

Markus KÄ¶nig

List of Publications by Year in descending order

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Version: 2024-02-01

107
papers

1,736
citations

394421

19
h-index

361022

35
g-index

123
all docs

123
docs citations

123
times ranked

1150
citing authors

#	ARTICLE	IF	CITATIONS
1	Natural markers for augmented reality-based indoor navigation and facility maintenance. Automation in Construction, 2014, 48, 18-30.	9.8	121
2	Interior construction state recognition with 4D BIM registered image sequences. Automation in Construction, 2018, 86, 11-32.	9.8	102
3	Do right PLS and do PLS right: A critical review of the application of PLS-SEM in construction management research. Frontiers of Engineering Management, 2021, 8, 356-369.	6.1	72
4	A tunnel information modelling framework to support management, simulations and visualisations in mechanised tunnelling projects. Automation in Construction, 2017, 83, 78-90.	9.8	69
5	Combining visual natural markers and IMU for improved AR based indoor navigation. Advanced Engineering Informatics, 2017, 31, 18-31.	8.0	65
6	Planning and executing construction inspections with unmanned aerial vehicles. Automation in Construction, 2018, 96, 540-553.	9.8	64
7	Bridge construction schedule generation with pattern-based construction methods and constraint-based simulation. Advanced Engineering Informatics, 2010, 24, 379-388.	8.0	63
8	Knowledge-based schedule generation and evaluation. Advanced Engineering Informatics, 2010, 24, 389-403.	8.0	59
9	Building Information Modeling: Why? What? How?. , 2018, , 1-24.		59
10	Applying rule-based model-checking to construction site layout planning tasks. Automation in Construction, 2019, 97, 205-219.	9.8	57
11	Recognition of process patterns for BIM-based construction schedules. Advanced Engineering Informatics, 2017, 33, 456-472.	8.0	49
12	Assessment and weighting of meteorological ensemble forecast members based on supervised machine learning with application to runoff simulations and flood warning. Advanced Engineering Informatics, 2017, 33, 427-439.	8.0	39
13	Automated Payment and Contract Management in the Construction Industry by Integrating Building Information Modeling and Blockchain-Based Smart Contracts. Applied Sciences (Switzerland), 2021, 11, 7653.	2.5	38
14	First Person Virtual Reality for Evaluation and Learning of Construction Site Safety. , 2016, , .		34
15	Construction resource efficiency improvement by Long Range Wide Area Network tracking and monitoring. Automation in Construction, 2020, 116, 103245.	9.8	33
16	Integrated parametric multi-level information and numerical modelling of mechanised tunnelling projects. Advanced Engineering Informatics, 2020, 43, 101011.	8.0	29
17	BIM-based modeling and management of design options at early planning phases. Advanced Engineering Informatics, 2018, 38, 316-329.	8.0	26
18	Scalable real-time parking lot classification: An evaluation of image features and supervised learning algorithms. , 2015, , .		24

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19	Algorithm for quantitative analysis of close call events and personalized feedback in construction safety. <i>Automation in Construction</i> , 2019, 99, 206-222.	9.8	23
20	Framework for Automated Billing in the Construction Industry Using BIM and Smart Contracts. <i>Lecture Notes in Civil Engineering</i> , 2021, , 824-838.	0.4	23
21	Evaluation of Disturbances in Mechanized Tunneling Using Process Simulation. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2016, 31, 176-192.	9.8	21
22	Radar interferometry based settlement monitoring in tunnelling: Visualisation and accuracy analyses. <i>Visualization in Engineering</i> , 2016, 4, .	8.8	21
23	An Empirical Study on the Acceptance of 4D BIM in EPC Projects in China. <i>Sustainability</i> , 2019, 11, 1316.	3.2	21
24	Indoor Localization for Augmented Reality Devices Using BIM, Point Clouds, and Template Matching. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 4260.	2.5	20
25	A sigmoid-optimized encoder-decoder network for crack segmentation with copy-paste transfer learning. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2022, 37, 1875-1890.	9.8	20
26	Using Synthetic Data to Improve and Evaluate the Tracking Performance of Construction Workers on Site. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 4948.	2.5	19
27	Intelligent BIM-based construction scheduling using discrete event simulation. , 2012, , .		18
28	From digital models to numerical analysis for mechanised tunnelling: A fully automated design-through-analysis workflow. <i>Tunnelling and Underground Space Technology</i> , 2021, 107, 103622.	6.2	18
29	Investigating the Relationship between Construction Supply Chain Integration and Sustainable Use of Material: Evidence from China. <i>Sustainability</i> , 2018, 10, 3581.	3.2	17
30	Automated Construction of Masonry Buildings using Cable-Driven Parallel Robots. , 2016, , .		17
31	On the Global Sensitivity Analysis Methods in Geotechnical Engineering: A Comparative Study on a Rock Salt Energy Storage. <i>International Journal of Civil Engineering</i> , 2019, 17, 131-143.	2.0	16
32	Systematic literature review on smart contracts in the construction industry: Potentials, benefits, and challenges. <i>Frontiers of Engineering Management</i> , 2022, 9, 196-213.	6.1	15
33	Hybrid Ground Data Model for Interacting Simulations in Mechanized Tunneling. <i>Journal of Computing in Civil Engineering</i> , 2013, 27, 708-718.	4.7	14
34	Assessing maintenance strategies for cutting tool replacements in mechanized tunneling using process simulation. <i>Journal of Simulation</i> , 2017, 11, 51-61.	1.5	14
35	Window detection in facade images for risk assessment in tunneling. <i>Visualization in Engineering</i> , 2018, 6, .	8.8	14
36	Consistent management and evaluation of building models in the early design stages. <i>Journal of Information Technology in Construction</i> , 2020, 25, 212-232.	2.1	14

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37	Integrating BIM- and Cost-included Information Container with Blockchain for Construction Automated Payment using Billing Model and Smart Contracts. , 2020, , .		14
38	Simulation-Based Analysis of Integrated Production and Jobsite Logistics in Mechanized Tunneling. Journal of Computing in Civil Engineering, 2016, 30, .	4.7	13
39	GPU-Enabled Pavement Distress Image Classification in Real Time. Journal of Computing in Civil Engineering, 2017, 31, .	4.7	13
40	A Framework for Automated Acquisition and Processing of As-Built Data with Autonomous Unmanned Aerial Vehicles. Sensors, 2019, 19, 4513.	3.8	13
41	Robustness evaluation of cutting tool maintenance planning for soft ground tunneling projects. Underground Space (China), 2018, 3, 72-85.	7.5	12
42	Optimal measurement design for parameter identification in mechanized tunneling. Underground Space (China), 2018, 3, 34-44.	7.5	12
43	BIM Project Management. , 2018, , 235-249.		12
44	Industrializing precast productions. Civil Engineering Design, 2021, 3, 87-98.	1.9	12
45	BIM for 3D Printing in Construction. , 2018, , 421-446.		11
46	A hybrid model for estimation of ground movements due to mechanized tunnel excavation. Computer-Aided Civil and Infrastructure Engineering, 2019, 34, 586-601.	9.8	11
47	Towards autonomous cloud-based close call data management for construction equipment safety. Automation in Construction, 2021, 132, 103962.	9.8	11
48	BIM Applications of Rule-Based Checking in Construction Site Layout Planning Tasks. , 2016, , .		11
49	Using Serious Games in Virtual Reality for Automated Close Call and Contact Collision Analysis in Construction Safety. , 2019, , .		11
50	Reactive scheduling based on actual logistics data by applying simulation-based optimization. Visualization in Engineering, 2015, 3, .	8.8	10
51	Automatic window detection in facade images. Automation in Construction, 2018, 96, 527-539.	9.8	10
52	Implementing textural features on GPUs for improved real-time pavement distress detection. Journal of Real-Time Image Processing, 2019, 16, 1383-1394.	3.5	10
53	Simulation of automated construction using wire robots. , 2016, , .		8
54	Common Data Environment. , 2018, , 279-291.		8

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55	Computer Vision and Deep Learning for Real-Time Pavement Distress Detection. , 2019, , 601-607.		8
56	Generating Construction Schedules with Case-Based Reasoning Support. , 2007, , 119.		7
57	Stochastic field simulation of slope stability problems: Improvement and reduction of computational effort. Computer Methods in Applied Mechanics and Engineering, 2020, 369, 113167.	6.6	7
58	Optimisation of geotechnical surveys using a BIM-based geostatistical analysis. Smart and Sustainable Built Environment, 2021, 10, 420-437.	4.0	7
59	Removing duplicated geometries in IFC models using rigid body transformation estimation and flyweight design pattern. Visualization in Engineering, 2018, 6, .	8.8	6
60	Comparing Classical and Modern Machine Learning Techniques for Monitoring Pedestrian Workers in Top-View Construction Site Video Sequences. Applied Sciences (Switzerland), 2020, 10, 8466.	2.5	6
61	Real-time Positioning via LoRa for Construction Site Logistics. , 2018, , .		6
62	Applying Eye Tracking in Virtual Construction Environments to Improve Cognitive Data Collection and Human-Computer Interaction of Site Hazard Identification. , 2019, , .		6
63	Evaluating Virtual Reality Simulations for Construction Safety Training. I-com, 2022, 21, 269-281.	1.3	6
64	Collaborative Data Management. , 2018, , 251-277.		5
65	BIM-Based Quantity Take-Off. , 2018, , 383-391.		5
66	Employment of the bootstrap method for optimal sensor location considering uncertainties in a coupled hydro-mechanical application. Applied Soft Computing Journal, 2019, 75, 298-309.	7.2	5
67	Germany's Governmental BIM Initiative "The BIM4INFRA2020 Project Implementing the BIM Roadmap. Lecture Notes in Civil Engineering, 2021, , 452-465.	0.4	5
68	Construction Worker Detection and Tracking in Bird's-Eye View Camera Images. , 2018, , .		5
69	From the graphical representation to the smart contract language: a use case in the construction industry. , 2021, , .		5
70	A hybrid exploration approach for the prediction of geological changes ahead of mechanized tunnel excavation. Journal of Applied Geophysics, 2022, 203, 104684.	2.1	5
71	Process Analysis of Cable-Driven Parallel Robots for Automated Construction. Intelligent Systems, Control and Automation: Science and Engineering, 2018, , 63-83.	0.5	4
72	COBie: A Specification for the Construction Operations Building Information Exchange. , 2018, , 167-180.		4

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73	A Cascaded Classifier Approach to Window Detection in Facade Images. , 2017, , .		4
74	Improved Window Detection in Facade Images. , 2019, , 537-543.		3
75	Rule-Based Semantic Validation for Standardized Linked Building Models. Lecture Notes in Civil Engineering, 2021, , 772-787.	0.4	3
76	From Forecasting to Real-Time Process Controlling with Continuous Simulation Model Updates. , 0, , .		3
77	Synthetic Data for Evaluating the Visual Tracking of Construction Workers. , 2020, , .		3
78	Ausarbeitungsgrade von BIM-Modellen. VDI-Buch, 2021, , 165-191.	0.1	3
79	A scenario-based simulation framework of on- and off-site construction logistics. , 2017, , .		2
80	Digitalisierung der Arbeitssicherheit auf Baustellen. , 2021, , 399-414.		2
81	Ontology for Logistics Requirements on a 4D BIM for Semi-Automatic Storage Space Planning. , 2019, , .		2
82	Applying Kanban System in Construction Logistics for Real-time Material Demand Report and Pulled Replenishment. , 2019, , .		2
83	A toolchain for automated acquisition and processing of as-built data with autonomous UAVs. , 2019, , .		2
84	BIM-based variant retrieval of building designs using case-based reasoning and pattern matching. , 2021, , .		2
85	Deep Learning-Based Entity Recognition in Construction Regulatory Documents. , 2021, , .		2
86	Toolchains for Interoperable BIM Workflows in a Web-Based Integration Platform. Applied Sciences (Switzerland), 2022, 12, 5959.	2.5	2
87	An ontology integrating as-built information for infrastructure asset management using BIM and semantic web. , 2021, , .		1
88	Integrated Platform for Interactive and Collaborative Exploration of Tunnel Alignments. Lecture Notes in Civil Engineering, 2021, , 320-334.	0.4	1
89	Reactive Adaptation of Construction Schedules by Applying Simulation-Based Optimization. , 2014, , .		1
90	Predictive Analytics for Close Calls in Construction Safety. , 2018, , .		1

#	ARTICLE	IF	CITATIONS
91	Using Wearable Devices to Explore the Relationship Among the Work Productivity, Psychological State, and Physical Status of Construction Workers. , 2018, , .		1
92	Improving 2D Construction Plans with Cycle-Consistent Generative Adversarial Networks. , 2022, , .		1
93	Simulation of maintenance strategies in mechanized tunneling. , 2016, , .		0
94	Process Modeling. , 2018, , 63-78.		0
95	Quantitative Analysis of Close Call Events. Lecture Notes in Computer Science, 2018, , 359-384.	1.3	0
96	Smart Maintenance Services for Buildings with Digital Twins and Augmented Reality. , 2021, , 130-163.		0
97	Aktuelle Entwicklungen und Herausforderungen der Bauinformatik/Advances and Challenges of Computing in Civil Engineering. Bauingenieur, 2015, 90, 320-329.	0.1	0
98	Applying Object-Oriented Analysis and Design to Digital Construction Logistics Planning from a Material Flow Perspective. , 2018, , .		0
99	Reliability-based Robust Design Optimization of a Rock Salt Cavern. , 2019, , .		0
100	Simulation als Bestandteil eines BIM-basierten Vorgehens zur Planung der Baustellenlogistik im Großanlagenbau. , 0, , .		0
101	Analytische und Simulationsbasierte Planungsansätze im mechanisierten Tunnelbau/Analytic and simulation based planning approaches in mechanized tunneling. Bauingenieur, 2020, 95, 230-241.	0.1	0
102	Prinzipien und Techniken der modellgestützten Zusammenarbeit. VDI-Buch, 2021, , 309-333.	0.1	0
103	Building Information Modeling. , 2021, , 1643-1652.		0
104	Rule-Based Generation of Assembly Sequences for Simulation in Large-Scale Plant Construction. , 2020, , .		0
105	A Systematic Review of Image-Based Technologies for Detecting As-Is BIM Objects. , 2022, , .		0
106	Strategies for Rule-Based Generated Assembly Sequences in Large-Scale Plant Construction. , 2022, , .		0
107	Integration and Provision of BIM-Based Information Containers for the Asset Management of Roads and Bridges. , 2022, , .		0