

Young-Jin Cha

List of Publications by Year in descending order

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58
papers

6,028
citations

201674

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48
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59
all docs

59
docs citations

59
times ranked

3463
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep Learning-Based Crack Damage Detection Using Convolutional Neural Networks. Computer-Aided Civil and Infrastructure Engineering, 2017, 32, 361-378.	9.8	2,022
2	Autonomous Structural Visual Inspection Using Region-Based Deep Learning for Detecting Multiple Damage Types. Computer-Aided Civil and Infrastructure Engineering, 2018, 33, 731-747.	9.8	943
3	Modal identification of simple structures with high-speed video using motion magnification. Journal of Sound and Vibration, 2015, 345, 58-71.	3.9	381
4	Autonomous UAVs for Structural Health Monitoring Using Deep Learning and an Ultrasonic Beacon System with Geo-Tagging. Computer-Aided Civil and Infrastructure Engineering, 2018, 33, 885-902.	9.8	243
5	SDDNet: Real-Time Crack Segmentation. IEEE Transactions on Industrial Electronics, 2020, 67, 8016-8025.	7.9	226
6	Vision-based detection of loosened bolts using the Hough transform and support vector machines. Automation in Construction, 2016, 71, 181-188.	9.8	208
7	Hybrid pixel-level concrete crack segmentation and quantification across complex backgrounds using deep learning. Automation in Construction, 2020, 118, 103291.	9.8	203
8	Structural Damage Detection Using Modal Strain Energy and Hybrid Multiobjective Optimization. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 347-358.	9.8	161
9	Deep learning-based automatic volumetric damage quantification using depth camera. Automation in Construction, 2019, 99, 114-124.	9.8	146
10	Output-only computer vision based damage detection using phase-based optical flow and unscented Kalman filters. Engineering Structures, 2017, 132, 300-313.	5.3	141
11	Unsupervised deep learning approach using a deep auto-encoder with a one-class support vector machine to detect damage. Structural Health Monitoring, 2021, 20, 406-425.	7.5	138
12	Efficient attention-based deep encoder and decoder for automatic crack segmentation. Structural Health Monitoring, 2022, 21, 2190-2205.	7.5	120
13	Subsurface damage detection of a steel bridge using deep learning and uncooled micro-bolometer. Construction and Building Materials, 2019, 226, 376-387.	7.2	100
14	Unsupervised novelty detection-based structural damage localization using a density peaks-based fast clustering algorithm. Structural Health Monitoring, 2018, 17, 313-324.	7.5	89
15	Fully automated vision-based loosened bolt detection using the Viola-Jones algorithm. Structural Health Monitoring, 2019, 18, 422-434.	7.5	89
16	Attention-based generative adversarial network with internal damage segmentation using thermography. Automation in Construction, 2022, 141, 104412.	9.8	89
17	Multi-objective genetic algorithms for cost-effective distributions of actuators and sensors in large structures. Expert Systems With Applications, 2012, 39, 7822-7833.	7.6	71
18	Real-time multiple damage mapping using autonomous UAV and deep faster region-based neural networks for GPS-denied structures. Automation in Construction, 2021, 130, 103831.	9.8	68

#	ARTICLE	IF	CITATIONS
19	Optimal placement of active control devices and sensors in frame structures using multi-objective genetic algorithms. <i>Structural Control and Health Monitoring</i> , 2013, 20, 16-44.	4.0	59
20	Comparative Studies of Semiactive Control Strategies for MR Dampers: Pure Simulation and Real-Time Hybrid Tests. <i>Journal of Structural Engineering</i> , 2013, 139, 1237-1248.	3.4	57
21	Wavelet-neuro-fuzzy control of hybrid building-active tuned mass damper system under seismic excitations. <i>JVC/Journal of Vibration and Control</i> , 2013, 19, 1881-1894.	2.6	32
22	Structural Modal Identification Through High Speed Camera Video: Motion Magnification. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014, , 191-197.	0.5	31
23	Multi-objective optimization for actuator and sensor layouts of actively controlled 3D buildings. <i>JVC/Journal of Vibration and Control</i> , 2013, 19, 942-960.	2.6	30
24	An iterated cubature unscented Kalman filter for large-DoF systems identification with noisy data. <i>Journal of Sound and Vibration</i> , 2018, 420, 21-34.	3.9	30
25	Decentralized output feedback polynomial control of seismically excited structures using genetic algorithm. <i>Structural Control and Health Monitoring</i> , 2013, 20, 241-258.	4.0	29
26	Direct performance-based design with 200kN MR dampers using multi-objective cost effective optimization for steel MRFs. <i>Engineering Structures</i> , 2014, 71, 60-72.	5.3	29
27	Seismic fragility estimates of a moment-resisting frame building controlled by MR dampers using performance-based design. <i>Engineering Structures</i> , 2016, 116, 192-202.	5.3	27
28	Performance Validations of Semiactive Controllers on Large-Scale Moment-Resisting Frame Equipped with 200-kN MR Damper Using Real-Time Hybrid Simulations. <i>Journal of Structural Engineering</i> , 2014, 140, .	3.4	25
29	Deep faster R-CNN-based automated detection and localization of multiple types of damage. , 2018, , .		24
30	Active control of highway bridges subject to a variety of earthquake loads. <i>Earthquake Engineering and Engineering Vibration</i> , 2015, 14, 253-263.	2.3	22
31	Hybrid output-only structural system identification using random decrement and Kalman filter. <i>Mechanical Systems and Signal Processing</i> , 2020, 144, 106977.	8.0	22
32	Velocity based semi-active turbo-Lyapunov control algorithms for seismically excited nonlinear smart structures. <i>Structural Control and Health Monitoring</i> , 2013, 20, 1043-1056.	4.0	20
33	Air-coupled impact-echo damage detection in reinforced concrete using wavelet transforms. <i>Smart Materials and Structures</i> , 2017, 26, 025018.	3.5	20
34	Robustness studies of sensor faults and noises for semi-active control strategies using large-scale magnetorheological dampers. <i>JVC/Journal of Vibration and Control</i> , 2016, 22, 1228-1243.	2.6	15
35	Vision-Based Concrete Crack Detection Using a Convolutional Neural Network. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017, , 71-73.	0.5	13
36	Semi-Automated Air-Coupled Impact-Echo Method for Large-Scale Parkade Structure. <i>Sensors</i> , 2018, 18, 1018.	3.8	12

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37	Field Measurement-Based System Identification and Dynamic Response Prediction of a Unique MIT Building. <i>Sensors</i> , 2016, 16, 1016.	3.8	10
38	Time-Delay Effects on Controlled Seismically Excited Linear and Nonlinear Structures. <i>International Journal of Structural Stability and Dynamics</i> , 2016, 16, 1550031.	2.4	10
39	Automated Vision-Based Loosened Bolt Detection Using the Cascade Detector. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017, , 23-28.	0.5	10
40	Seismic retrofit of MRF buildings using decentralized semi-active control for multi-target performances. <i>Earthquake Engineering and Structural Dynamics</i> , 2017, 46, 409-424.	4.4	9
41	Modal Strain Energy Based Damage Detection Using Multi-Objective Optimization. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014, , 125-133.	0.5	8
42	Advanced Sensing and Structural Health Monitoring. <i>Journal of Sensors</i> , 2018, 2018, 1-3.	1.1	7
43	Motion Magnification Based Damage Detection Using High Speed Video. , 0, , .		7
44	Damage detection with an autonomous UAV using deep learning. , 2018, , .		6
45	Automated damage-sensitive feature extraction using unsupervised convolutional neural networks. , 2018, , .		6
46	Bridge pier scour level quantification based on output-only Kalman filtering. <i>Structural Health Monitoring</i> , 2022, 21, 2116-2135.	7.5	6
47	Unsupervised Novelty Detection Techniques for Structural Damage Localization: A Comparative Study. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017, , 125-132.	0.5	3
48	Wavelet Transform-Based Damage Detection in Reinforced Concrete Using an Air-Coupled Impact-Echo Method. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017, , 23-25.	0.5	2
49	Hybrid Concrete Crack Segmentation and Quantification Across Complex Backgrounds Without a Large Training Dataset. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2022, , 123-128.	0.5	2
50	In-Place Performance of Severely Deteriorated Pervious Concrete: A Case Study. <i>ACI Materials Journal</i> , 2015, 112, .	0.2	2
51	A study of digital and physical workflows used for the creation of fabric-formed ice shells with bending active frames. <i>International Journal of Space Structures</i> , 2021, 36, 13-25.	1.0	2
52	Vision-based concrete crack detection technique using cascade features. , 2018, , .		1
53	Comparative Study on Multi-Objective Genetic Algorithms for Seismic Response Controls of Structures. , 0, , 333-358.		1
54	Analyzing the Robustness of Hybrid, Output-Only, Kalman Filtering-Based System Identification Method. <i>Lecture Notes in Civil Engineering</i> , 2021, , 533-542.	0.4	0

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55	Identification of large-scale systems with noisy data using an iterated cubature unscented Kalman filter. , 2018, , .		0
56	Automated air-coupled impact echo based non-destructive testing using machine learning. , 2018, , .		0
57	Automated volumetric damage detection and quantification using region-based convolution neural networks and an inexpensive depth camera. , 2018, , .		0
58	Comparative Study on Multi-Objective Genetic Algorithms for Seismic Response Controls of Structures. , 0, , 1886-1911.		0