

# Ayan Sadhu

## List of Publications by Year in descending order

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54  
papers

1,871  
citations

257101

24  
h-index

264894

42  
g-index

55  
all docs

55  
docs citations

55  
times ranked

1150  
citing authors

#	ARTICLE	IF	CITATIONS
1	A literature review of next-generation smart sensing technology in structural health monitoring. <i>Structural Control and Health Monitoring</i> , 2019, 26, e2321.	1.9	336
2	A systematic review of convolutional neural network-based structural condition assessment techniques. <i>Engineering Structures</i> , 2021, 226, 111347.	2.6	183
3	A review of output-only structural mode identification literature employing blind source separation methods. <i>Mechanical Systems and Signal Processing</i> , 2017, 94, 415-431.	4.4	126
4	Empirical mode decomposition and its variants: a review with applications in structural health monitoring. <i>Smart Materials and Structures</i> , 2020, 29, 093001.	1.8	90
5	Hybrid Time-Frequency Blind Source Separation Towards Ambient System Identification of Structures. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2012, 27, 314-332.	6.3	75
6	Decentralized modal identification of structures using parallel factor decomposition and sparse blind source separation. <i>Mechanical Systems and Signal Processing</i> , 2013, 41, 396-419.	4.4	57
7	Initial service life data towards structural health monitoring of a concrete arch dam. <i>Structural Control and Health Monitoring</i> , 2018, 25, e2036.	1.9	57
8	Improved visualization of infrastructure monitoring data using building information modeling. <i>Structure and Infrastructure Engineering</i> , 2019, 15, 1247-1263.	2.0	52
9	Road Condition Monitoring Using Smart Sensing and Artificial Intelligence: A Review. <i>Sensors</i> , 2022, 22, 3044.	2.1	48
10	Underdetermined Blind Identification of Structures by Using the Modified Cross-Correlation Method. <i>Journal of Engineering Mechanics - ASCE</i> , 2012, 138, 327-337.	1.6	45
11	Multicomponent energy assessment of buildings using building information modeling. <i>Sustainable Cities and Society</i> , 2019, 49, 101603.	5.1	39
12	LiDAR-Based Structural Health Monitoring: Applications in Civil Infrastructure Systems. <i>Sensors</i> , 2022, 22, 4610.	2.1	38
13	Re-tuning tuned mass dampers using ambient vibration measurements. <i>Smart Materials and Structures</i> , 2010, 19, 115002.	1.8	35
14	An improved time-varying empirical mode decomposition for structural condition assessment using limited sensors. <i>Engineering Structures</i> , 2021, 232, 111882.	2.6	35
15	Decentralized modal identification using sparse blind source separation. <i>Smart Materials and Structures</i> , 2011, 20, 125009.	1.8	33
16	Vibration-based multiclass damage detection and localization using long short-term memory networks. <i>Structures</i> , 2022, 35, 436-451.	1.7	33
17	Towards damage detection using blind source separation integrated with time-varying auto-regressive modeling. <i>Smart Materials and Structures</i> , 2016, 25, 015013.	1.8	31
18	Simultaneous vibration suppression and energy harvesting with a non-traditional vibration absorber. <i>Journal of Intelligent Material Systems and Structures</i> , 2018, 29, 1748-1763.	1.4	30

#	ARTICLE	IF	CITATIONS
19	A Novel Damage Detection Algorithm using Time-Series Analysis-Based Blind Source Separation. <i>Shock and Vibration</i> , 2013, 20, 423-438.	0.3	29
20	An integrated multivariate empirical mode decomposition method towards modal identification of structures. <i>JVC/Journal of Vibration and Control</i> , 2017, 23, 2727-2741.	1.5	28
21	Blind identification of earthquake-excited structures. <i>Smart Materials and Structures</i> , 2012, 21, 045019.	1.8	27
22	Decentralized modal identification of structures using an adaptive empirical mode decomposition method. <i>Journal of Sound and Vibration</i> , 2019, 447, 20-41.	2.1	27
23	A decentralized blind source separation algorithm for ambient modal identification in the presence of narrowband disturbances. <i>Structural Control and Health Monitoring</i> , 2014, 21, 282-302.	1.9	26
24	Multiclass Damage Identification in a Full-Scale Bridge Using Optimally Tuned One-Dimensional Convolutional Neural Network. <i>Journal of Computing in Civil Engineering</i> , 2022, 36, .	2.5	26
25	Ambient modal identification using multi-rank parallel factor decomposition. <i>Structural Control and Health Monitoring</i> , 2015, 22, 595-614.	1.9	25
26	Multisensor-based hybrid empirical mode decomposition method towards system identification of structures. <i>Structural Control and Health Monitoring</i> , 2018, 25, e2147.	1.9	24
27	Condition assessment of structure with tuned mass damper using empirical wavelet transform. <i>JVC/Journal of Vibration and Control</i> , 2018, 24, 4850-4867.	1.5	23
28	Synchrosqueezing transform-based identification of time-varying structural systems using multi-sensor data. <i>Journal of Sound and Vibration</i> , 2020, 486, 115576.	2.1	22
29	A Comparison of Time-Frequency Methods for Real-Time Application to High-Rate Dynamic Systems. <i>Vibration</i> , 2020, 3, 204-216.	0.9	22
30	Decentralized Modal Identification of a Pony Truss Pedestrian Bridge Using Wireless Sensors. <i>Journal of Bridge Engineering</i> , 2014, 19, .	1.4	20
31	Toward Compressed Sensing of Structural Monitoring Data Using Discrete Cosine Transform. <i>Journal of Computing in Civil Engineering</i> , 2020, 34, .	2.5	20
32	A hybrid hidden Markov model towards fault detection of rotating components. <i>JVC/Journal of Vibration and Control</i> , 2017, 23, 3175-3195.	1.5	19
33	System Identification-Enhanced Visualization Tool for Infrastructure Monitoring and Maintenance. <i>Frontiers in Built Environment</i> , 2020, 6, .	1.2	18
34	Evaluation of progressive damage in structures using tensor decomposition-based wavelet analysis. <i>JVC/Journal of Vibration and Control</i> , 2019, 25, 2595-2610.	1.5	16
35	Multivariate empirical mode decomposition-based structural damage localization using limited sensors. <i>JVC/Journal of Vibration and Control</i> , 2022, 28, 2155-2167.	1.5	16
36	Performance of tensor decomposition-based modal identification under nonstationary vibration. <i>Smart Materials and Structures</i> , 2017, 26, 035024.	1.8	15

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37	Ambient modal identification of structures equipped with tuned mass dampers using parallel factor blind source separation. <i>Smart Structures and Systems</i> , 2014, 13, 257-280.	1.9	15
38	A hybrid time-frequency method for robust drive-by modal identification of bridges. <i>Engineering Structures</i> , 2022, 266, 114624.	2.6	14
39	Time-frequency decomposition-assisted improved localization of proximity of damage using acoustic sensors. <i>Smart Materials and Structures</i> , 2021, 30, 025021.	1.8	12
40	Modelling and testing of a historic steel suspension footbridge in Ireland. <i>Proceedings of the Institution of Civil Engineers: Bridge Engineering</i> , 2017, 170, 116-132.	0.3	10
41	Limited sensor-based bridge condition assessment using vehicle-induced nonstationary measurements. <i>Structures</i> , 2021, 32, 1207-1220.	1.7	10
42	Output-only de-tuning assessment of tuned mass dampers. <i>Journal of Civil Structural Health Monitoring</i> , 2013, 3, 33-48.	2.0	9
43	Fault detection of gearboxes using synchro-squeezing transform. <i>JVC/Journal of Vibration and Control</i> , 2017, 23, 3108-3127.	1.5	8
44	Blind source separation-based optimum sensor placement strategy for structures. <i>Journal of Civil Structural Health Monitoring</i> , 2017, 7, 445-458.	2.0	8
45	Acoustic emission-based damage localization using wavelet-assisted deep learning. <i>Journal of Infrastructure Preservation and Resilience</i> , 2022, 3, .	1.5	8
46	Blind source separation towards decentralized modal identification using compressive sampling. , 2012, , .		7
47	Dynamic Multimodal Response of Bender Element Transmitter. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2021, 147, .	1.5	5
48	Investigation of vibration data-based human load monitoring system. <i>Structural Health Monitoring</i> , 2021, 20, 791-803.	4.3	4
49	Investigation of climate change impacts on long-term care facility occupants. <i>City and Environment Interactions</i> , 2022, 13, 100077.	1.8	4
50	Experimental and numerical investigation of tensile properties of early-age masonry. <i>Materials and Structures/Materiaux Et Constructions</i> , 2021, 54, 1.	1.3	3
51	Monitoring the strength properties of electrokinetically treated soil by bender elements to determine the treatment period. <i>Soils and Foundations</i> , 2021, 61, 675-691.	1.3	3
52	Blind Source Separation: A Generalized Modal Identification Tool for Civil Structures. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2015, , 39-47.	0.3	2
53	Optimization of a Non-Traditional Vibration Absorber for Vibration Suppression and Energy Harvesting. <i>Vibration</i> , 2022, 5, 383-407.	0.9	2
54	Comparison of Time-Domain and Time-Frequency-Domain System Identification Methods on Tall Building Data with Noise. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2021, , 179-184.	0.3	1