

Songye Zhu

List of Publications by Year in descending order

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126
papers

4,940
citations

76196

40
h-index

106150

65
g-index

132
all docs

132
docs citations

132
times ranked

2192
citing authors

#	ARTICLE	IF	CITATIONS
1	Seismic Analysis of Concentrically Braced Frame Systems with Self-Centering Friction Damping Braces. <i>Journal of Structural Engineering</i> , 2008, 134, 121-131.	1.7	247
2	Performance-based seismic design of self-centering steel frames with SMA-based braces. <i>Engineering Structures</i> , 2017, 130, 67-82.	2.6	239
3	Shake table test and numerical study of self-centering steel frame with SMA braces. <i>Earthquake Engineering and Structural Dynamics</i> , 2017, 46, 117-137.	2.5	230
4	2.5D large eddy simulation of vertical axis wind turbine in consideration of high angle of attack flow. <i>Renewable Energy</i> , 2013, 51, 317-330.	4.3	177
5	Linear electromagnetic devices for vibration damping and energy harvesting: Modeling and testing. <i>Engineering Structures</i> , 2012, 34, 198-212.	2.6	162
6	Seismic behaviour of self-centring braced frame buildings with reusable hysteretic damping brace. <i>Earthquake Engineering and Structural Dynamics</i> , 2007, 36, 1329-1346.	2.5	144
7	High-mode effects on seismic performance of multi-story self-centering braced steel frames. <i>Journal of Constructional Steel Research</i> , 2016, 119, 133-143.	1.7	135
8	A shape memory alloy-based reusable hysteretic damper for seismic hazard mitigation. <i>Smart Materials and Structures</i> , 2007, 16, 1603-1613.	1.8	125
9	Mechanical and energy-harvesting model for electromagnetic inertial mass dampers. <i>Mechanical Systems and Signal Processing</i> , 2019, 120, 203-220.	4.4	102
10	Magnetic negative stiffness dampers. <i>Smart Materials and Structures</i> , 2015, 24, 072002.	1.8	100
11	Long-term condition assessment of suspenders under traffic loads based on structural monitoring system: Application to the Tsing Ma Bridge. <i>Structural Control and Health Monitoring</i> , 2012, 19, 82-101.	1.9	93
12	Dynamic characteristics of stay cables with inerter dampers. <i>Journal of Sound and Vibration</i> , 2018, 423, 287-305.	2.1	87
13	A thermomechanical constitutive model for superelastic SMA wire with strain-rate dependence. <i>Smart Materials and Structures</i> , 2007, 16, 1696-1707.	1.8	86
14	Superelastic SMA U-shaped dampers with self-centering functions. <i>Smart Materials and Structures</i> , 2018, 27, 055003.	1.8	81
15	Experimental Study on Passive Negative Stiffness Damper for Cable Vibration Mitigation. <i>Journal of Engineering Mechanics - ASCE</i> , 2017, 143, .	1.6	78
16	Optimization of blade pitch in H-rotor vertical axis wind turbines through computational fluid dynamics simulations. <i>Applied Energy</i> , 2018, 212, 1107-1125.	5.1	78
17	Harvesting energy via electromagnetic damper: Application to bridge stay cables. <i>Journal of Intelligent Material Systems and Structures</i> , 2015, 26, 3-19.	1.4	77
18	Cyclic tension-compression behavior of superelastic shape memory alloy bars with buckling-restrained devices. <i>Construction and Building Materials</i> , 2018, 186, 103-113.	3.2	77

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19	Seismic performance of benchmark base-isolated bridges with superelastic Cu-Al-Be restraining damping device. <i>Structural Control and Health Monitoring</i> , 2009, 16, 668-685.	1.9	76
20	An experimental study on self-powered vibration control and monitoring system using electromagnetic TMD and wireless sensors. <i>Sensors and Actuators A: Physical</i> , 2012, 180, 166-176.	2.0	72
21	High-performance self-centering steel columns with shape memory alloy bolts: Design procedure and experimental evaluation. <i>Engineering Structures</i> , 2019, 182, 446-458.	2.6	71
22	Characterization of cyclic properties of superelastic monocrystalline Cu-Al-Be SMA wires for seismic applications. <i>Construction and Building Materials</i> , 2014, 72, 219-230.	3.2	70
23	Dynamic behavior of stay cables with passive negative stiffness dampers. <i>Smart Materials and Structures</i> , 2016, 25, 075044.	1.8	70
24	Simulation and optimization of magnetic negative stiffness dampers. <i>Sensors and Actuators A: Physical</i> , 2017, 259, 14-33.	2.0	70
25	Damage detection of beam structures using quasi-static moving load induced displacement response. <i>Engineering Structures</i> , 2017, 145, 70-82.	2.6	69
26	Damage Detection in Long Suspension Bridges Using Stress Influence Lines. <i>Journal of Bridge Engineering</i> , 2015, 20, .	1.4	68
27	Seismic behavior of self-centering reinforced concrete wall enabled by superelastic shape memory alloy bars. <i>Bulletin of Earthquake Engineering</i> , 2018, 16, 479-502.	2.3	68
28	Experimental Study of Novel Self-Centering Seismic Base Isolators Incorporating Superelastic Shape Memory Alloys. <i>Journal of Structural Engineering</i> , 2020, 146, .	1.7	65
29	Seismic Response Control of Building Structures with Superelastic Shape Memory Alloy Wire Dampers. <i>Journal of Engineering Mechanics - ASCE</i> , 2008, 134, 240-251.	1.6	64
30	A comparative study of vibration isolation performance using negative stiffness and inerter dampers. <i>Journal of the Franklin Institute</i> , 2019, 356, 7922-7946.	1.9	60
31	Moving load-induced response of damaged beam and its application in damage localization. <i>JVC/Journal of Vibration and Control</i> , 2016, 22, 3601-3617.	1.5	59
32	Development of superelastic SMA angles as seismic-resistant self-centering devices. <i>Engineering Structures</i> , 2020, 218, 110836.	2.6	58
33	Multi-type sensor placement and response reconstruction for structural health monitoring of long-span suspension bridges. <i>Science Bulletin</i> , 2016, 61, 313-329.	4.3	53
34	INTEGRATED OPTIMAL PLACEMENT OF DISPLACEMENT TRANSDUCERS AND STRAIN GAUGES FOR BETTER ESTIMATION OF STRUCTURAL RESPONSE. <i>International Journal of Structural Stability and Dynamics</i> , 2011, 11, 581-602.	1.5	51
35	Energy regenerative tuned mass dampers in high-rise buildings. <i>Structural Control and Health Monitoring</i> , 2018, 25, e2072.	1.9	51
36	Probabilistic deterioration model of high-strength steel wires and its application to bridge cables. <i>Structure and Infrastructure Engineering</i> , 2015, 11, 1240-1249.	2.0	46

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37	Experimental study on using electromagnetic devices on bridge stay cables for simultaneous energy harvesting and vibration damping. <i>Smart Materials and Structures</i> , 2016, 25, 065011.	1.8	46
38	A Laser-Based Fiber Bragg Grating Ultrasonic Sensing System for Structural Health Monitoring. <i>IEEE Photonics Technology Letters</i> , 2016, 28, 2573-2576.	1.3	45
39	Versatile Behaviors of Electromagnetic Shunt Damper With a Negative Impedance Converter. <i>IEEE/ASME Transactions on Mechatronics</i> , 2018, 23, 1415-1424.	3.7	45
40	The nexus between vibration-based energy harvesting and structural vibration control: A comprehensive review. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 155, 111920.	8.2	45
41	Damage quantification of beam structures using deflection influence lines. <i>Structural Control and Health Monitoring</i> , 2018, 25, e2242.	1.9	43
42	Performance Comparison between Passive Negative-Stiffness Dampers and Active Control in Cable Vibration Mitigation. <i>Journal of Bridge Engineering</i> , 2017, 22, .	1.4	41
43	Dynamic analogy between an electromagnetic shunt damper and a tuned mass damper. <i>Smart Materials and Structures</i> , 2013, 22, 115018.	1.8	40
44	Mechanical properties of superelastic Cu-Al-Be wires at cold temperatures for the seismic protection of bridges. <i>Smart Materials and Structures</i> , 2008, 17, 025008.	1.8	39
45	Electromagnetic energy harvesting from structural vibrations during earthquakes. <i>Smart Structures and Systems</i> , 2016, 18, 449-470.	1.9	39
46	Unify Energy Harvesting and Vibration Control Functions in Randomly Excited Structures with Electromagnetic Devices. <i>Journal of Engineering Mechanics - ASCE</i> , 2019, 145, 04018115.	1.6	37
47	Multi-Type Sensor Placement for Multi-Scale Response Reconstruction. <i>Advances in Structural Engineering</i> , 2013, 16, 1779-1797.	1.2	35
48	Baseline-free damage localization method for statically determinate beam structures using dual-type response induced by quasi-static moving load. <i>Journal of Sound and Vibration</i> , 2017, 400, 58-70.	2.1	35
49	Damage identification of supporting structures with a moving sensory system. <i>Journal of Sound and Vibration</i> , 2018, 415, 111-127.	2.1	34
50	Structural Damage Detection Using Auto/Cross-Correlation Functions Under Multiple Unknown Excitations. <i>International Journal of Structural Stability and Dynamics</i> , 2014, 14, 1440006.	1.5	32
51	Enhancing the performance of electromagnetic damper cum energy harvester using microcontroller: Concept and experiment validation. <i>Mechanical Systems and Signal Processing</i> , 2019, 134, 106339.	4.4	30
52	Earthquake resilient RC walls using shape memory alloy bars and replaceable energy dissipating devices. <i>Smart Materials and Structures</i> , 2019, 28, 065021.	1.8	29
53	Development of novel track nonlinear energy sinks for seismic performance improvement of offshore wind turbine towers. <i>Mechanical Systems and Signal Processing</i> , 2022, 172, 108975.	4.4	29
54	Incremental Dynamic Analysis of Highway Bridges with Novel Shape Memory Alloy Isolators. <i>Advances in Structural Engineering</i> , 2014, 17, 429-438.	1.2	27

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55	Dual-type sensor placement for multi-scale response reconstruction. <i>Mechatronics</i> , 2014, 24, 376-384.	2.0	27
56	Applying double-mass pendulum oscillator with tunable ultra-low frequency in wave energy converters. <i>Applied Energy</i> , 2021, 298, 117228.	5.1	26
57	Dynamic behavior and seismic performance of base-isolated structures with electromagnetic inertial mass dampers: Analytical solutions and simulations. <i>Engineering Structures</i> , 2021, 246, 113072.	2.6	26
58	Typhoon-induced vibration response and the working mechanism of large wind turbine considering multi-stage effects. <i>Renewable Energy</i> , 2020, 153, 740-758.	4.3	25
59	Electromagnetic Shunt Damper for Bridge Cable Vibration Mitigation: Full-Scale Experimental Study. <i>Journal of Structural Engineering</i> , 2020, 146, .	1.7	23
60	Development of novel self-centering steel coupling beams without beam elongation for earthquake resilience. <i>Engineering Structures</i> , 2021, 232, 111827.	2.6	23
61	Testbed for Structural Health Monitoring of Long-Span Suspension Bridges. <i>Journal of Bridge Engineering</i> , 2012, 17, 896-906.	1.4	22
62	Cooling Time Estimation of Newly Placed Hot-Mix Asphalt Pavement in Different Weather Conditions. <i>Journal of Construction Engineering and Management - ASCE</i> , 2014, 140, .	2.0	22
63	Issues in design of one-dimensional metamaterials for seismic protection. <i>Soil Dynamics and Earthquake Engineering</i> , 2018, 107, 264-278.	1.9	22
64	Seismic Retrofitting of Non-Seismically Designed RC Beam-Column Joints using Buckling-Restrained Haunches: Design and Analysis. <i>Journal of Earthquake Engineering</i> , 2018, 22, 1188-1208.	1.4	21
65	Progressive damage detection based on multi-scale wavelet finite element model: numerical study. <i>Computers and Structures</i> , 2013, 125, 177-186.	2.4	20
66	Locate Damage in Long-Span Bridges Based on Stress Influence Lines and Information Fusion Technique. <i>Advances in Structural Engineering</i> , 2014, 17, 1089-1102.	1.2	20
67	Moving-window extended Kalman filter for structural damage detection with unknown process and measurement noises. <i>Measurement: Journal of the International Measurement Confederation</i> , 2016, 88, 428-440.	2.5	20
68	Damage detection of long-span bridges using stress influence lines incorporated control charts. <i>Science China Technological Sciences</i> , 2014, 57, 1689-1697.	2.0	19
69	Developing IoT Sensing System for Construction-Induced Vibration Monitoring and Impact Assessment. <i>Sensors</i> , 2020, 20, 6120.	2.1	19
70	Development of novel SMA-based D-type self-centering eccentrically braced frames. <i>Engineering Structures</i> , 2022, 260, 114228.	2.6	18
71	Two-phase damage detection of beam structures under moving load using multi-scale wavelet signal processing and wavelet finite element model. <i>Applied Mathematical Modelling</i> , 2019, 66, 728-744.	2.2	17
72	Unified strategy for overall impedance optimization in vibration-based electromagnetic energy harvesters. <i>International Journal of Mechanical Sciences</i> , 2020, 165, 105198.	3.6	17

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73	Tunable electromagnetic damper with synthetic impedance and self-powered functions. <i>Mechanical Systems and Signal Processing</i> , 2021, 159, 107822.	4.4	17
74	Cyclic behavior of iron-based shape memory alloy bars for high-performance seismic devices. <i>Engineering Structures</i> , 2022, 252, 113588.	2.6	16
75	High-performance vibration isolation technique using passive negative stiffness and semiactive damping. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2021, 36, 1034-1055.	6.3	15
76	Loading rate effect on superelastic SMA-based seismic response modification devices. <i>Earthquake and Structures</i> , 2013, 4, 607-627.	1.0	14
77	Seismic upgrading of multistory steel moment-resisting frames by installing shape memory alloy braces: Design method and performance evaluation. <i>Structural Control and Health Monitoring</i> , 2020, 27, e2596.	1.9	14
78	Self-Powered Active Vibration Control: Concept, Modeling, and Testing. <i>Engineering</i> , 2022, 11, 126-137.	3.2	14
79	Performance Based Seismic Design of Steel Braced Frame System with Self-Centering Friction Damping Brace. , 2008, , .		13
80	Optimal design of tuned inerter dampers with series or parallel stiffness connection for cable vibration control. <i>Structural Control and Health Monitoring</i> , 2021, 28, e2673.	1.9	13
81	Advanced vibration isolation technique using versatile electromagnetic shunt damper with tunable behavior. <i>Engineering Structures</i> , 2021, 242, 112503.	2.6	13
82	Displacement-based design approach for highway bridges with SMA isolators. <i>Smart Structures and Systems</i> , 2011, 8, 173-190.	1.9	13
83	Damage quantification of beam structures using deflection influence line changes and sparse regularization. <i>Advances in Structural Engineering</i> , 0, , 136943322199248.	1.2	12
84	Cyclic behavior and deformation mechanism of superelastic SMA U-shaped dampers under in-plane and out-of-plane loadings. <i>Smart Materials and Structures</i> , 2021, 30, 055009.	1.8	12
85	Impact of Construction-Induced Vibration on Vibration-Sensitive Medical Equipment: A Case Study. <i>Advances in Structural Engineering</i> , 2014, 17, 907-920.	1.2	11
86	Vibration Serviceability Assessment of Pedestrian Bridges Based on Comfort Level. <i>Journal of Performance of Constructed Facilities</i> , 2019, 33, .	1.0	11
87	High-performance semiactive secondary suspension of high-speed trains using negative stiffness and magnetorheological dampers. <i>Vehicle System Dynamics</i> , 2022, 60, 2290-2311.	2.2	11
88	Wind- and sea wave-induced response mitigations of offshore wind turbines using track nonlinear energy sinks. <i>Structural Control and Health Monitoring</i> , 2022, 29, .	1.9	11
89	On damage detection of beam structures using multiple types of influence lines. <i>Structures</i> , 2022, 42, 449-465.	1.7	11
90	Structural health monitoring of wind turbine blade using fiber Bragg grating sensors and fiber optic rotary joint. <i>Proceedings of SPIE</i> , 2012, , .	0.8	10

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91	Can we unify vibration control and energy harvesting objectives in energy regenerative tuned mass dampers?. <i>Smart Materials and Structures</i> , 2020, 29, 087002.	1.8	10
92	Field measurement, model updating, and response prediction of a large-scale straight-bladed vertical axis wind turbine structure. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 130, 57-70.	2.5	9
93	Enhance seismic performance of self-centering concentrically braced frames by using hybrid systems. <i>Bulletin of Earthquake Engineering</i> , 2020, 18, 3995-4015.	2.3	9
94	Probabilistic seismic demand and fragility analysis of a novel mid-rise large-span cassette structure. <i>Bulletin of Earthquake Engineering</i> , 2022, 20, 383-413.	2.3	9
95	Adaptive Mode Selection Integrating Kalman Filter for Dynamic Response Reconstruction. <i>Journal of Sound and Vibration</i> , 2021, 515, 116497.	2.1	9
96	Adaptive-scale damage detection strategy for plate structures based on wavelet finite element model. <i>Structural Engineering and Mechanics</i> , 2015, 54, 239-256.	1.0	9
97	Hybrid self-centering companion spines for structural and nonstructural damage control. <i>Engineering Structures</i> , 2022, 266, 114603.	2.6	9
98	Wavelet-based multi-scale finite element modeling and modal identification for structural damage detection. <i>Advances in Structural Engineering</i> , 2017, 20, 1185-1195.	1.2	8
99	High-solidity straight-bladed vertical axis wind turbine: Numerical simulation and validation. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2019, 193, 103960.	1.7	8
100	Impact source localization and vibration intensity prediction on construction sites. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 175, 109148.	2.5	8
101	Energy-Regenerative Semiactive Lateral Suspension Control in High-Speed Trains Using Electromagnetic Damper Cum Energy Harvester. <i>IEEE Transactions on Vehicular Technology</i> , 2022, 71, 4801-4812.	3.9	8
102	Seismic Analysis of 10 MW Offshore Wind Turbine with Large-Diameter Monopile in Consideration of Seabed Liquefaction. <i>Energies</i> , 2022, 15, 2539.	1.6	8
103	A Multi-Scale Wavelet Finite Element Model for Damage Detection of Beams Under a Moving Load. <i>International Journal of Structural Stability and Dynamics</i> , 2018, 18, 1850078.	1.5	7
104	Energy-Harvesting Adaptive Vibration Damping in High-Speed Train Suspension Using Electromagnetic Dampers. <i>International Journal of Structural Stability and Dynamics</i> , 2021, 21, .	1.5	7
105	Global Vibration Intensity Assessment Based on Vibration Source Localization on Construction Sites: Application to Vibratory Sheet Piling. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 1946.	1.3	7
106	Two-level performance-based seismic design approach for steel frames with novel self-centring seismic base isolators. <i>Journal of Constructional Steel Research</i> , 2022, 195, 107352.	1.7	7
107	Assessment of Ground-Borne Vibration Impact on Nearby Underground Facilities Induced by Ground Surface Excavation. <i>Journal of Construction Engineering and Management - ASCE</i> , 2021, 147, .	2.0	5
108	A wavelet finite element-based adaptive-scale damage detection strategy. <i>Smart Structures and Systems</i> , 2014, 14, 285-305.	1.9	5

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109	Performance enhancement of FPS-isolated buildings using an inerter-based damper: Stochastic seismic analysis and optimization. <i>Mechanical Systems and Signal Processing</i> , 2022, 177, 109237.	4.4	5
110	Experimental Study on Impact-Induced Damage Detection Using an Improved Extended Kalman Filter. <i>International Journal of Structural Stability and Dynamics</i> , 2014, 14, 1440007.	1.5	4
111	Simulation of support settlement and cable slippage by using a long-span suspension bridge testbed. <i>Structure and Infrastructure Engineering</i> , 2017, 13, 401-415.	2.0	4
112	Innovative technologies in manufacturing, mechanics and smart civil infrastructure. <i>International Journal of Smart and Nano Materials</i> , 2018, 9, 261-278.	2.0	4
113	Adaptive Reconstruction of a Dynamic Force Using Multiscale Wavelet Shape Functions. <i>Shock and Vibration</i> , 2018, 2018, 1-11.	0.3	4
114	Stochastic seismic analysis of base-isolated structures with electromagnetic inertial mass dampers considering different soil conditions. <i>Bulletin of Earthquake Engineering</i> , 0, , 1.	2.3	4
115	Probabilistic Seismic Capacity Analysis of a Novel Mid-rise Large-span Cassette Structure Using Multidirectional Pushover Method. <i>Journal of Earthquake Engineering</i> , 0, , 1-26.	1.4	4
116	A wavelet-based structural damage assessment approach with progressively downloaded sensor data. <i>Smart Materials and Structures</i> , 2008, 17, 015020.	1.8	3
117	Three-dimensional vibration control of high-tech facilities against earthquakes and microvibration using hybrid platform. <i>Earthquake Engineering and Structural Dynamics</i> , 2010, 39, 615-634.	2.5	3
118	Construction Activity Classification Based on Vibration Monitoring Data: A Supervised Deep-Learning Approach with Time Series RandAugment. <i>Journal of Construction Engineering and Management - ASCE</i> , 2022, 148, .	2.0	3
119	DYNAMIC STRAIN SENSING IN A LONG-SPAN SUSPENSION BRIDGE USING FIBER BRAGG GRATING SENSORS. , 2011, , .		2
120	ADAPTIVE-SCALE DAMAGE DETECTION FOR FRAME STRUCTURES USING BEAM-TYPE WAVELET FINITE ELEMENT: EXPERIMENTAL VALIDATION. <i>Journal of Earthquake and Tsunami</i> , 2013, 07, 1350024.	0.7	2
121	Accurate Response Sensitivity Analysis of a Thermomechanical Constitutive Model for Superelastic SMAs. <i>Journal of Engineering Mechanics - ASCE</i> , 2021, 147, 04021026.	1.6	1
122	Probability seismic demand and fragility analyses of novel SMA-based self-centring eccentrically braced frames. <i>Smart Materials and Structures</i> , 2022, 31, 095011.	1.8	1
123	Resilient Civil Infrastructure under Dynamic Loadings. <i>Shock and Vibration</i> , 2018, 2018, 1-1.	0.3	0
124	Resilient Civil Infrastructure under Dynamic Loadings 2020. <i>Shock and Vibration</i> , 2021, 2021, 1-1.	0.3	0
125	Fiber Bragg Grating Sensing System for Detection of Laser-Induced Ultrasonics in Application to Railway. , 0, , .		0
126	Vibration-based energy harvesting circuit using feed-forward control. , 2019, , .		0