

Ioannis Brilakis

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.

127 papers	4,165 citations	37 h-index	62 g-index
149 ext. papers	5,284 ext. citations	5.4 avg, IF	6.18 L-index

#	Paper	IF	Citations
127	Digital technologies can enhance climate resilience of critical infrastructure. <i>Climate Risk Management</i> , 2022 , 35, 100387	4.6	6
126	Construction schedule risk analysis by a hybrid machine learning approach. <i>Journal of Information Technology in Construction</i> , 2022 , 27, 70-93	2.5	
125	Analysis of User Needs in Time-Related Risk Management for Holistic Project Understanding. <i>Journal of Construction Engineering and Management - ASCE</i> , 2022 , 148,	4.2	2
124	Reality Capture: Photography, Videos, Laser Scanning and Drones. <i>Structural Integrity</i> , 2022 , 443-469	0.2	1
123	Vision-based excavator pose estimation using synthetically generated datasets with domain randomization. <i>Automation in Construction</i> , 2022 , 134, 104089	9.6	3
122	Enriching geometric digital twins of buildings with small objects by fusing laser scanning and AI-based image recognition. <i>Automation in Construction</i> , 2022 , 140, 104375	9.6	0
121	Comparing Natural Language Processing Methods to Cluster Construction Schedules. <i>Journal of Construction Engineering and Management - ASCE</i> , 2021 , 147, 04021136	4.2	5
120	CLOI: An Automated Benchmark Framework for Generating Geometric Digital Twins of Industrial Facilities. <i>Journal of Construction Engineering and Management - ASCE</i> , 2021 , 147, 04021145	4.2	0
119	Instance Segmentation of Industrial Point Cloud Data. <i>Journal of Computing in Civil Engineering</i> , 2021 , 35, 04021022	5	2
118	Construction with digital twin information systems. <i>Data-Centric Engineering</i> , 2020 , 1,	2.6	52
117	Real-Time Volume-to-Plane Comparison for Mixed Reality-Based Progress Monitoring. <i>Journal of Computing in Civil Engineering</i> , 2020 , 34, 04020016	5	13
116	Building Information Modelling, Artificial Intelligence and Construction Tech. <i>Developments in the Built Environment</i> , 2020 , 4, 100011	5.1	27
115	Detection of Railway Masts in Airborne LiDAR Data. <i>Journal of Construction Engineering and Management - ASCE</i> , 2020 , 146, 04020105	4.2	8
114	CLOI-NET: Class segmentation of industrial facilities' point cloud datasets. <i>Advanced Engineering Informatics</i> , 2020 , 45, 101121	7.4	13
113	Comprehensive Decision Support System for Managing Asphalt Pavements. <i>Journal of Transportation Engineering Part B: Pavements</i> , 2020 , 146, 06020001	1.4	4
112	Multi-classifier for reinforced concrete bridge defects. <i>Automation in Construction</i> , 2019 , 105, 102824	9.6	35
111	Digital twinning of existing reinforced concrete bridges from labelled point clusters. <i>Automation in Construction</i> , 2019 , 105, 102837	9.6	45

110	Adaptive computer vision-based 2D tracking of workers in complex environments. <i>Automation in Construction</i> , 2019 , 103, 168-184	9.6	23
109	Detection of Structural Components in Point Clouds of Existing RC Bridges. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2019 , 34, 191-212	8.4	35
108	Automated Defect Detection For Masonry Arch Bridges 2019 ,		4
107	Reducing Greenhouse Gas Emission of Construction Equipment at Construction Sites: Field Study Approach. <i>Journal of Construction Engineering and Management - ASCE</i> , 2019 , 145, 05019012	4.2	4
106	Digital Twinning of Existing Bridges from Labelled Point Clusters 2019 ,		2
105	Monitoring construction labour productivity by way of a smart technology approach. <i>Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction</i> , 2019 , 172, 70-82	0.5	0
104	A benchmarked framework for geometric digital twinning of slab and beam-and-slab bridges. <i>Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction</i> , 2019 , 172, 3-18	0.5	0
103	CLOI: A Shape Classification Benchmark Dataset for Industrial Facilities 2019 ,		4
102	SeeBridge as next generation bridge inspection: Overview, Information Delivery Manual and Model View Definition. <i>Automation in Construction</i> , 2018 , 90, 134-145	9.6	45
101	Integrating RC Bridge Defect Information into BIM Models. <i>Journal of Computing in Civil Engineering</i> , 2018 , 32, 04018013	5	23
100	Structural Performance Monitoring Using a Dynamic Data-Driven BIM Environment. <i>Journal of Computing in Civil Engineering</i> , 2018 , 32, 04018009	5	34
99	Matching Construction Workers across Views for Automated 3D Vision Tracking On-Site. <i>Journal of Construction Engineering and Management - ASCE</i> , 2018 , 144, 04018061	4.2	28
98	Real-time validation of vision-based over-height vehicle detection system. <i>Advanced Engineering Informatics</i> , 2018 , 38, 67-80	7.4	6
97	State-of-Practice on As-Is Modelling of Industrial Facilities. <i>Lecture Notes in Computer Science</i> , 2018 , 103-124	12.4	4
96	Real-time simulation of construction workers using combined human body and hand tracking for robotic construction worker system. <i>Automation in Construction</i> , 2018 , 86, 125-137	9.6	30
95	Prioritizing object types for modelling existing industrial facilities. <i>Automation in Construction</i> , 2018 , 96, 211-223	9.6	14
94	Road Design Layer Detection in Point Cloud Data for Construction Progress Monitoring. <i>Journal of Computing in Civil Engineering</i> , 2018 , 32, 04018029	5	12
93	Detecting healthy concrete surfaces. <i>Advanced Engineering Informatics</i> , 2018 , 37, 150-162	7.4	15

92	Mixed reality constructs a new frontier for maintaining the built environment. <i>Proceedings of the Institution of Civil Engineers: Civil Engineering</i> , 2017 , 170, 53-53	0.4	3
91	Management of structural monitoring data of bridges using BIM. <i>Proceedings of the Institution of Civil Engineers: Bridge Engineering</i> , 2017 , 170, 204-218	0.5	26
90	Automated re-prefabrication system for buildings using robotics. <i>Automation in Construction</i> , 2017 , 83, 184-195	9.6	37
89	Optimized Parameters for Over-Height Vehicle Detection under Variable Weather Conditions. <i>Journal of Computing in Civil Engineering</i> , 2017 , 31, 04017039	5	5
88	Automated Detection of Multiple Pavement Defects. <i>Journal of Computing in Civil Engineering</i> , 2017 , 31, 04016057	5	49
87	Multistep Explicit Stereo Camera Calibration Approach to Improve Euclidean Accuracy of Large-Scale 3D Reconstruction. <i>Journal of Computing in Civil Engineering</i> , 2016 , 30, 04014120	5	16
86	Design and Data Modelling of Fibre Optic Systems to Monitor Reinforced Concrete Structural Elements 2016 ,		2
85	3D Semantic Parsing of Large-Scale Indoor Spaces 2016 ,		372
84	Detection of Walls, Floors, and Ceilings in Point Cloud Data 2016 ,		9
83	Semantic Enrichment for Building Information Modeling. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2016 , 31, 261-274	8.4	95
82	Entity Matching across Stereo Cameras for Tracking Construction Workers 2016 ,		4
81	3D Matching of Resource Vision Tracking Trajectories 2016 ,		4
80	Point Cloud Data Cleaning and Refining for 3D As-Built Modeling of Built Infrastructure 2016 ,		6
79	A Suitability Analysis of Precast Components for Standardized Bridge Construction in the United Kingdom. <i>Procedia Engineering</i> , 2016 , 164, 188-195		24
78	A Framework for Automated Pavement Condition Monitoring 2016 ,		7
77	Continuous localization of construction workers via integration of detection and tracking. <i>Automation in Construction</i> , 2016 , 72, 129-142	9.6	61
76	Understanding the Problem of Bridge and Tunnel Strikes Caused by Over-height Vehicles. <i>Transportation Research Procedia</i> , 2016 , 14, 3915-3924	2.4	9
75	Improving Road Asset Condition Monitoring. <i>Transportation Research Procedia</i> , 2016 , 14, 3004-3012	2.4	29

74	State of research in automatic as-built modelling. <i>Advanced Engineering Informatics</i> , 2015 , 29, 162-171	7.4	180
73	Patch detection for pavement assessment. <i>Automation in Construction</i> , 2015 , 53, 95-104	9.6	50
72	A vision-based method for on-road truck height measurement in proactive prevention of collision with overpasses and tunnels. <i>Automation in Construction</i> , 2015 , 50, 29-39	9.6	11
71	Automated Damage Index Estimation of Reinforced Concrete Columns for Post-Earthquake Evaluations. <i>Journal of Structural Engineering</i> , 2015 , 141, 04014228	3	33
70	Framework of aftershock fragility assessment—case studies: older California reinforced concrete building frames. <i>Earthquake Engineering and Structural Dynamics</i> , 2015 , 44, 2617-2636	4	66
69	Automated Brick Counting for Façade Construction Progress Estimation. <i>Journal of Computing in Civil Engineering</i> , 2015 , 29, 04014091	5	13
68	Generating Absolute-Scale Point Cloud Data of Built Infrastructure Scenes Using a Monocular Camera Setting. <i>Journal of Computing in Civil Engineering</i> , 2015 , 29, 04014089	5	34
67	A Sparsity-Inducing Optimization-Based Algorithm for Planar Patches Extraction from Noisy Point-Cloud Data. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2015 , 30, 85-102	8.4	34
66	Fragility curves for non-ductile reinforced concrete frames that exhibit different component response mechanisms. <i>Engineering Structures</i> , 2015 , 85, 127-143	4.7	57
65	A study on influencing factors and revitalization of the adoption of off-site construction - Case study on the construction market of the United Kingdom -. <i>KIBIM Magazine</i> , 2015 , 5, 33-40		
64	Machine Vision Techniques for Condition Assessment of Civil Infrastructure. <i>Advances in Computer Vision and Pattern Recognition</i> , 2015 , 351-375	1.1	2
63	Achievements and Challenges in Machine Vision-Based Inspection of Large Concrete Structures. <i>Advances in Structural Engineering</i> , 2014 , 17, 303-318	1.9	74
62	Full-Body Occlusion Handling and Density Analysis in Traffic Video-Surveillance Systems. <i>Transportation Research Record</i> , 2014 , 2460, 58-65	1.7	1
61	Civil Engineering Grand Challenges: Opportunities for Data Sensing, Information Analysis, and Knowledge Discovery. <i>Journal of Computing in Civil Engineering</i> , 2014 , 28, 04014013	5	33
60	A videogrammetric as-built data collection method for digital fabrication of sheet metal roof panels. <i>Advanced Engineering Informatics</i> , 2013 , 27, 466-476	7.4	28
59	Optimized selection of key frames for monocular videogrammetric surveying of civil infrastructure. <i>Advanced Engineering Informatics</i> , 2013 , 27, 270-282	7.4	45
58	A Transformational Approach to Explicit Stereo Camera Calibration for Improved Euclidean Accuracy of Infrastructure 3D Reconstruction 2013 ,		2
57	Comparison of Image-Based and Time-of-Flight-Based Technologies for Three-Dimensional Reconstruction of Infrastructure. <i>Journal of Construction Engineering and Management - ASCE</i> , 2013 , 139, 69-79	4.2	88

56	Automated Pothole Distress Assessment Using Asphalt Pavement Video Data. <i>Journal of Computing in Civil Engineering</i> , 2013 , 27, 370-378	5	92
55	Machine Vision-Enhanced Postearthquake Inspection. <i>Journal of Computing in Civil Engineering</i> , 2013 , 27, 622-634	5	41
54	Construction worker detection in video frames for initializing vision trackers. <i>Automation in Construction</i> , 2012 , 28, 15-25	9.6	163
53	Rapid entropy-based detection and properties measurement of concrete spalling with machine vision for post-earthquake safety assessments. <i>Advanced Engineering Informatics</i> , 2012 , 26, 846-858	7.4	111
52	Three-Dimensional Tracking of Construction Resources Using an On-Site Camera System. <i>Journal of Computing in Civil Engineering</i> , 2012 , 26, 541-549	5	75
51	Comparison of Image-Based and Time-of-Flight-Based Technologies for 3D Reconstruction of Infrastructure 2012 ,		6
50	A Novel Approach for Automated Selection of Key Video Frames for 3D Reconstruction of Civil Infrastructure 2012 ,		1
49	Detection of Construction Workers in Video Frames for Automatic Initialization of Vision Trackers 2012 ,		9
48	Comprehensive property retrieval and measurement of concrete spalling using machine vision for post-earthquake safety assessments 2012 ,		2
47	Enhancement of Construction Equipment Detection in Video Frames by Combining with Tracking 2012 ,		7
46	Achievements and Challenges in Recognizing and Reconstructing Civil Infrastructure. <i>Lecture Notes in Computer Science</i> , 2012 , 151-176	0.9	5
45	Testing of Depth-Encoded Hough Voting for Infrastructure Object Detection 2012 ,		1
44	Data-Fusion Approaches and Applications for Construction Engineering. <i>Journal of Construction Engineering and Management - ASCE</i> , 2011 , 137, 863-869	4.2	26
43	Neurofuzzy Genetic System for Selection of Construction Project Managers. <i>Journal of Construction Engineering and Management - ASCE</i> , 2011 , 137, 17-29	4.2	65
42	Innovative Stereo Vision-Based Approach to Generate Dense Depth Map of Transportation Infrastructure. <i>Transportation Research Record</i> , 2011 , 2215, 93-99	1.7	46
41	Visual Pattern Recognition Models for Remote Sensing of Civil Infrastructure. <i>Journal of Computing in Civil Engineering</i> , 2011 , 25, 388-393	5	21
40	Visual retrieval of concrete crack properties for automated post-earthquake structural safety evaluation. <i>Automation in Construction</i> , 2011 , 20, 874-883	9.6	111
39	Progressive 3D reconstruction of infrastructure with videogrammetry. <i>Automation in Construction</i> , 2011 , 20, 884-895	9.6	123

38	Comparative study of vision tracking methods for tracking of construction site resources. <i>Automation in Construction</i> , 2011 , 20, 905-915	9.6	81
37	Automated vision tracking of project related entities. <i>Advanced Engineering Informatics</i> , 2011 , 25, 713-724	7.4	140
36	Automated computation of the fundamental matrix for vision based construction site applications. <i>Advanced Engineering Informatics</i> , 2011 , 25, 725-735	7.4	15
35	Automated sparse 3D point cloud generation of infrastructure using its distinctive visual features. <i>Advanced Engineering Informatics</i> , 2011 , 25, 760-770	7.4	54
34	Pothole detection in asphalt pavement images. <i>Advanced Engineering Informatics</i> , 2011 , 25, 507-515	7.4	271
33	Testing in harsh conditions: Tracking resources on construction sites with machine vision. <i>Automation in Construction</i> , 2011 , 20, 328-337	9.6	12
32	Machine Vision Enhanced Post-Earthquake Inspection 2011 ,		2
31	Comparison of Camera Motion Estimation Methods for 3D Reconstruction of Infrastructure 2011 ,		5
30	Generating the sparse point cloud of a civil infrastructure scene using a single video camera under practical constraints 2011 ,		1
29	Special Issue on Lessons Learned from the 2009 ASCE International Workshop on Computing in Civil Engineering. <i>Journal of Computing in Civil Engineering</i> , 2011 , 25, 419-420	5	
28	Initializing Vision Based Trackers Using Semantic Texton Forests 2011 ,		2
27	Automated Detection of Exposed Reinforcement in Post-Earthquake Safety and Structural Evaluations 2011 ,		4
26	Automated Detection of Potholes in Visual Data 2011 ,		2
25	Concrete Column Recognition in Images and Videos. <i>Journal of Computing in Civil Engineering</i> , 2010 , 24, 478-487	5	70
24	Machine Vision-Based Concrete Surface Quality Assessment. <i>Journal of Construction Engineering and Management - ASCE</i> , 2010 , 136, 210-218	4.2	52
23	Toward automated generation of parametric BIMs based on hybrid video and laser scanning data. <i>Advanced Engineering Informatics</i> , 2010 , 24, 456-465	7.4	126
22	Parameter optimization for automated concrete detection in image data. <i>Automation in Construction</i> , 2010 , 19, 944-953	9.6	31
21	Detection of large-scale concrete columns for automated bridge inspection. <i>Automation in Construction</i> , 2010 , 19, 1047-1055	9.6	50

20	Improvements to Concrete Column Detection in Live Video 2010 ,		2
19	Automated Detection of Concrete Columns from Visual Data 2009 ,		5
18	Comparison of Optical Sensor-Based Spatial Data Collection Techniques for Civil Infrastructure Modeling. <i>Journal of Computing in Civil Engineering</i> , 2009 , 23, 170-177	5	64
17	Selected and Revised Papers from the ASCE International Workshop on Computing in Civil Engineering 2007, Special Section 2. <i>Journal of Computing in Civil Engineering</i> , 2009 , 23, 63-63	5	
16	Computing in Civil Engineering Lessons Learned from the 2007 ASCE International Workshop on Computing in Civil Engineering. <i>Journal of Computing in Civil Engineering</i> , 2009 , 23, 1-1	5	
15	Selected and Revised Papers from the ASCE International Workshop on Computing in Civil Engineering 2007, Special Section 3. <i>Journal of Computing in Civil Engineering</i> , 2009 , 23, 139-139	5	
14	Real-Time Concrete Damage Visual Assessment for First Responders 2009 ,		8
13	Shape-Based Retrieval of Construction Site Photographs. <i>Journal of Computing in Civil Engineering</i> , 2008 , 22, 14-20	5	45
12	Management and analysis of unstructured construction data types. <i>Advanced Engineering Informatics</i> , 2008 , 22, 15-27	7.4	52
11	Comparison of Civil Infrastructure Optical-Based Spatial Data Acquisition Techniques 2007 ,		3
10	Multimodal Image Retrieval from Construction Databases and Model-Based Systems. <i>Journal of Construction Engineering and Management - ASCE</i> , 2006 , 132, 777-785	4.2	19
9	Data Analysis on Complicated Construction Data Sources: Vision, Research, and Recent Developments. <i>Lecture Notes in Computer Science</i> , 2006 , 637-652	0.9	1
8	Construction site image retrieval based on material cluster recognition. <i>Advanced Engineering Informatics</i> , 2006 , 20, 443-452	7.4	46
7	Automated On-site Retrieval of Project Information. <i>Lecture Notes in Computer Science</i> , 2006 , 92-100	0.9	
6	Identification of Materials from Construction Site Images Using Content Based Image Retrieval Techniques 2005 , 1		4
5	Material-Based Construction Site Image Retrieval. <i>Journal of Computing in Civil Engineering</i> , 2005 , 19, 341-355	5	50
4	Content-Based Search Engines for construction image databases. <i>Automation in Construction</i> , 2005 , 14, 537-550	9.6	20
3	Recursive Segmentation for As-Is Bridge Information Modelling		4

2	Computer Vision and Pattern Recognition Technologies for Construction	189-209
1	Geometric Accuracy of Digital Twins for Structural Health Monitoring	3