

Ioannis Brilakis

List of Publications by Year in descending order

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Version: 2024-02-01

144
papers

6,558
citations

50276

46
h-index

82547

72
g-index

150
all docs

150
docs citations

150
times ranked

3399
citing authors

#	ARTICLE	IF	CITATIONS
1	Reality Capture: Photography, Videos, Laser Scanning and Drones. Structural Integrity, 2022, , 443-469.	1.4	2
2	Vision-based excavator pose estimation using synthetically generated datasets with domain randomization. Automation in Construction, 2022, 134, 104089.	9.8	29
3	Digital technologies can enhance climate resilience of critical infrastructure. Climate Risk Management, 2022, 35, 100387.	3.2	69
4	Construction schedule risk analysis “ a hybrid machine learning approach. Journal of Information Technology in Construction, 2022, 27, 70-93.	2.1	4
5	Analysis of User Needs in Time-Related Risk Management for Holistic Project Understanding. Journal of Construction Engineering and Management - ASCE, 2022, 148, .	3.8	4
6	CLOI: An Automated Benchmark Framework for Generating Geometric Digital Twins of Industrial Facilities. , 2022, , .		0
7	Enriching geometric digital twins of buildings with small objects by fusing laser scanning and AI-based image recognition. Automation in Construction, 2022, 140, 104375.	9.8	33
8	Improving the accuracy of schedule information communication between humans and data. Advanced Engineering Informatics, 2022, 53, 101645.	8.0	3
9	Comparing Natural Language Processing Methods to Cluster Construction Schedules. Journal of Construction Engineering and Management - ASCE, 2021, 147, .	3.8	22
10	CLOI: An Automated Benchmark Framework for Generating Geometric Digital Twins of Industrial Facilities. Journal of Construction Engineering and Management - ASCE, 2021, 147, .	3.8	6
11	Instance Segmentation of Industrial Point Cloud Data. Journal of Computing in Civil Engineering, 2021, 35, .	4.7	7
12	An Automated Target-Oriented Scanning System for Infrastructure Applications. , 2020, , .		2
13	Construction with digital twin information systems. Data-Centric Engineering, 2020, 1, .	2.3	184
14	Real-Time Volume-to-Plane Comparison for Mixed Reality“Based Progress Monitoring. Journal of Computing in Civil Engineering, 2020, 34, .	4.7	32
15	Building Information Modelling, Artificial Intelligence and Construction Tech. Developments in the Built Environment, 2020, 4, 100011.	4.0	88
16	Detection of Railway Masts in Airborne LiDAR Data. Journal of Construction Engineering and Management - ASCE, 2020, 146, .	3.8	21
17	CLOI-NET: Class segmentation of industrial facilities“™ point cloud datasets. Advanced Engineering Informatics, 2020, 45, 101121.	8.0	35
18	Comprehensive Decision Support System for Managing Asphalt Pavements. Journal of Transportation Engineering Part B: Pavements, 2020, 146, 06020001.	1.5	6

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19	Improving Construction Project Schedules before Execution. , 2020, , .		1
20	Digital Twinning of Railway Overhead Line Equipment from Airborne LiDAR Data. , 2020, , .		7
21	Detection of Structural Components in Point Clouds of Existing RC Bridges. Computer-Aided Civil and Infrastructure Engineering, 2019, 34, 191-212.	9.8	78
22	Automated Defect Detection For Masonry Arch Bridges. , 2019, , .		11
23	Reducing Greenhouse Gas Emission of Construction Equipment at Construction Sites: Field Study Approach. Journal of Construction Engineering and Management - ASCE, 2019, 145, .	3.8	16
24	Multi-classifier for reinforced concrete bridge defects. Automation in Construction, 2019, 105, 102824.	9.8	77
25	Digital twinning of existing reinforced concrete bridges from labelled point clusters. Automation in Construction, 2019, 105, 102837.	9.8	126
26	Adaptive computer vision-based 2D tracking of workers in complex environments. Automation in Construction, 2019, 103, 168-184.	9.8	44
27	Monitoring construction labour productivity by way of a smart technology approach. Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction, 2019, 172, 70-82.	1.7	2
28	Exploiting Music and Dance Notation to Improve Visualization of Data in BIM. , 2019, , .		0
29	A benchmarked framework for geometric digital twinning of slab and beam-and-slab bridges. Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction, 2019, 172, 3-18.	1.7	3
30	CLOI: A Shape Classification Benchmark Dataset for Industrial Facilities. , 2019, , .		7
31	Digital Twinning of Existing Bridges from Labelled Point Clusters. , 2019, , .		4
32	Generating bridge geometric digital twins from point clouds. , 2019, , .		7
33	Road asset classification system. , 2019, , .		1
34	SeeBridge as next generation bridge inspection: Overview, Information Delivery Manual and Model View Definition. Automation in Construction, 2018, 90, 134-145.	9.8	88
35	Integrating RC Bridge Defect Information into BIM Models. Journal of Computing in Civil Engineering, 2018, 32, .	4.7	49
36	Structural Performance Monitoring Using a Dynamic Data-Driven BIM Environment. Journal of Computing in Civil Engineering, 2018, 32, .	4.7	50

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37	Real-time simulation of construction workers using combined human body and hand tracking for robotic construction worker system. Automation in Construction, 2018, 86, 125-137.	9.8	49
38	Prioritizing object types for modelling existing industrial facilities. Automation in Construction, 2018, 96, 211-223.	9.8	28
39	Road Design Layer Detection in Point Cloud Data for Construction Progress Monitoring. Journal of Computing in Civil Engineering, 2018, 32, .	4.7	20
40	Detecting healthy concrete surfaces. Advanced Engineering Informatics, 2018, 37, 150-162.	8.0	29
41	Matching Construction Workers across Views for Automated 3D Vision Tracking On-Site. Journal of Construction Engineering and Management - ASCE, 2018, 144, 04018061.	3.8	33
42	Real-time validation of vision-based over-height vehicle detection system. Advanced Engineering Informatics, 2018, 38, 67-80.	8.0	12
43	State-of-Practice on As-Is Modelling of Industrial Facilities. Lecture Notes in Computer Science, 2018, , 103-124.	1.3	7
44	Trajectory-Based Worker Task Productivity Monitoring. , 2018, , .		2
45	Mixed reality constructs a new frontier for maintaining the built environment. Proceedings of the Institution of Civil Engineers: Civil Engineering, 2017, 170, 53-53.	0.3	5
46	Management of structural monitoring data of bridges using BIM. Proceedings of the Institution of Civil Engineers: Bridge Engineering, 2017, 170, 204-218.	0.6	40
47	Automated re-prefabrication system for buildings using robotics. Automation in Construction, 2017, 83, 184-195.	9.8	66
48	Optimized Parameters for Over-Height Vehicle Detection under Variable Weather Conditions. Journal of Computing in Civil Engineering, 2017, 31, .	4.7	10
49	Automated Detection of Multiple Pavement Defects. Journal of Computing in Civil Engineering, 2017, 31, .	4.7	79
50	3D Matching of Resource Vision Tracking Trajectories. , 2016, , .		6
51	Point Cloud Data Cleaning and Refining for 3D As-Built Modeling of Built Infrastructure. , 2016, , .		7
52	A Suitability Analysis of Precast Components for Standardized Bridge Construction in the United Kingdom. Procedia Engineering, 2016, 164, 188-195.	1.2	33
53	A Framework for Automated Pavement Condition Monitoring. , 2016, , .		11
54	Continuous localization of construction workers via integration of detection and tracking. Automation in Construction, 2016, 72, 129-142.	9.8	90

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55	Understanding the Problem of Bridge and Tunnel Strikes Caused by Over-height Vehicles. Transportation Research Procedia, 2016, 14, 3915-3924.	1.5	15
56	Improving Road Asset Condition Monitoring. Transportation Research Procedia, 2016, 14, 3004-3012.	1.5	41
57	Design and Data Modelling of Fibre Optic Systems to Monitor Reinforced Concrete Structural Elements. , 2016, , .		2
58	3D Semantic Parsing of Large-Scale Indoor Spaces. , 2016, , .		820
59	Detection of Walls, Floors, and Ceilings in Point Cloud Data. , 2016, , .		15
60	Semantic Enrichment for Building Information Modeling. Computer-Aided Civil and Infrastructure Engineering, 2016, 31, 261-274.	9.8	129
61	Multistep Explicit Stereo Camera Calibration Approach to Improve Euclidean Accuracy of Large-Scale 3D Reconstruction. Journal of Computing in Civil Engineering, 2016, 30, .	4.7	20
62	Entity Matching across Stereo Cameras for Tracking Construction Workers. , 2016, , .		5
63	Framework of aftershock fragility assessmentâ€œcase studies: older California reinforced concrete building frames. Earthquake Engineering and Structural Dynamics, 2015, 44, 2617-2636.	4.4	91
64	Automated Brick Counting for Façade Construction Progress Estimation. Journal of Computing in Civil Engineering, 2015, 29, .	4.7	20
65	Generating Absolute-Scale Point Cloud Data of Built Infrastructure Scenes Using a Monocular Camera Setting. Journal of Computing in Civil Engineering, 2015, 29, .	4.7	44
66	A Sparsityâ€œInducing Optimizationâ€œBased Algorithm for Planar Patches Extraction from Noisy Pointâ€œCloud Data. Computer-Aided Civil and Infrastructure Engineering, 2015, 30, 85-102.	9.8	42
67	Fragility curves for non-ductile reinforced concrete frames that exhibit different component response mechanisms. Engineering Structures, 2015, 85, 127-143.	5.3	91
68	State of research in automatic as-built modelling. Advanced Engineering Informatics, 2015, 29, 162-171.	8.0	247
69	Patch detection for pavement assessment. Automation in Construction, 2015, 53, 95-104.	9.8	64
70	Special Issue on the 2013 International Workshop on Computing in Civil Engineering. Journal of Computing in Civil Engineering, 2015, 29, .	4.7	0
71	A vision-based method for on-road truck height measurement in proactive prevention of collision with overpasses and tunnels. Automation in Construction, 2015, 50, 29-39.	9.8	19
72	Automated Damage Index Estimation of Reinforced Concrete Columns for Post-Earthquake Evaluations. Journal of Structural Engineering, 2015, 141, .	3.4	64

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73	Machine Vision Techniques for Condition Assessment of Civil Infrastructure. <i>Advances in Computer Vision and Pattern Recognition</i> , 2015, , 351-375.	1.3	2
74	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.	0.2	0
75	Automated In-Placed Brick Counting for Façade Construction Progress Estimation. , 2014, , .		2
76	Civil Engineering Grand Challenges: Opportunities for Data Sensing, Information Analysis, and Knowledge Discovery. <i>Journal of Computing in Civil Engineering</i> , 2014, 28, .	4.7	51
77	Achievements and Challenges in Machine Vision-Based Inspection of Large Concrete Structures. <i>Advances in Structural Engineering</i> , 2014, 17, 303-318.	2.4	106
78	Full-Body Occlusion Handling and Density Analysis in Traffic Video-Surveillance Systems. <i>Transportation Research Record</i> , 2014, 2460, 58-65.	1.9	1
79	A videogrammetric as-built data collection method for digital fabrication of sheet metal roof panels. <i>Advanced Engineering Informatics</i> , 2013, 27, 466-476.	8.0	33
80	Optimized selection of key frames for monocular videogrammetric surveying of civil infrastructure. <i>Advanced Engineering Informatics</i> , 2013, 27, 270-282.	8.0	54
81	A Transformational Approach to Explicit Stereo Camera Calibration for Improved Euclidean Accuracy of Infrastructure 3D Reconstruction. , 2013, , .		2
82	Aftershock Probabilistic Seismic Demand Model of Damaged Non-Ductile Reinforced Concrete Frames in California. , 2013, , .		2
83	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.	3.8	112
84	Automated Pothole Distress Assessment Using Asphalt Pavement Video Data. <i>Journal of Computing in Civil Engineering</i> , 2013, 27, 370-378.	4.7	123
85	Machine Vision-Enhanced Postearthquake Inspection. <i>Journal of Computing in Civil Engineering</i> , 2013, 27, 622-634.	4.7	51
86	Comprehensive property retrieval and measurement of concrete spalling using machine vision for post-earthquake safety assessments. , 2012, , .		3
87	Enhancement of Construction Equipment Detection in Video Frames by Combining with Tracking. , 2012, , .		11
88	Machine Vision-Based Infrastructure As-Built Documentation Using Edge Points. , 2012, , .		0
89	Construction worker detection in video frames for initializing vision trackers. <i>Automation in Construction</i> , 2012, 28, 15-25.	9.8	200
90	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.	8.0	151

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91	Three-Dimensional Tracking of Construction Resources Using an On-Site Camera System. Journal of Computing in Civil Engineering, 2012, 26, 541-549.	4.7	91
92	Comparison of Image-Based and Time-of-Flight-Based Technologies for 3D Reconstruction of Infrastructure. , 2012, , .		9
93	A Novel Approach for Automated Selection of Key Video Frames for 3D Reconstruction of Civil Infrastructure. , 2012, , .		3
94	Detection of Construction Workers in Video Frames for Automatic Initialization of Vision Trackers. , 2012, , .		13
95	Achievements and Challenges in Recognizing and Reconstructing Civil Infrastructure. Lecture Notes in Computer Science, 2012, , 151-176.	1.3	5
96	Testing of Depth-Encoded Hough Voting for Infrastructure Object Detection. , 2012, , .		1
97	Outdoor and Large-Scale Real-World Scene Analysis. Lecture Notes in Computer Science, 2012, , .	1.3	3
98	Data-Fusion Approaches and Applications for Construction Engineering. Journal of Construction Engineering and Management - ASCE, 2011, 137, 863-869.	3.8	38
99	Neurofuzzy Genetic System for Selection of Construction Project Managers. Journal of Construction Engineering and Management - ASCE, 2011, 137, 17-29.	3.8	80
100	Innovative Stereo Vision-Based Approach to Generate Dense Depth Map of Transportation Infrastructure. Transportation Research Record, 2011, 2215, 93-99.	1.9	52
101	Visual Pattern Recognition Models for Remote Sensing of Civil Infrastructure. Journal of Computing in Civil Engineering, 2011, 25, 388-393.	4.7	24
102	Visual retrieval of concrete crack properties for automated post-earthquake structural safety evaluation. Automation in Construction, 2011, 20, 874-883.	9.8	152
103	Progressive 3D reconstruction of infrastructure with videogrammetry. Automation in Construction, 2011, 20, 884-895.	9.8	159
104	Comparative study of vision tracking methods for tracking of construction site resources. Automation in Construction, 2011, 20, 905-915.	9.8	98
105	Automated vision tracking of project related entities. Advanced Engineering Informatics, 2011, 25, 713-724.	8.0	177
106	Automated computation of the fundamental matrix for vision based construction site applications. Advanced Engineering Informatics, 2011, 25, 725-735.	8.0	17
107	Automated sparse 3D point cloud generation of infrastructure using its distinctive visual features. Advanced Engineering Informatics, 2011, 25, 760-770.	8.0	74
108	Pothole detection in asphalt pavement images. Advanced Engineering Informatics, 2011, 25, 507-515.	8.0	402

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109	Testing in harsh conditions: Tracking resources on construction sites with machine vision. Automation in Construction, 2011, 20, 328-337.	9.8	16
110	Machine Vision Enhanced Post-Earthquake Inspection. , 2011, , .		2
111	Comparison of Camera Motion Estimation Methods for 3D Reconstruction of Infrastructure. , 2011, , .		6
112	Civil and Environmental Engineering Challenges for Data Sensing and Analysis. , 2011, , .		1
113	Generating the sparse point cloud of a civil infrastructure scene using a single video camera under practical constraints. , 2011, , .		1
114	Special Issue on Lessons Learned from the 2009 ASCE International Workshop on Computing in Civil Engineering. Journal of Computing in Civil Engineering, 2011, 25, 419-420.	4.7	0
115	Initializing Vision Based Trackers Using Semantic Texton Forests. , 2011, , .		2
116	Automated Detection of Exposed Reinforcement in Post-Earthquake Safety and Structural Evaluations. , 2011, , .		5
117	Automated Detection of Potholes in Visual Data. , 2011, , .		2
118	Toward automated generation of parametric BIMs based on hybrid video and laser scanning data. Advanced Engineering Informatics, 2010, 24, 456-465.	8.0	151
119	Parameter optimization for automated concrete detection in image data. Automation in Construction, 2010, 19, 944-953.	9.8	52
120	Detection of large-scale concrete columns for automated bridge inspection. Automation in Construction, 2010, 19, 1047-1055.	9.8	76
121	Concrete Column Recognition in Images and Videos. Journal of Computing in Civil Engineering, 2010, 24, 478-487.	4.7	77
122	Machine Vision-Based Concrete Surface Quality Assessment. Journal of Construction Engineering and Management - ASCE, 2010, 136, 210-218.	3.8	66
123	Large-Scale Column Detection for Bridge Inspection. , 2010, , .		0
124	Improvements to Concrete Column Detection in Live Video. , 2010, , .		2
125	Automated Detection of Concrete Columns from Visual Data. , 2009, , .		8
126	Comparison of Optical Sensor-Based Spatial Data Collection Techniques for Civil Infrastructure Modeling. Journal of Computing in Civil Engineering, 2009, 23, 170-177.	4.7	78

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127	Selected and Revised Papers from the ASCE International Workshop on Computing in Civil Engineering 2007, Special Section 2. Journal of Computing in Civil Engineering, 2009, 23, 63-63.	4.7	0
128	Computing in Civil Engineering”Lessons Learned from the 2007 ASCE International Workshop on Computing in Civil Engineering. Journal of Computing in Civil Engineering, 2009, 23, 1-1.	4.7	0
129	Selected and Revised Papers from the ASCE International Workshop on Computing in Civil Engineering 2007, Special Section 3. Journal of Computing in Civil Engineering, 2009, 23, 139-139.	4.7	0
130	Validation of Vision Tracking at Egnatia Odos Motorway. , 2009, , .		1
131	Real-Time Concrete Damage Visual Assessment for First Responders. , 2009, , .		10
132	Management and analysis of unstructured construction data types. Advanced Engineering Informatics, 2008, 22, 15-27.	8.0	74
133	Shape-Based Retrieval of Construction Site Photographs. Journal of Computing in Civil Engineering, 2008, 22, 14-20.	4.7	61
134	Comparison of Civil Infrastructure Optical-Based Spatial Data Acquisition Techniques. , 2007, , .		4
135	Multimodal Image Retrieval from Construction Databases and Model-Based Systems. Journal of Construction Engineering and Management - ASCE, 2006, 132, 777-785.	3.8	22
136	Data Analysis on Complicated Construction Data Sources: Vision, Research, and Recent Developments. Lecture Notes in Computer Science, 2006, , 637-652.	1.3	1
137	Construction site image retrieval based on material cluster recognition. Advanced Engineering Informatics, 2006, 20, 443-452.	8.0	54
138	Content-Based Search Engines for construction image databases. Automation in Construction, 2005, 14, 537-550.	9.8	26
139	Identification of Materials from Construction Site Images Using Content Based Image Retrieval Techniques. , 2005, , 1.		6
140	Material-Based Construction Site Image Retrieval. Journal of Computing in Civil Engineering, 2005, 19, 341-355.	4.7	59
141	Geometric Accuracy of Digital Twins for Structural Health Monitoring. , 0, , .		6
142	Recursive Segmentation for As-Is Bridge Information Modelling. , 0, , .		6
143	Asphalt Road Layer Detection for Construction Progress Monitoring. , 0, , .		0
144	Minimising Misclassifications of Over-Height Vehicles Due to Wind. , 0, , .		1