of measurement uncertainties on strain-based damage diagnostics for highway bridges. Journal of Civil Structural Health Monitoring, 2015, 5, 321-335.	3.9	4
27	Wireless sensing system for bridge condition assessment and health monitoring. , 2009, , .		3
28	Underground Wireless Sensor Networks Using 2ndGeneration RF Transceivers. , 2014, , .		3
29	Blast Testing of Cold-Formed Steel-Stud Wall Panels. Journal of Performance of Constructed Facilities, 2016, 30, 04015008.	2.0	3
30	Integrated monitoring of wind plant systems. , 2008, , .		2
31	Effect of sensor system noise and load positioning on the precision of load testing and rating of highway bridges: a case study. Journal of Structural Integrity and Maintenance, 2017, 2, 234-248.	1.5	2
32	Performance monitoring of a short-span integral-abutment bridge using wireless sensor technology. , 2007, , .		1
33	Case History of a Full Scale Axial Load Test of Sheet Piles. , 2017, , .		1
34	Leveraging Hybrid Simulation for Vibration-Based Damage Detection Studies. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 333-341.	0.5	1
35	The impact of measurement uncertainty from experimental load distribution factors on bridge load rating. , 2018, , .		1
36	Experimental and numerical investigations of glass curtain walls subjected to low- level blast loads. International Journal of Computational Methods and Experimental Measurements, 2015, 3, 121-138.	0.2	1

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37	Structural Identification Using the Applied Element Method: Advantages and Case Study Application. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 255-262.	0.5	1
38	Advanced inline measurement and control tools for sand filling and compaction in lost foam casting. , 2004, 5388, 410.		0
39	Development and optimization of novel sensors for inline measurement of sand filling and compaction stages in lost foam casting. , 2005, , .		0
40	Wireless accelerometer network for process monitoring during mold forming in lost foam casting. , 2006, , .		0
41	Real-time wireless sensing with spatiotemporal tracking. , 2007, , .		0
42	Condition assessment of a bridge superstructure using diagnostic performance indicators. Proceedings of SPIE, 2011, , .	0.8	0
43	Effect of sensor placement on operational modal analysis of steel girder bridges. , 2011, , .		0
44	System identification of a tied arch bridge using reference-based wireless sensor networks. , 2012, , .		0
45	Sensor topologies for application of strain energy damage diagnostics and prognostication. Proceedings of SPIE, 2012, , .	0.8	0
46	Damage identification in highway bridges using distribution factors. , 2017, , .		0
47	Intelligent Transportation Infrastructure Technologies for Condition Assessment and Structural Health Monitoring of Highway Bridges. , 2010, , 159-184.		0
48	Wireless vibration sensors track condition of highway bridges. SPIE Newsroom, 0, , .	0.1	0
49	Experimental Modal Analysis of a Prestressed Concrete Double-Tee Joist Roof Subject to Blast. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 61-69.	0.5	0
50	Experimental Modal Analysis of Double Tee Floors in a Fire Damaged Parking Deck for Post-Fire Vibration-Based Condition Assessment. Conference Proceedings of the Society for Experimental Mechanics, 2021, , 113-120.	0.5	0
51	Structural Identification of Large Finite Element Models Using Commodity Computing Clusters for Parallel Genetic Algorithms. , 0, , .		0