

# Sung Han Sim

## List of Publications by Year in Descending Order

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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	A machine learning procedure for seismic qualitative assessment and design of structures considering safety and serviceability. <i>Journal of Building Engineering</i> , <b>2022</b> , 50, 104190	5.2	4
89	Automated concrete crack evaluation using stereo vision with two different focal lengths. <i>Automation in Construction</i> , <b>2022</b> , 135, 104136	9.6	4
88	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> , <b>2021</b> , 21, 183-190	0.2	
87	Framework for characterizing the time-dependent volumetric properties of aerated cementitious material. <i>Construction and Building Materials</i> , <b>2021</b> , 284, 122781	6.7	1
86	Fully automated peak-picking method for an autonomous stay-cable monitoring system in cable-stayed bridges. <i>Automation in Construction</i> , <b>2021</b> , 126, 103628	9.6	3
85	Crack identification method for concrete structures considering angle of view using RGB-D camera-based sensor fusion. <i>Structural Health Monitoring</i> , <b>2021</b> , 20, 500-512	4.4	4
84	Nontarget-Based Measurement of 6-DOF Structural Displacement Using Combined RGB Color and Depth Information. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2021</b> , 26, 1358-1368	5.5	2
83	Automated Damage Localization and Quantification in Concrete Bridges Using Point Cloud-Based Surface-Fitting Strategy. <i>Journal of Computing in Civil Engineering</i> , <b>2021</b> , 35, 04021028	5	2
82	LiDAR-Based Bridge Displacement Estimation Using 3D Spatial Optimization. <i>Sensors</i> , <b>2020</b> , 20,	3.8	6
81	Field experiment on a PSC-I bridge for convolutional autoencoder-based damage detection. <i>Structural Health Monitoring</i> , <b>2020</b> , 147592172092626	4.4	3
80	Automated bridge component recognition from point clouds using deep learning. <i>Structural Control and Health Monitoring</i> , <b>2020</b> , 27, e2591	4.5	17
79	Individual Disaster Assistance For Socially Vulnerable People: Lessons Learned From the Pohang Earthquake in the Republic of Korea. <i>Risk Analysis</i> , <b>2020</b> , 40, 2373-2389	3.9	1
78	Long-term displacement measurement of full-scale bridges using camera ego-motion compensation. <i>Mechanical Systems and Signal Processing</i> , <b>2020</b> , 140, 106651	7.8	26
77	Data fusion-based damage identification for a monopile offshore wind turbine structure using wireless smart sensors. <i>Ocean Engineering</i> , <b>2020</b> , 195, 106728	3.9	7
76	Characterization of Porous Cementitious Materials Using Microscopic Image Processing and X-ray CT Analysis. <i>Materials</i> , <b>2020</b> , 13,	3.5	6
75	Automated wireless monitoring system for cable tension forces using deep learning. <i>Structural Health Monitoring</i> , <b>2020</b> , 147592172093583	4.4	3
74	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> , <b>2020</b> , 13,	3.5	2

73	Rheology-based determination of injectable grout fluidity for preplaced aggregate concrete using ultrasonic tomography. <i>Construction and Building Materials</i> , <b>2020</b> , 260, 120447	6.7	4
72	Prediction Model for Mechanical Properties of Lightweight Aggregate Concrete Using Artificial Neural Network. <i>Materials</i> , <b>2019</b> , 12,	3.5	15
71	Automated peak picking using region-based convolutional neural network for operational modal analysis. <i>Structural Control and Health Monitoring</i> , <b>2019</b> , 26, e2436	4.5	15
70	A New Probabilistic Framework for Structural System Fragility and Sensitivity Analysis of Concrete Gravity Dams. <i>KSCE Journal of Civil Engineering</i> , <b>2019</b> , 23, 3592-3605	1.9	1
69	A Novelty Detection Approach for Tendons of Prestressed Concrete Bridges Based on a Convolutional Autoencoder and Acceleration Data. <i>Sensors</i> , <b>2019</b> , 19,	3.8	11
68	Performance assessment method for crack repair in concrete using PZT-based electromechanical impedance technique. <i>NDT and E International</i> , <b>2019</b> , 104, 90-97	4.1	16
67	Uniaxial Static Stress Estimation for Concrete Structures Using Digital Image Correlation. <i>Sensors</i> , <b>2019</b> , 19,	3.8	6
66	Serviceability Assessment Method of Stay Cables with Vibration Control Using First-Passage Probability. <i>Mathematical Problems in Engineering</i> , <b>2019</b> , 2019, 1-9	1.1	3
65	Long-term displacement measurement of bridges using a LiDAR system. <i>Structural Control and Health Monitoring</i> , <b>2019</b> , 26, e2428	4.5	17
64	Recent progress and future trends on damage identification methods for bridge structures. <i>Structural Control and Health Monitoring</i> , <b>2019</b> , 26, e2416	4.5	75
63	Equivalent neutral axis for structural condition assessment using multi-sensor fusion. <i>Engineering Structures</i> , <b>2019</b> , 197, 109350	4.7	2
62	Bayesian Prediction of Pre-Stressed Concrete Bridge Deflection Using Finite Element Analysis. <i>Sensors</i> , <b>2019</b> , 19,	3.8	3
61	Stress Estimation Using Digital Image Correlation with Compensation of Camera Motion-Induced Error. <i>Sensors</i> , <b>2019</b> , 19,	3.8	2
60	Automated Real-Time Assessment of Stay-Cable Serviceability Using Smart Sensors. <i>Applied Sciences (Switzerland)</i> , <b>2019</b> , 9, 4469	2.6	5
59	Crack and Noncrack Classification from Concrete Surface Images Using Machine Learning. <i>Structural Health Monitoring</i> , <b>2019</b> , 18, 725-738	4.4	88
58	Surface-Wave Based Model for Estimation of Discontinuity Depth in Concrete. <i>Sensors</i> , <b>2018</b> , 18,	3.8	6
57	Applicability of Diffuse Ultrasound to Evaluation of the Water Permeability and Chloride Ion Penetrability of Cracked Concrete. <i>Sensors</i> , <b>2018</b> , 18,	3.8	4
56	Comparative analysis of image binarization methods for crack identification in concrete structures. <i>Cement and Concrete Research</i> , <b>2017</b> , 99, 53-61	10.3	90

55	Flood fragility analysis for bridges with multiple failure modes. <i>Advances in Mechanical Engineering</i> , <b>2017</b> , 9, 168781401769641	1.2	22
54	Reconstruction of Unmeasured Strain Responses in Bottom-fixed Offshore Structures by Multimetric Sensor Data Fusion. <i>Procedia Engineering</i> , <b>2017</b> , 188, 96-101		
53	Concrete Crack Identification Using a UAV Incorporating Hybrid Image Processing. <i>Sensors</i> , <b>2017</b> , 17,	3.8	84
52	Principles and Applications of Ultrasonic-Based Nondestructive Methods for Self-Healing in Cementitious Materials. <i>Materials</i> , <b>2017</b> , 10,	3.5	35
51	Computer Vision-Based Structural Displacement Measurement Robust to Light-Induced Image Degradation for In-Service Bridges. <i>Sensors</i> , <b>2017</b> , 17,	3.8	35
50	Recent advances in wireless smart sensors for multi-scale monitoring and control of civil infrastructure. <i>Journal of Civil Structural Health Monitoring</i> , <b>2016</b> , 6, 17-41	2.9	49
49	Estimation of flexibility matrix of beam structures using multisensor fusion. <i>Journal of Structural Integrity and Maintenance</i> , <b>2016</b> , 1, 60-64	1.5	8
48	Recent R&D activities on structural health monitoring in Korea. <i>Structural Monitoring and Maintenance</i> , <b>2016</b> , 3, 91-114		10
47	A new methodology development for flood fragility curve derivation considering structural deterioration for bridges. <i>Smart Structures and Systems</i> , <b>2016</b> , 17, 149-165		8
46	Flood fragility analysis of bridge piers in consideration of debris impacts. <i>Journal of the Korea Academia-Industrial Cooperation Society</i> , <b>2016</b> , 17, 325-331		
45	Probabilistic Assessment of High-Throughput Wireless Sensor Networks. <i>Sensors</i> , <b>2016</b> , 16,	3.8	3
44	Reference-Free Displacement Estimation of Bridges Using Kalman Filter-Based Multimetric Data Fusion. <i>Journal of Sensors</i> , <b>2016</b> , 2016, 1-9	2	19
43	Traffic Safety Evaluation for Railway Bridges Using Expanded Multisensor Data Fusion. <i>Computer-Aided Civil and Infrastructure Engineering</i> , <b>2016</b> , 31, 749-760	8.4	18
42	Data fusion of acceleration and angular velocity for improved model updating. <i>Measurement: Journal of the International Measurement Confederation</i> , <b>2016</b> , 91, 239-250	4.6	13
41	Development of temperature-robust damage factor based on sensor fusion for a wind turbine structure. <i>Frontiers of Structural and Civil Engineering</i> , <b>2015</b> , 9, 42-47	2.5	4
40	Decentralized system identification using stochastic subspace identification for wireless sensor networks. <i>Sensors</i> , <b>2015</b> , 15, 8131-45	3.8	13
39	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> , <b>2015</b> , 11, 691565	1.7	3
38	Issues in structural health monitoring for fixed-type offshore structures under harsh tidal environments. <i>Smart Structures and Systems</i> , <b>2015</b> , 15, 335-353		1

37	Experimental validation of Kalman filter-based strain estimation in structures subjected to non-zero mean input. <i>Smart Structures and Systems</i> , <b>2015</b> , 15, 489-503		17
36	Displacement estimation of bridge structures using data fusion of acceleration and strain measurement incorporating finite element model. <i>Smart Structures and Systems</i> , <b>2015</b> , 15, 645-663		24
35	A wireless smart sensor network for automated monitoring of cable tension. <i>Smart Materials and Structures</i> , <b>2014</b> , 23, 025006	3-4	32
34	Wireless displacement sensing system for bridges using multi-sensor fusion. <i>Smart Materials and Structures</i> , <b>2014</b> , 23, 045022	3-4	35
33	Extension of indirect displacement estimation method using acceleration and strain to various types of beam structures. <i>Smart Structures and Systems</i> , <b>2014</b> , 14, 699-718		25
32	Evaluation of Cable Tension Forces Using Vibration Method for a Cable-stayed Bridge under Construction. <i>Journal of the Korean Society of Safety</i> , <b>2014</b> , 29, 38-44		2
31	On-site Performance Evaluation of a Vision-based Displacement Measurement System. <i>Journal of the Korea Academia-Industrial Cooperation Society</i> , <b>2014</b> , 15, 5854-5860		4
30	Feasibility of displacement monitoring using low-cost GPS receivers. <i>Structural Control and Health Monitoring</i> , <b>2013</b> , 20, 1240-1254	4-5	39
29	. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2013</b> , 18, 1675-1682	5-5	76
28	Analysis of vibration for regions above rectangular delamination defects in solids. <i>Journal of Sound and Vibration</i> , <b>2013</b> , 332, 1766-1776	3-9	21
27	A hybrid electromagnetic energy harvesting device for low frequency vibration <b>2013</b> ,		6
26	Development of a wireless displacement measurement system using acceleration responses. <i>Sensors</i> , <b>2013</b> , 13, 8377-92	3-8	51
25	Dynamic Displacement Estimation from Acceleration Measurements Using a Wireless Smart Sensor. <i>Key Engineering Materials</i> , <b>2013</b> , 558, 227-234	0-4	
24	Wireless sensor network for decentralized damage detection of building structures. <i>Smart Structures and Systems</i> , <b>2013</b> , 12, 399-414		7
23	Dynamic Behavior of Composite Steel Girder Bridge Exceeding Train Speed 350km/h. <i>Journal of the Korea Academia-Industrial Cooperation Society</i> , <b>2013</b> , 14, 3518-3527		4
22	A decentralized receptance-based damage detection strategy for wireless smart sensors. <i>Smart Materials and Structures</i> , <b>2012</b> , 21, 055017	3-4	8
21	Development and Application of High-Sensitivity Wireless Smart Sensors for Decentralized Stochastic Modal Identification. <i>Journal of Engineering Mechanics - ASCE</i> , <b>2012</b> , 138, 683-694	2-4	54
20	Full-scale experimental validation of decentralized damage identification using wireless smart sensors. <i>Smart Materials and Structures</i> , <b>2012</b> , 21, 115019	3-4	12

19	Decentralized system identification using stochastic subspace identification on wireless smart sensor networks <b>2012</b> ,		2
18	Multimetric Sensing for Structural Damage Detection. <i>Journal of Engineering Mechanics - ASCE</i> , <b>2011</b> , 137, 22-30	2.4	36
17	Full-scale decentralized damage identification using wireless smart sensors <b>2011</b> ,		3
16	Enabling framework for structural health monitoring using smart sensors. <i>Structural Control and Health Monitoring</i> , <b>2011</b> , 18, 574-587	4.5	40
15	Decentralized random decrement technique for efficient data aggregation and system identification in wireless smart sensor networks. <i>Probabilistic Engineering Mechanics</i> , <b>2011</b> , 26, 81-91	2.6	54
14	Modal Analysis of Simply Supported Plate Using Wireless Smart Sensor Networks. <i>Applied Mechanics and Materials</i> , <b>2011</b> , 94-96, 1022-1025	0.3	
13	Hybrid wireless smart sensor network for full-scale structural health monitoring of a cable-stayed bridge <b>2011</b> ,		15
12	Decentralized Random Decrement Technique for Data Aggregation and System Identification in Wireless Smart Sensor Networks. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2011</b> , 305-314	0.3	
11	Efficient decentralized data aggregation in wireless smart sensor networks <b>2010</b> ,		1
10	Decentralized bridge health monitoring using wireless smart sensors <b>2010</b> ,		2
9	Automated decentralized modal analysis using smart sensors. <i>Structural Control and Health Monitoring</i> , <b>2010</b> , 17, 872-894	4.5	40
8	Flexible smart sensor framework for autonomous structural health monitoring. <i>Smart Structures and Systems</i> , <b>2010</b> , 6, 423-438		153
7	Structural health monitoring of a cable-stayed bridge using smart sensor technology: deployment and evaluation. <i>Smart Structures and Systems</i> , <b>2010</b> , 6, 439-459		299
6	Virtual laboratory for experimental structural dynamics. <i>Computer Applications in Engineering Education</i> , <b>2009</b> , 17, 80-88	1.6	12
5	Automated decentralized smart sensor network for modal analysis <b>2009</b> ,		3
4	Reliability-based evaluation of the performance of the damage locating vector method. <i>Probabilistic Engineering Mechanics</i> , <b>2008</b> , 23, 489-495	2.6	13
3	Issues in structural health monitoring employing smart sensors. <i>Smart Structures and Systems</i> , <b>2007</b> , 3, 299-320		100
2	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

- 1 Monitoring of self-healing in concrete with micro-capsules using a combination of air-coupled surface wave and computer-vision techniques. *Structural Health Monitoring*,147592172110410 4.4 ○