

Matthew J Whelan

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

39
papers

423
citations

9
h-index

20
g-index

53
ext. papers

486
ext. citations

2.6
avg, IF

3.69
L-index

#	Paper	IF	Citations
39	Real-time wireless vibration monitoring for operational modal analysis of an integral abutment highway bridge. <i>Engineering Structures</i> , 2009 , 31, 2224-2235	4.7	78
38	Design of a Robust, High-rate Wireless Sensor Network for Static and Dynamic Structural Monitoring. <i>Journal of Intelligent Material Systems and Structures</i> , 2009 , 20, 849-863	2.3	63
37	Wireless Monitoring of a Multispan Bridge Superstructure for Diagnostic Load Testing and System Identification. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2011 , 26, 560-579	8.4	50
36	Damage detection in an experimental bridge model using Hilbert-Huang transform of transient vibrations. <i>Structural Control and Health Monitoring</i> , 2013 , 20, 1-15	4.5	49
35	Highway Bridge Assessment Using an Adaptive Real-Time Wireless Sensor Network. <i>IEEE Sensors Journal</i> , 2009 , 9, 1405-1413	4	44
34	In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study. <i>Journal of Bridge Engineering</i> , 2010 , 15, 597-607	2.7	23
33	Dynamic identification of axial force and boundary restraints in tie rods and cables with uncertainty quantification using Set Inversion Via Interval Analysis. <i>Journal of Sound and Vibration</i> , 2018 , 423, 401-420	3.9	11
32	Characterising the effect of external factors on deterioration rates of bridge components using multivariate proportional hazards regression. <i>Structure and Infrastructure Engineering</i> , 2017 , 13, 894-905	2.9	10
31	Structural Identification and Damage Characterization of a Masonry Infill Wall in a Full-Scale Building Subjected to Internal Blast Load. <i>Journal of Structural Engineering</i> , 2015 , 141,	3	9
30	Wireless operational modal analysis of a multi-span prestressed concrete bridge for structural identification. <i>Smart Structures and Systems</i> , 2010 , 6, 579-593		9
29	Structural identification using a nonlinear constraint satisfaction processor with interval arithmetic and contractor programming. <i>Computers and Structures</i> , 2017 , 188, 1-16	4.5	7
28	Structural identification of a tied arch bridge using parallel genetic algorithms and ambient vibration monitoring with a wireless sensor network. <i>Journal of Civil Structural Health Monitoring</i> , 2018 , 8, 315-330	2.9	6
27	Development of performance assessment tools for a highway bridge resulting from controlled progressive monitoring. <i>Structure and Infrastructure Engineering</i> , 2014 , 10, 551-567	2.9	6
26	Vibration-based damage detection with uncertainty quantification by structural identification using nonlinear constraint satisfaction with interval arithmetic. <i>Structural Health Monitoring</i> , 2019 , 18, 1569-1589	4.4	6
25	Deployment of a dense hybrid wireless sensing system for bridge assessment. <i>Structure and Infrastructure Engineering</i> , 2011 , 7, 369-378	2.9	5
24	Experimental characterization and diagnostics of the early-age behavior of a semi-integral abutment FRP deck bridge. <i>Sensor Review</i> , 2012 , 32, 296-309	1.4	5
23	Multivariable Proportional Hazards-Based Probabilistic Model for Bridge Deterioration Forecasting. <i>Journal of Infrastructure Systems</i> , 2020 , 26, 04020007	2.9	4

22	Influence of fire damage on the modal parameters of a prestressed concrete double-tee joist roof. <i>Structural Control and Health Monitoring</i> , 2014 , 21, 1335-1346	4.5	4
21	Large scale remote sensing for environmental monitoring of infrastructure. <i>Journal of Environmental Monitoring</i> , 2008 , 10, 812-6		4
20	Post-Fire Nondestructive Evaluation of a Prestressed Concrete Double-Tee Joist Roof. <i>Journal of Performance of Constructed Facilities</i> , 2015 , 29, 04014055	2	3
19	Effect of measurement uncertainties on strain-based damage diagnostics for highway bridges. <i>Journal of Civil Structural Health Monitoring</i> , 2015 , 5, 321-335	2.9	3
18	Assessment of Simplified Linear Dynamic Analysis of a Multispan Skew Bridge on Steel-Reinforced Elastomeric Bearings. <i>Journal of Bridge Engineering</i> , 2012 , 17, 151-160	2.7	3
17	Wireless sensing system for bridge condition assessment and health monitoring 2009 ,		3
16	Field deployment of a dense wireless sensor network for condition assessment of a bridge superstructure 2008 ,		3
15	Underground Wireless Sensor Networks Using 2ndGeneration RF Transceivers 2014 ,		2
14	Integrated monitoring of wind plant systems 2008 ,		2
13	Development of a wireless bridge monitoring system for condition assessment using hybrid techniques 2007 ,		2
12	Interface Stresses between Soil and Large Diameter Drilled Shaft under Lateral Loading 2004 , 816		2
11	Blast Testing of Cold-Formed Steel-Stud Wall Panels. <i>Journal of Performance of Constructed Facilities</i> , 2016 , 30, 04015008	2	1
10	Effect of sensor system noise and load positioning on the precision of load testing and rating of highway bridges: a case study. <i>Journal of Structural Integrity and Maintenance</i> , 2017 , 2, 234-248	1.5	1
9	The impact of measurement uncertainty from experimental load distribution factors on bridge load rating 2018 ,		1
8	Leveraging Hybrid Simulation for Vibration-Based Damage Detection Studies. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016 , 333-341	0.3	1
7	Structural Identification Using the Applied Element Method: Advantages and Case Study Application. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014 , 255-262	0.3	1
6	Advanced inline measurement and control tools for sand filling and compaction in lost foam casting 2004 , 5388, 410		
5	Experimental Modal Analysis of Double Tee Floors in a Fire Damaged Parking Deck for Post-Fire Vibration-Based Condition Assessment. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2021 , 113-120	0.3	

- 4 Influence of Prestressing Strand Damage on Modal Parameters of a Hybrid Composite Bridge Beam. *Conference Proceedings of the Society for Experimental Mechanics*, **2015**, 209-217 0.3
- 3 Formal Analysis of Critical Infrastructures by Structural Identification Using Constraint Programming Paradigm. *Conference Proceedings of the Society for Experimental Mechanics*, **2015**, 255-263^{0.3}
- 2 Intelligent Transportation Infrastructure Technologies for Condition Assessment and Structural Health Monitoring of Highway Bridges **2010**, 159-184
- 1 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 0.3