Onur Avci

List of Publications by Year
in descending order

75 papers	4,118 citations	361045 20 h-index	138251 58 g-index
76 all docs	76 docs citations	76 times ranked	2485 citing authors

#	Article	IF	Citations
1	1D convolutional neural networks and applications: A survey. Mechanical Systems and Signal Processing, 2021, 151, 107398.	4.4	1,005
2	Real-time vibration-based structural damage detection using one-dimensional convolutional neural networks. Journal of Sound and Vibration, 2017, 388, 154-170.	2.1	827
3	A review of vibration-based damage detection in civil structures: From traditional methods to Machine Learning and Deep Learning applications. Mechanical Systems and Signal Processing, 2021, 147, 107077.	4.4	569
4	1-D CNNs for structural damage detection: Verification on a structural health monitoring benchmark data. Neurocomputing, 2018, 275, 1308-1317.	3.5	327
5	1-D Convolutional Neural Networks for Signal Processing Applications. , 2019, , .		167
6	Wireless and real-time structural damage detection: A novel decentralized method for wireless sensor networks. Journal of Sound and Vibration, 2018, 424, 158-172.	2.1	146
7	Active vibration control of flexible cantilever plates using piezoelectric materials and artificial neural networks. Journal of Sound and Vibration, 2016, 363, 33-53.	2.1	118
8	Fault Detection and Severity Identification of Ball Bearings by Online Condition Monitoring. IEEE Transactions on Industrial Electronics, 2019, 66, 8136-8147.	5.2	87
9	Optimization of chiral lattice based metastructures for broadband vibration suppression using genetic algorithms. Journal of Sound and Vibration, 2016, 369, 50-62.	2.1	49
10	Structural Damage Detection in Real Time: Implementation of 1D Convolutional Neural Networks for SHM Applications. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 49-54.	0.3	49
11	Nonparametric Structural Damage Detection Algorithm for Ambient Vibration Response: Utilizing Artificial Neural Networks and Self-Organizing Maps. Journal of Architectural Engineering, 2016, 22, .	0.8	40
12	Self-Organizing Maps for Structural Damage Detection: A Novel Unsupervised Vibration-Based Algorithm. Journal of Performance of Constructed Facilities, 2016, 30, .	1.0	36
13	Iterated square root unscented Kalman filter for nonlinear states and parameters estimation: three DOF damped system. Journal of Civil Structural Health Monitoring, 2015, 5, 493-508.	2.0	31
14	Blind identification of the Millikan Library from earthquake data considering soil-structure interaction. Structural Control and Health Monitoring, 2016, 23, 684-706.	1.9	31
15	Review of Pedestrian Load Models for Vibration Serviceability Assessment of Floor Structures. Vibration, 2019, 2, 1-24.	0.9	30
16	Sensing and Monitoring for Stadium Structures: A Review of Recent Advances and a Forward Look. Frontiers in Built Environment, 2017, 3, .	1.2	29
17	Simplified Vibration Serviceability Evaluation of Slender Monumental Stairs. Journal of Structural Engineering, 2015, 141, .	1.7	28
18	Dynamic Forces Induced by a Single Pedestrian: A Literature Review. Applied Mechanics Reviews, 2017, 69, .	4.5	26

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19	Optimization of linear zigzag insert metastructures for low-frequency vibration attenuation using genetic algorithms. Mechanical Systems and Signal Processing, 2017, 84, 625-641.	4.4	25
20	Convolutional Neural Networks for Real-Time and Wireless Damage Detection. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 129-136.	0.3	21
21	Vibration annoyance assessment of train induced excitations from tunnels embedded in rock. Science of the Total Environment, 2020, 711, 134528.	3.9	21
22	Diaphragm shear strength and stiffness of aluminum roof panel assemblies. Thin-Walled Structures, 2016, 106, 51-60.	2.7	20
23	Recent Issues on Stadium Monitoring and Serviceability: A Review. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 411-416.	0.3	18
24	A numerical and experimental investigation of a special type of floating-slab tracks. Engineering Structures, 2020, 215, 110734.	2.6	18
25	Observations from Vibration Testing of In-Situ Structures. , 2006, , 1.		17
26	Threat and vulnerability risk assessment for existing subway stations: A simplified approach. Case Studies on Transport Policy, 2018, 6, 663-673.	1.1	17
27	Amplitude-Dependent Damping in Vibration Serviceability: Case of a Laboratory Footbridge. Journal of Architectural Engineering, 2016, 22, 04016005.	0.8	16
28	Quantification of Structural Damage with Self-Organizing Maps. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 47-57.	0.3	16
29	Novel Framework for Vibration Serviceability Assessment of Stadium Grandstands Considering Durations of Vibrations. Journal of Structural Engineering, 2018, 144, .	1.7	16
30	A Comparative Assessment of Nonlinear State Estimation Methods for Structural Health Monitoring. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 45-54.	0.3	15
31	Dynamic Testing of a Laboratory Stadium Structure. , 2016, , .		15
32	Operational modal analysis and finite element model updating of a 230Âm tall tower. Structures, 2022, 37, 154-167.	1.7	15
33	A methodological approach towards evaluating structural damage severity using 1D CNNs. Structures, 2021, 34, 4435-4446.	1.7	14
34	A novel video-vibration monitoring system for walking pattern identification on floors. Advances in Engineering Software, 2020, 139, 102710.	1.8	13
35	Effect of Bottom Chord Extensions on the Static Flexural Stiffness of Open-Web Steel Joists. Journal of Performance of Constructed Facilities, 2012, 26, 620-632.	1.0	12
36	Vibrations Serviceability of a Medical Facility Floor for Sensitive Equipment Replacement: Evaluation with Sparse In Situ Data. Practice Periodical on Structural Design and Construction, 2019, 24, .	0.7	12

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37	Early Bearing Fault Diagnosis of Rotating Machinery by 1D Self-Organized Operational Neural Networks. IEEE Access, 2021, 9, 139260-139270.	2.6	12
38	Retrofitting Steel Joist Supported Footbridges for Improved Vibration Response. , 2012, , .		11
39	Modal Parameter Variations due to Joist Bottom Chord Extension Installations on Laboratory Footbridges. Journal of Performance of Constructed Facilities, 2015, 29, .	1.0	11
40	Damage detection using enhanced multivariate statistical process control technique. , 2016, , .		11
41	Effective standoff in standing seam roof systems. Journal of Constructional Steel Research, 2021, 180, 106590.	1.7	11
42	Nonlinear Damping in Floor Vibrations Serviceability: Verification on a Laboratory Structure. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 139-145.	0.3	11
43	Vibrations Assessment of a Hospital Floor for a Magnetic Resonance Imaging Unit (MRI) Replacement. , 2013, , .		10
44	A Study on Effective Mass of One Way Joist Supported Systems. , 2015, , .		10
45	Vibration Testing of Joist Supported Footbridges. , 2010, , .		9
46	Simplified Vibration Response Prediction for Slender Monumental Stairs. , 2014, , .		9
47	Finite-Element Analysis of Cantilever Slab Deflections with ANSYS SOLID65 3D Reinforced-Concrete Element with Cracking and Crushing Capabilities. Practice Periodical on Structural Design and Construction, 2019, 24, .	0.7	9
48	Unreinforced Masonry FaÃ§ade Assessment of a Historic Building for Excessive Displacements Due to a Nearby Subway Construction. Practice Periodical on Structural Design and Construction, 2019, 24, .	0.7	8
49	Analysis of floor vibration evaluation methods using a large database of floors framed with W-Shaped members subjected to walking excitation. Journal of Constructional Steel Research, 2020, 164, 105764.	1.7	7
50	An Overview on Floor Vibration Serviceability Evaluation Methods with a Large Database of Recorded Floor Data. Conference Proceedings of the Society for Experimental Mechanics, 2021, , 91-101.	0.3	7
51	Effects of Bottom Chord Extensions on the Static and Dynamic Performance of Steel Joist Supported Floors. , 2008, , .		6
52	Seismic Assessment of Existing Lowrise and Midrise Reinforced Concrete Buildings Using the 2014 Qatar Construction Specification. Journal of Architectural Engineering, 2018, 24, .	0.8	6
53	Structural Health Monitoring with Self-Organizing Maps and Artificial Neural Networks. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 237-246.	0.3	6
54	Investigation of Uplift Pressures on a Drainage Shaft Using ANSYS SOLID185 Elements and Druckerâ€“Prager Failure Criterion for the Surrounding Rock Stratum. Journal of Performance of Constructed Facilities, 2020, 34, .	1.0	6

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55	Design of Experiments Study to Obtain a Robust 3D Computational Bridge Model. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 287-297.	0.3	6
56	Structural Damage Detection in Civil Engineering with Machine Learning: Current State of the Art. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 223-229.	0.3	6
57	An Overview of Deep Learning Methods Used in Vibration-Based Damage Detection in Civil Engineering. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 93-98.	0.3	6
58	Web Crippling Strength of Steel Deck Subjected to End One Flange Loading. Journal of Structural Engineering, 2004, 130, 697-707.	1.7	5
59	Fundamentals of Highway Bridge Demolition. , 2013, , .		5
60	One-Dimensional Convolutional Neural Networks for Real-Time Damage Detection of Rotating Machinery. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 73-83.	0.3	5
61	Iterated Square Root Unscented Kalman Filter for state estimation â€" CSTR model. , 2015, , .		4
62	Nonexplosive Deconstruction of Steel Girder Highway Bridges. Journal of Performance of Constructed Facilities, 2017, 31, .	1.0	3
63	Vibrations Assessment of Existing Building Foundations Due to Moving Trains in Underground Tunnels. Conference Proceedings of the Society for Experimental Mechanics, 2021, , 65-73.	0.3	3
64	EFFICIENCY OF 1D CNNS IN FINITE ELEMENT MODEL PARAMETER ESTIMATION USING SYNTHETIC DYNAMIC RESPONSES. , 2020, , .		3
65	Parameter identification for nonlinear biological phenomena modeled by S-systems. , 2015, , .		2
66	Vibration Suppression in Metastructures Using Zigzag Inserts Optimized by Genetic Algorithms. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 275-283.	0.3	2
67	Genetic Algorithm use for Internally Resonating Lattice Optimization: Case of a Beam-Like Metastructure. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 289-295.	0.3	2
68	A New Benchmark Problem for Structural Damage Detection: Bolt Loosening Tests on a Large-Scale Laboratory Structure. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 15-22.	0.3	2
69	Generative Adversarial Networks for Data Generation in Structural Health Monitoring. Frontiers in Built Environment, 2022, 8, .	1.2	2
70	Vibration Serviceability Investigation of a Curved Footbridge. Practice Periodical on Structural Design and Construction, 2022, 27, .	0.7	2
71	Control of Plate Vibrations with Artificial Neural Networks and Piezoelectricity. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 293-301.	0.3	1
72	INVESTIGATING THE DYNAMICS OF A SPECIAL TYPE OF A FLOATING-SLAB TRACKS. , 2019, , .		1

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73	Effect of Non-Structural Components on the Dynamic Response of Steel-Framed Floors: Tests Before and After Component Installations. Frontiers in Built Environment, 2021, 7, .	1.2	1
74	Operational Modal Analysis and Finite Element Model Updating of a 53-Story Building. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 83-91.	0.3	0
75	Editorial: Human-Induced Excitations and Vibrations Serviceability of Civil Engineering Structures. Frontiers in Built Environment, 2022, 8, .	1.2	0