

Sung Han Sim

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.

90
papers

1,969
citations

23
h-index

42
g-index

97
ext. papers

2,454
ext. citations

3.8
avg, IF

5.19
L-index

#	Paper	IF	Citations
90	Structural health monitoring of a cable-stayed bridge using smart sensor technology: deployment and evaluation. <i>Smart Structures and Systems</i> , 2010 , 6, 439-459		299
89	Flexible smart sensor framework for autonomous structural health monitoring. <i>Smart Structures and Systems</i> , 2010 , 6, 423-438		153
88	Issues in structural health monitoring employing smart sensors. <i>Smart Structures and Systems</i> , 2007 , 3, 299-320		100
87	Comparative analysis of image binarization methods for crack identification in concrete structures. <i>Cement and Concrete Research</i> , 2017 , 99, 53-61	10.3	90
86	Crack and Noncrack Classification from Concrete Surface Images Using Machine Learning. <i>Structural Health Monitoring</i> , 2019 , 18, 725-738	4.4	88
85	Concrete Crack Identification Using a UAV Incorporating Hybrid Image Processing. <i>Sensors</i> , 2017 , 17,	3.8	84
84	. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013 , 18, 1675-1682	5.5	76
83	Recent progress and future trends on damage identification methods for bridge structures. <i>Structural Control and Health Monitoring</i> , 2019 , 26, e2416	4.5	75
82	Decentralized random decrement technique for efficient data aggregation and system identification in wireless smart sensor networks. <i>Probabilistic Engineering Mechanics</i> , 2011 , 26, 81-91	2.6	54
81	Development and Application of High-Sensitivity Wireless Smart Sensors for Decentralized Stochastic Modal Identification. <i>Journal of Engineering Mechanics - ASCE</i> , 2012 , 138, 683-694	2.4	54
80	Development of a wireless displacement measurement system using acceleration responses. <i>Sensors</i> , 2013 , 13, 8377-92	3.8	51
79	Recent advances in wireless smart sensors for multi-scale monitoring and control of civil infrastructure. <i>Journal of Civil Structural Health Monitoring</i> , 2016 , 6, 17-41	2.9	49
78	Enabling framework for structural health monitoring using smart sensors. <i>Structural Control and Health Monitoring</i> , 2011 , 18, 574-587	4.5	40
77	Automated decentralized modal analysis using smart sensors. <i>Structural Control and Health Monitoring</i> , 2010 , 17, 872-894	4.5	40
76	Feasibility of displacement monitoring using low-cost GPS receivers. <i>Structural Control and Health Monitoring</i> , 2013 , 20, 1240-1254	4.5	39
75	Multimetric Sensing for Structural Damage Detection. <i>Journal of Engineering Mechanics - ASCE</i> , 2011 , 137, 22-30	2.4	36
74	Principles and Applications of Ultrasonic-Based Nondestructive Methods for Self-Healing in Cementitious Materials. <i>Materials</i> , 2017 , 10,	3.5	35

73	Computer Vision-Based Structural Displacement Measurement Robust to Light-Induced Image Degradation for In-Service Bridges. <i>Sensors</i> , 2017 , 17,	3.8	35
72	Wireless displacement sensing system for bridges using multi-sensor fusion. <i>Smart Materials and Structures</i> , 2014 , 23, 045022	3.4	35
71	A wireless smart sensor network for automated monitoring of cable tension. <i>Smart Materials and Structures</i> , 2014 , 23, 025006	3.4	32
70	Long-term displacement measurement of full-scale bridges using camera ego-motion compensation. <i>Mechanical Systems and Signal Processing</i> , 2020 , 140, 106651	7.8	26
69	Extension of indirect displacement estimation method using acceleration and strain to various types of beam structures. <i>Smart Structures and Systems</i> , 2014 , 14, 699-718		25
68	Displacement estimation of bridge structures using data fusion of acceleration and strain measurement incorporating finite element model. <i>Smart Structures and Systems</i> , 2015 , 15, 645-663		24
67	Flood fragility analysis for bridges with multiple failure modes. <i>Advances in Mechanical Engineering</i> , 2017 , 9, 168781401769641	1.2	22
66	Analysis of vibration for regions above rectangular delamination defects in solids. <i>Journal of Sound and Vibration</i> , 2013 , 332, 1766-1776	3.9	21
65	Reference-Free Displacement Estimation of Bridges Using Kalman Filter-Based Multimetric Data Fusion. <i>Journal of Sensors</i> , 2016 , 2016, 1-9	2	19
64	Traffic Safety Evaluation for Railway Bridges Using Expanded Multisensor Data Fusion. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2016 , 31, 749-760	8.4	18
63	Automated bridge component recognition from point clouds using deep learning. <i>Structural Control and Health Monitoring</i> , 2020 , 27, e2591	4.5	17
62	Long-term displacement measurement of bridges using a LiDAR system. <i>Structural Control and Health Monitoring</i> , 2019 , 26, e2428	4.5	17
61	Experimental validation of Kalman filter-based strain estimation in structures subjected to non-zero mean input. <i>Smart Structures and Systems</i> , 2015 , 15, 489-503		17
60	Performance assessment method for crack repair in concrete using PZT-based electromechanical impedance technique. <i>NDT and E International</i> , 2019 , 104, 90-97	4.1	16
59	Prediction Model for Mechanical Properties of Lightweight Aggregate Concrete Using Artificial Neural Network. <i>Materials</i> , 2019 , 12,	3.5	15
58	Automated peak picking using region-based convolutional neural network for operational modal analysis. <i>Structural Control and Health Monitoring</i> , 2019 , 26, e2436	4.5	15
57	Hybrid wireless smart sensor network for full-scale structural health monitoring of a cable-stayed bridge 2011 ,		15
56	Decentralized system identification using stochastic subspace identification for wireless sensor networks. <i>Sensors</i> , 2015 , 15, 8131-45	3.8	13

55	Reliability-based evaluation of the performance of the damage locating vector method. <i>Probabilistic Engineering Mechanics</i> , 2008 , 23, 489-495	2.6	13
54	Data fusion of acceleration and angular velocity for improved model updating. <i>Measurement: Journal of the International Measurement Confederation</i> , 2016 , 91, 239-250	4.6	13
53	Virtual laboratory for experimental structural dynamics. <i>Computer Applications in Engineering Education</i> , 2009 , 17, 80-88	1.6	12
52	Full-scale experimental validation of decentralized damage identification using wireless smart sensors. <i>Smart Materials and Structures</i> , 2012 , 21, 115019	3.4	12
51	A Novelty Detection Approach for Tendons of Prestressed Concrete Bridges Based on a Convolutional Autoencoder and Acceleration Data. <i>Sensors</i> , 2019 , 19,	3.8	11
50	Recent R&D activities on structural health monitoring in Korea. <i>Structural Monitoring and Maintenance</i> , 2016 , 3, 91-114		10
49	Estimation of flexibility matrix of beam structures using multisensor fusion. <i>Journal of Structural Integrity and Maintenance</i> , 2016 , 1, 60-64	1.5	8
48	A decentralized receptance-based damage detection strategy for wireless smart sensors. <i>Smart Materials and Structures</i> , 2012 , 21, 055017	3.4	8
47	A new methodology development for flood fragility curve derivation considering structural deterioration for bridges. <i>Smart Structures and Systems</i> , 2016 , 17, 149-165		8
46	Wireless sensor network for decentralized damage detection of building structures. <i>Smart Structures and Systems</i> , 2013 , 12, 399-414		7
45	Data fusion-based damage identification for a monopile offshore wind turbine structure using wireless smart sensors. <i>Ocean Engineering</i> , 2020 , 195, 106728	3.9	7
44	Uniaxial Static Stress Estimation for Concrete Structures Using Digital Image Correlation. <i>Sensors</i> , 2019 , 19,	3.8	6
43	LiDAR-Based Bridge Displacement Estimation Using 3D Spatial Optimization. <i>Sensors</i> , 2020 , 20,	3.8	6
42	A hybrid electromagnetic energy harvesting device for low frequency vibration 2013 ,		6
41	Characterization of Porous Cementitious Materials Using Microscopic Image Processing and X-ray CT Analysis. <i>Materials</i> , 2020 , 13,	3.5	6
40	Surface-Wave Based Model for Estimation of Discontinuity Depth in Concrete. <i>Sensors</i> , 2018 , 18,	3.8	6
39	Automated Real-Time Assessment of Stay-Cable Serviceability Using Smart Sensors. <i>Applied Sciences (Switzerland)</i> , 2019 , 9, 4469	2.6	5
38	Development of temperature-robust damage factor based on sensor fusion for a wind turbine structure. <i>Frontiers of Structural and Civil Engineering</i> , 2015 , 9, 42-47	2.5	4

37	A machine learning procedure for seismic qualitative assessment and design of structures considering safety and serviceability. <i>Journal of Building Engineering</i> , 2022 , 50, 104190	5.2	4
36	Automated concrete crack evaluation using stereo vision with two different focal lengths. <i>Automation in Construction</i> , 2022 , 135, 104136	9.6	4
35	Dynamic Behavior of Composite Steel Girder Bridge Exceeding Train Speed 350km/h. <i>Journal of the Korea Academia-Industrial Cooperation Society</i> , 2013 , 14, 3518-3527		4
34	On-site Performance Evaluation of a Vision-based Displacement Measurement System. <i>Journal of the Korea Academia-Industrial Cooperation Society</i> , 2014 , 15, 5854-5860		4
33	Rheology-based determination of injectable grout fluidity for preplaced aggregate concrete using ultrasonic tomography. <i>Construction and Building Materials</i> , 2020 , 260, 120447	6.7	4
32	Crack identification method for concrete structures considering angle of view using RGB-D camera-based sensor fusion. <i>Structural Health Monitoring</i> , 2021 , 20, 500-512	4.4	4
31	Applicability of Diffuse Ultrasound to Evaluation of the Water Permeability and Chloride Ion Penetrability of Cracked Concrete. <i>Sensors</i> , 2018 , 18,	3.8	4
30	Field experiment on a PSC-I bridge for convolutional autoencoder-based damage detection. <i>Structural Health Monitoring</i> , 2020 , 147592172092626	4.4	3
29	Serviceability Assessment Method of Stay Cables with Vibration Control Using First-Passage Probability. <i>Mathematical Problems in Engineering</i> , 2019 , 2019, 1-9	1.1	3
28	Full-scale decentralized damage identification using wireless smart sensors 2011 ,		3
27	Automated decentralized smart sensor network for modal analysis 2009 ,		3
26	Smart One-Channel Sensor Node for Ambient Vibration Test with Applications to Structural Health Monitoring of Large Civil Infrastructures. <i>International Journal of Distributed Sensor Networks</i> , 2015 , 11, 691565	1.7	3
25	Automated wireless monitoring system for cable tension forces using deep learning. <i>Structural Health Monitoring</i> , 2020 , 147592172093583	4.4	3
24	Fully automated peak-picking method for an autonomous stay-cable monitoring system in cable-stayed bridges. <i>Automation in Construction</i> , 2021 , 126, 103628	9.6	3
23	Probabilistic Assessment of High-Throughput Wireless Sensor Networks. <i>Sensors</i> , 2016 , 16,	3.8	3
22	Bayesian Prediction of Pre-Stressed Concrete Bridge Deflection Using Finite Element Analysis. <i>Sensors</i> , 2019 , 19,	3.8	3
21	Equivalent neutral axis for structural condition assessment using multi-sensor fusion. <i>Engineering Structures</i> , 2019 , 197, 109350	4.7	2
20	Decentralized system identification using stochastic subspace identification on wireless smart sensor networks 2012 ,		2

19	Decentralized bridge health monitoring using wireless smart sensors 2010 ,		2
18	Evaluation of Cable Tension Forces Using Vibration Method for a Cable-stayed Bridge under Construction. <i>Journal of the Korean Society of Safety</i> , 2014 , 29, 38-44		2
17	Prediction of Static Modulus and Compressive Strength of Concrete from Dynamic Modulus Associated with Wave Velocity and Resonance Frequency Using Machine Learning Techniques. <i>Materials</i> , 2020 , 13,	3.5	2
16	Stress Estimation Using Digital Image Correlation with Compensation of Camera Motion-Induced Error. <i>Sensors</i> , 2019 , 19,	3.8	2
15	Nontarget-Based Measurement of 6-DOF Structural Displacement Using Combined RGB Color and Depth Information. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021 , 26, 1358-1368	5.5	2
14	Automated Damage Localization and Quantification in Concrete Bridges Using Point Cloud-Based Surface-Fitting Strategy. <i>Journal of Computing in Civil Engineering</i> , 2021 , 35, 04021028	5	2
13	A New Probabilistic Framework for Structural System Fragility and Sensitivity Analysis of Concrete Gravity Dams. <i>KSCE Journal of Civil Engineering</i> , 2019 , 23, 3592-3605	1.9	1
12	Individual Disaster Assistance For Socially Vulnerable People: Lessons Learned From the Pohang Earthquake in the Republic of Korea. <i>Risk Analysis</i> , 2020 , 40, 2373-2389	3.9	1
11	Efficient decentralized data aggregation in wireless smart sensor networks 2010 ,		1
10	Issues in structural health monitoring for fixed-type offshore structures under harsh tidal environments. <i>Smart Structures and Systems</i> , 2015 , 15, 335-353		1
9	Framework for characterizing the time-dependent volumetric properties of aerated cementitious material. <i>Construction and Building Materials</i> , 2021 , 284, 122781	6.7	1
8	Sensor data-based probabilistic monitoring of time-history deflections of railway bridges induced by high-speed trains. <i>Structural Health Monitoring</i> , 147592172110634	4.4	0
7	Monitoring of self-healing in concrete with micro-capsules using a combination of air-coupled surface wave and computer-vision techniques. <i>Structural Health Monitoring</i> , 147592172110410	4.4	0
6	Reconstruction of Unmeasured Strain Responses in Bottom-fixed Offshore Structures by Multimetric Sensor Data Fusion. <i>Procedia Engineering</i> , 2017 , 188, 96-101		
5	Dynamic Displacement Estimation from Acceleration Measurements Using a Wireless Smart Sensor. <i>Key Engineering Materials</i> , 2013 , 558, 227-234	0.4	
4	Modal Analysis of Simply Supported Plate Using Wireless Smart Sensor Networks. <i>Applied Mechanics and Materials</i> , 2011 , 94-96, 1022-1025	0.3	
3	Impact Assessment of Bridge Damage Detection Based on Deep Learning According to Number and Location of Accelerometer Installations. <i>Korean Society of Hazard Mitigation</i> , 2021 , 21, 183-190	0.2	
2	Flood fragility analysis of bridge piers in consideration of debris impacts. <i>Journal of the Korea Academia-Industrial Cooperation Society</i> , 2016 , 17, 325-331		

- 1 Decentralized Random Decrement Technique for Data Aggregation and System Identification in Wireless Smart Sensor Networks. *IUTAM Symposium on Cellular, Molecular and Tissue Mechanics*, **2011**, 305-314 0.3