Vineet R Kamat

List of Publications by Year
in descending order

157 papers	4,482 citations	101384 36 h-index	133063 59 g-index
158 all docs	158 docs citations	158 times ranked	2714 citing authors

#	Article	IF	Citations
1	Evaluation of position tracking technologies for user localization in indoor construction environments. Automation in Construction, 2009, 18, 444-457.	4.8	206
2	Personalized human comfort in indoor building environments under diverse conditioning modes. Building and Environment, 2017, 126, 304-317.	3.0	205
3	Visualizing Simulated Construction Operations in 3D. Journal of Computing in Civil Engineering, 2001, 15, 329-337.	2.5	178
4	Remote proximity monitoring between mobile construction resources using camera-mounted UAVs. Automation in Construction, 2019, 99, 168-182.	4.8	166
5	Fast plane extraction in organized point clouds using agglomerative hierarchical clustering. , 2014, , .		144
6	Non-intrusive interpretation of human thermal comfort through analysis of facial infrared thermography. Energy and Buildings, 2018, 176, 246-261.	3.1	139
7	Ubiquitous location tracking for context-specific information delivery on construction sites. Automation in Construction, 2008, 17, 737-748.	4.8	129
8	Enhancing perceived safety in human–robot collaborative construction using immersive virtual environments. Automation in Construction, 2018, 96, 161-170.	4.8	110
9	Augmented reality visualization: A review of civil infrastructure system applications. Advanced Engineering Informatics, 2015, 29, 252-267.	4.0	102
10	Evaluation of Augmented Reality for Rapid Assessment of Earthquake-Induced Building Damage. Journal of Computing in Civil Engineering, 2007, 21, 303-310.	2.5	100
11	Vision guided autonomous robotic assembly and as-built scanning on unstructured construction sites. Automation in Construction, 2015, 59, 128-138.	4.8	97
12	Collaborative visualization of engineering processes using tabletop augmented reality. Advances in Engineering Software, 2013, 55, 45-55.	1.8	89
13	Optimization modeling of multi-skilled resources in prefabrication: Theorizing cost analysis of process integration in off-site construction. Automation in Construction, 2018, 95, 1-9.	4.8	85
14	Research in Visualization Techniques for Field Construction. Journal of Construction Engineering and Management - ASCE, 2011, 137, 853-862.	2.0	83
15	Enabling discovery–based learning in construction using telepresent augmented reality. Automation in Construction, 2013, 33, 3-10.	4.8	75
16	Georeferenced Registration of Construction Graphics in Mobile Outdoor Augmented Reality. Journal of Computing in Civil Engineering, 2007, 21, 247-258.	2.5	74
17	Robust non-intrusive interpretation of occupant thermal comfort in built environments with low-cost networked thermal cameras. Applied Energy, 2019, 251, 113336.	5.1	70
18	A vision-based marker-less pose estimation system for articulated construction robots. Automation in Construction, 2019, 104, 80-94.	4.8	69

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19	Investigating the effect of indoor thermal environment on occupants' mental workload and task performance using electroencephalogram. Building and Environment, 2019, 158, 120-132.	3.0	68
20	Human–Robot Collaboration in Construction: Classification and Research Trends. Journal of Construction Engineering and Management - ASCE, 2021, 147, .	2.0	65
21	Uncertainty-aware geospatial system for mapping and visualizing underground utilities. Automation in Construction, 2015, 53, 105-119.	4.8	62
22	An Occupancy Grid Mapping enhanced visual SLAM for real-time locating applications in indoor GPS-denied environments. Automation in Construction, 2019, 104, 230-245.	4.8	59
23	Integrating Natural Language Processing and Spatial Reasoning for Utility Compliance Checking. Journal of Construction Engineering and Management - ASCE, 2016, 142, .	2.0	57
24	Dynamic 3D Visualization of Articulated Construction Equipment. Journal of Computing in Civil Engineering, 2005, 19, 356-368.	2.5	55
25	General-purpose modular hardware and software framework for mobile outdoor augmented reality applications in engineering. Advanced Engineering Informatics, 2008, 22, 90-105.	4.0	55
26	Teaching robots to perform quasi-repetitive construction tasks through human demonstration. Automation in Construction, 2020, 120, 103370.	4.8	53
27	Interactive and Immersive Process-Level Digital Twin for Collaborative Human–Robot Construction Work. Journal of Computing in Civil Engineering, 2021, 35, .	2.5	51
28	Validating Complex Construction Simulation Models Using 3D Visualization. Systems Analysis Modelling Simulation, 2003, 43, 455-467.	0.1	49
29	Autonomous motion planning and task execution in geometrically adaptive robotized construction work. Automation in Construction, 2019, 100, 24-45.	4.8	49
30	Optical marker–based end effector pose estimation for articulated excavators. Automation in Construction, 2016, 65, 51-64.	4.8	48
31	Real-Time Hybrid Virtuality for Prevention of Excavation Related Utility Strikes. Journal of Computing in Civil Engineering, 2014, 28, .	2.5	47
32	Uncertainty-aware visualization and proximity monitoring in urban excavation: a geospatial augmented reality approach. Visualization in Engineering, 2013, 1, .	8.8	43
33	BIM-Based Construction Scheduling Method Using Optimization Theory for Reducing Activity Overlaps. Journal of Computing in Civil Engineering, 2015, 29, .	2.5	42
34	Robotic data collection and simulation for evaluation of building retrofit performance. Automation in Construction, 2018, 92, 88-102.	4.8	42
35	Photogrammetry Assisted Measurement of Interstory Drift for Rapid Post-disaster Building Damage Reconnaissance. Journal of Nondestructive Evaluation, 2011, 30, 201-212.	1.1	40
36	Real-time drill monitoring and control using building information models augmented with 3D imaging data. Automation in Construction, 2013, 36, 1-15.	4.8	39

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37	Sensitivity analysis of augmented reality-assisted building damage reconnaissance using virtual prototyping. Automation in Construction, 2013, 33, 24-36.	4.8	39
38	SMART: scalable and modular augmented reality template for rapid development of engineering visualization applications. Visualization in Engineering, 2013, 1, .	8.8	39
39	Proximity Prediction of Mobile Objects to Prevent Contact-Driven Accidents in Co-Robotic Construction. Journal of Computing in Civil Engineering, 2020, 34, .	2.5	36
40	Integration of infrastructure based positioning systems and inertial navigation for ubiquitous context-aware engineering applications. Advanced Engineering Informatics, 2011, 25, 640-655.	4.0	35
41	Scene Graph and Frame Update Algorithms for Smooth and Scalable 3D Visualization of Simulated Construction Operations. Computer-Aided Civil and Infrastructure Engineering, 2002, 17, 228-245.	6.3	34
42	Automated building information modeling for fault detection and diagnostics in commercial HVAC systems. Facilities, 2016, 34, 233-246.	0.8	34
43	Automated Generation of Operations Level Construction Animations in Outdoor Augmented Reality. Journal of Computing in Civil Engineering, 2009, 23, 405-417.	2.5	32
44	High-precision identification of contextual information in location-aware engineering applications. Advanced Engineering Informatics, 2009, 23, 483-496.	4.0	31
45	Camera marker networks for articulated machine pose estimation. Automation in Construction, 2018, 96, 148-160.	4.8	31
46	A collaborative augmented reality based modeling environment for construction engineering and management education. , 2011, , .		30
47	GPR Signature Detection and Decomposition for Mapping Buried Utilities with Complex Spatial Configuration. Journal of Computing in Civil Engineering, 2018, 32, .	2.5	30
48	Detecting, locating, and characterizing voids in disaster rubble for search and rescue. Advanced Engineering Informatics, 2019, 42, 100974.	4.0	29
49	Geometric modeling of geospatial data for visualization-assisted excavation. Advanced Engineering Informatics, 2013, 27, 283-298.	4.0	28
50	Conceptual Framework to Optimize Building Energy Consumption by Coupling Distributed Energy Simulation and Occupancy Models. Journal of Computing in Civil Engineering, 2014, 28, 50-62.	2.5	28
51	Scene understanding for adaptive manipulation in robotized construction work. Automation in Construction, 2017, 82, 16-30.	4.8	28
52	A systems simulation framework to realize net-zero building energy retrofits. Sustainable Cities and Society, 2018, 41, 405-420.	5.1	28
53	Computer vision for anatomical analysis of equipment in civil infrastructure projects: Theorizing the development of regression-based deep neural networks. Automation in Construction, 2022, 137, 104193.	4.8	28
54	System Dynamics Framework to Study the Effect of Material Performance on a Building's Lifecycle Energy Requirements. Journal of Computing in Civil Engineering, 2016, 30, .	2.5	27

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55	Large-Scale Dynamic Terrain in Three-Dimensional Construction Process Visualizations. Journal of Computing in Civil Engineering, 2005, 19, 160-171.	2.5	26
56	Scalable Algorithm for Resolving Incorrect Occlusion in Dynamic Augmented Reality Engineering Environments. Computer-Aided Civil and Infrastructure Engineering, 2010, 25, 3-19.	6.3	26
57	Automatic extraction of 1D barcodes from video scans for drone-assisted inventory management in warehousing applications. International Journal of Logistics Research and Applications, 2018, 21, 243-258.	5.6	26
58	Plane Registration Leveraged by Global Constraints for Context‐Aware AEC Applications. Computer-Aided Civil and Infrastructure Engineering, 2013, 28, 325-343.	6.3	25
59	Enhanced Boundary Condition–Based Approach for Construction Location Sensing Using RFID and RTK GPS. Journal of Construction Engineering and Management - ASCE, 2014, 140, .	2.0	25
60	Enhancing stroke assessment simulation experience in clinical training using augmented reality. Virtual Reality, 2021, 25, 575-584.	4.1	25
61	Geospatial Databases and Augmented Reality Visualization for Improving Safety in Urban Excavation Operations. , 2010, , .		24
62	HEAT - Human Embodied Autonomous Thermostat. Building and Environment, 2020, 178, 106879.	3.0	24
63	Analytical Approach to Augmenting Site Photos with 3D Graphics of Underground Infrastructure in Construction Engineering Applications. Journal of Computing in Civil Engineering, 2011, 25, 66-74.	2.5	23
64	Real-Time Fire Monitoring and Visualization for the Post-Ignition Fire State in a Building. Fire Technology, 2018, 54, 995-1027.	1.5	22
65	Generic representation of 3D motion paths in dynamic animations of simulated construction processes. Automation in Construction, 2008, 17, 188-200.	4.8	19
66	Relative Displacement Sensing Techniques for Postevent Structural Damage Assessment: Review. Journal of Structural Engineering, 2013, 139, 1421-1434.	1.7	19
67	A scene-adaptive descriptor for visual SLAM-based locating applications in built environments. Automation in Construction, 2020, 112, 103067.	4.8	19
68	Modular data communication methods for a robotic excavator. Automation in Construction, 2018, 90, 166-177.	4.8	17
69	Human tracking from single RGB-D camera using online learning. Image and Vision Computing, 2019, 88, 67-75.	2.7	17
70	Implementation of UAV localization methods for a mobile post-earthquake monitoring system. , 2015, , .		16
71	A taxonomy of data types and data collection methods for building energy monitoring and performance simulation. Advances in Building Energy Research, 2016, 10, 263-293.	1.1	16
72	Interactive Augmented Reality Visualization for Improved Damage Prevention and Maintenance of Underground Infrastructure. , 2009, , .		15

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73	Generalized task allocation and route planning for robots with multiple depots in indoor building environments. Automation in Construction, 2020, 119, 103359.	4.8	15
74	Real-Time Process-Level Digital Twin for Collaborative Human-Robot Construction Work. , 2020, , .		15
75	Task Allocation and Route Planning for Robotic Service Networks in Indoor Building Environments. Journal of Computing in Civil Engineering, 2017, 31, .	2.5	14
76	Trajectory Prediction of Mobile Construction Resources Toward Pro-active Struck-by Hazard Detection. , 2019, , .		14
77	Software mechanisms for extensible and scalable 3D visualization of construction operations. Advances in Engineering Software, 2008, 39, 659-675.	1.8	13
78	Implementing Remote-Sensing Methodologies for Construction Research: An Unoccupied Airborne System Perspective. Journal of Construction Engineering and Management - ASCE, 2022, 148, .	2.0	13
79	Interactive collision detection in three-dimensional visualizations of simulated construction operations. Engineering With Computers, 2007, 23, 79-91.	3.5	12
80	Real-Time Occlusion Handling for Dynamic Augmented Reality Using Geometric Sensing and Graphical Shading. Journal of Computing in Civil Engineering, 2013, 27, 607-621.	2.5	12
81	Framework for Modeling Interdependent Effects in Natural Disasters: Application to Wind Engineering. Journal of Structural Engineering, 2019, 145, .	1.7	12
82	Evaluation of Preference- and Constraint-Sensitive Path Planning for Assisted Navigation in Indoor Building Environments. Journal of Computing in Civil Engineering, 2020, 34, 04019050.	2.5	12
83	GPS and 3DOF Tracking for Georeferenced Registration of Construction Graphics in Outdoor Augmented Reality. Lecture Notes in Computer Science, 2006, , 368-375.	1.0	12
84	Vision-Based Articulated Machine Pose Estimation for Excavation Monitoring and Guidance. , 2015, , .		12
85	Real-time state synchronization between physical construction robots and process-level digital twins. Construction Robotics, 2022, 6, 57-73.	1.2	12
86	Dynamic Three-Dimensional Visualization of Fluid Construction Materials. Journal of Computing in Civil Engineering, 2004, 18, 237-247.	2.5	11
87	Evaluation of General-Purpose Construction Simulation and Visualization tools for Modeling and Animating AirSide Airport Operations. Simulation, 2007, 83, 663-679.	1.1	11
88	Algorithm for Accurate Threeâ€Dimensional Scene Graph Updates in Highâ€Speed Animations of Previously Simulated Construction Operations. Computer-Aided Civil and Infrastructure Engineering, 2009, 24, 186-198.	6.3	11
89	Robust mobile computing framework for visualization of simulated processes in Augmented Reality. , 2010, , .		11
90	Virtual Prototyping for Robotic Fabrication of Rebar Cages in Manufactured Concrete Construction. Journal of Architectural Engineering, 2014, 20, 06013002.	0.8	11

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91	Bi-Directional Communication Bridge for State Synchronization between Digital Twin Simulations and Physical Construction Robots. , 2020, , .		11
92	Evaluation of standard product models for supporting automated erection of structural steelwork. Automation in Construction, 2007, 16, 232-241.	4.8	10
93	Shared autonomy in assistive mobile robots: a review. Disability and Rehabilitation: Assistive Technology, 2023, 18, 827-848.	1.3	10
94	Stacked Hourglass Networks for Markerless Pose Estimation of Articulated Construction Robots. , 2018, , .		10
95	Evaluation of Legal Risks for E-Commerce in Construction. Journal of Professional Issues in Engineering Education and Practice, 2006, 132, 355-360.	0.9	9
96	Grid Cell-based Algorithm for Workspace Overlapping Analysis Considering Multiple Allocations of Construction Resources. Journal of Asian Architecture and Building Engineering, 2014, 13, 341-348.	1.2	9
97	Feasibility of real-time graphical simulation for active monitoring of visibility-constrained construction processes. Engineering With Computers, 2015, 31, 29-49.	3.5	9
98	Lightweight and adaptive building simulation (LABS) framework for integrated building energy and thermal comfort analysis. Building Simulation, 2017, 10, 1023-1044.	3.0	9
99	Collaborative visualization of simulated processes using tabletop fiducial augmented reality. , 2011, , .		8
100	A Framework to Understand Effect of Building Systems Deterioration on Life Cycle Energy. Procedia Engineering, 2015, 118, 507-514.	1.2	8
101	User-Guided Dimensional Analysis of Indoor Building Environments from Single Frames of RGB-D Sensors. Journal of Computing in Civil Engineering, 2017, 31, .	2.5	8
102	A Personalized HVAC Control Smartphone Application Framework for Improved Human Health and Well-Being. , 2017, , .		8
103	Coupling Point Cloud Completion and Surface Connectivity Relation Inference for 3D Modeling of Indoor Building Environments. Journal of Computing in Civil Engineering, 2018, 32, .	2.5	8
104	Teaching Robots to Perform Construction Tasks via Learning from Demonstration. , 2019, , .		8
105	Simulation and visualization of traffic operations in Augmented Reality for improved planning and design of road construction projects. , 2008, , .		7
106	Trajectory-Based Skill Learning for Overhead Construction Robots Using Generalized Cylinders with Orientation. Journal of Computing in Civil Engineering, 2022, 36, .	2.5	7
107	Efficient Interference Detection in 3D Animations of Simulated Construction Operations. , 2005, , 1.		6
108	Enabling smooth and scalable dynamic 3D visualization of discrete-event construction simulations in outdoor augmented reality. , 2007, , .		6

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109	Semantic Relation Detection between Construction Entities to Support Safe Human-Robot Collaboration in Construction. , 2019, , .		6
110	Rapid Reconnaissance of Post-Disaster Building Damage Using Augmented Situational Visualization. , 2006, , 1.		5
111	Logical product models for automated scripting of process-level construction animations. Advances in Engineering Software, 2008, 39, 233-241.	1.8	5
112	Integrated Multi-Disciplinary e-Business Infrastructure Framework. , 0, , 65-80.		5
113	Overview of a cyber-enabled wireless monitoring system for the protection and management of critical infrastructure systems. , 2009, , .		5
114	Real-Time Construction Site Layout and Equipment Monitoring. , 2018, , .		5
115	Understanding the impact of building thermal environments on occupants' comfort and mental workload demand through human physiological sensing. , 2020, , 291-341.		5
116	Simulation and Visualization of Air-Side Operations at Detroit Metropolitan Airport. , 2006, , .		4
117	Marker-Assisted Structure from Motion for 3D Environment Modeling and Object Pose Estimation. , 2016, , .		4
118	Feasibility of Low-Cost Infrared Thermal Imaging to Assess Occupantsâ€™ Thermal Comfort. , 2019, , .		4
119	Can Infrared Facial Thermography Disclose Mental Workload in Indoor Thermal Environments?. , 2019, , .		4
120	Reusable Modular Software Interfaces for Outdoor Augmented Reality Applications in Engineering. , 2007, , .		3
121	On-line simulation of building energy processes: Need and research requirements. , 2013, , .		3
122	Context-Aware Framework for Highway Bridge Inspections. Journal of Computing in Civil Engineering, 2015, 29, 04014027.	2.5	3
123	Distributed simulation framework to analyze the energy effects of adaptive thermal comfort behavior of building occupants. , 2016, , .		3
124	Demonstration of UAV deployment and control of mobile wireless sensing networks for modal analysis of structures. Proceedings of SPIE, 2016, , .	0.8	3
125	Georeferenced Augmented Reality for Discovery-Based Learning in Civil Engineering. , 2018, , 199-228.		3
126	Monitoring Excavation Slope Stability Using Drones. , 2018, , .		3

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127	Enhancing Deep Neural Network-Based Trajectory Prediction: Fine-Tuning and Inherent Movement-Driven Post-Processing. , 2020, , .		3
128	Distributed Simulation Platforms and Data Passing Tools for Natural Hazards Engineering: Reviews, Limitations, and Recommendations. International Journal of Disaster Risk Science, 2021, 12, 617-634.	1.3	3
129	Multi-Sensor Monitoring for Real-Time 3D Visualization of Construction Equipment. , 2013, , .		3
130	Structure of an Extensible Augmented Reality Framework for Visualization of Simulated Construction Processes. , 2006, , .		2
131	Occlusion Handling Method for Ubiquitous Augmented Reality Using Reality Capture Technology and GLSL. , 2011, , .		2
132	Mobile and Pervasive Construction Visualization Using Outdoor Augmented Reality. , 2012, , 54-85.		2
133	Rapid geometric modeling for visual simulation using semi-automated reconstruction from single image. Engineering With Computers, 2014, 30, 31-39.	3.5	2
134	BIMap: Plan Drawings as Tangible Interfaces for Building Information Models. , 2016, , .		2
135	Fast Dataset Collection Approach for Articulated Equipment Pose Estimation. , 2019, , .		2
136	Enhancing Visual SLAM with Occupancy Grid Mapping for Real-Time Locating Applications in Indoor GPS-Denied Environments. , 2019, , .		2
137	Simple Run-Time Infrastructure (SRTI): An accessible distributed computing platform for interdisciplinary simulation. Journal of Computational Science, 2021, 55, 101455.	1.5	2
138	Ambient Data Collection in Indoor Building Environments Using Mobile Robots. , 2016, , .		2
139	Visualizing ``Fuzzy'' Construction Materials Using VITASCOPE's ParticleWorks Add-On. , 2003, , 1.		1
140	Legal Risk Analysis, Modeling and Programming for E-Commerce in Construction. , 2005, , 1.		1
141	Musings from the 13th European Group for Intelligent Computing in Engineering (EG-ICE) Workshop on Intelligent Computing in Engineering and Architecture. Journal of Computing in Civil Engineering, 2007, 21, 1-2.	2.5	1
142	Special Issue on Graphical Three-Dimensional Visualization in Architecture, Engineering, and Construction. Journal of Computing in Civil Engineering, 2009, 23, 309-310.	2.5	1
143	Augmenting BIM with 3D Imaging Data to Control Drilling for Embeds into Reinforced Concrete Bridge Decks. , 2012, , .		1
144	Multi-Robot Task Allocation and Route Planning for Indoor Building Environment Applications. , 2018, , .		1

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145	Modeling Interactions in Community Resilience. , 2018, , .		1
146	Investigating the Neurophysiological Effect of Thermal Environment on Individualsâ€™ Performance Using Electroencephalogram. , 2019, , .		1
147	Planning and Execution for Geometrically Adaptive BIM-Driven Robotized Construction Processes. , 2019, , .		1
148	A Plane Tracker for AEC-Automation Applications. , 2012, , .		1
149	User-Guided Dimensional Analysis of Indoor Scenes Using Depth Sensors. , 2015, , .		1
150	Adaptive Perception and Modeling for Robotized Construction Joint Filling. , 2018, , .		1
151	Call for Papers: Special Issue of the <i>Journal of Computing in Civil Engineering</i> on Graphical 3D Visualization in Architecture, Engineering, and Construction. Journal of Computing in Civil Engineering, 2007, 21, 383-383.	2.5	0
152	Legal Issues in Construction e-Business. , 0, , 211-221.		0
153	Context-Aware Computing Framework for Improved Bridge Inspection. , 2012, , .		0
154	An LCM Framework to Couple Spatially Distributed Energy Simulation and Occupancy Models for Optimizing Building Energy Consumption. , 2016, , .		0
155	Automatic Barcode Extraction for Efficient Large-Scale Inventory Management. , 2017, , .		0
156	Workpiece Modeling for Adaptive Robotized Construction Work. , 2018, , .		0
157	Enhancing Perceived Safety in Humanâ€"Robot Collaborative Construction Using Immersive Virtual Environments. SSRN Electronic Journal, 2018, , .	0.4	0