

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	A sigmoid-optimized encoder-decoder network for crack segmentation with copy-edit-paste transfer learning. Computer-Aided Civil and Infrastructure Engineering, 2022, 37, 1875-1890.	9.8	20
2	Systematic literature review on smart contracts in the construction industry: Potentials, benefits, and challenges. Frontiers of Engineering Management, 2022, 9, 196-213.	6.1	15
3	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
4	A Systematic Review of Image-Based Technologies for Detecting As-Is BIM Objects. , 2022, , .		0
5	Strategies for Rule-Based Generated Assembly Sequences in Large-Scale Plant Construction. , 2022, , .		0
6	Improving 2D Construction Plans with Cycle-Consistent Generative Adversarial Networks. , 2022, , .		1
7	Integration and Provision of BIM-Based Information Containers for the Asset Management of Roads and Bridges. , 2022, , .		0
8	Toolchains for Interoperable BIM Workflows in a Web-Based Integration Platform. Applied Sciences (Switzerland), 2022, 12, 5959.	2.5	2
9	Evaluating Virtual Reality Simulations for Construction Safety Training. I-com, 2022, 21, 269-281.	1.3	6
10	From digital models to numerical analysis for mechanised tunnelling: A fully automated design-through-analysis workflow. Tunnelling and Underground Space Technology, 2021, 107, 103622.	6.2	18
11	Digitalisierung der Arbeitssicherheit auf Baustellen. , 2021, , 399-414.		2
12	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
13	Smart Maintenance Services for Buildings with Digital Twins and Augmented Reality. , 2021, , 130-163.		0
14	Industrializing precast productions. Civil Engineering Design, 2021, 3, 87-98.	1.9	12
15	An ontology integrating as-built information for infrastructure asset management using BIM and semantic web. , 2021, , .		1
16	Optimisation of geotechnical surveys using a BIM-based geostatistical analysis. Smart and Sustainable Built Environment, 2021, 10, 420-437.	4.0	7
17	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
18	Towards autonomous cloud-based close call data management for construction equipment safety. Automation in Construction, 2021, 132, 103962.	9.8	11

#	ARTICLE	IF	CITATIONS
19	Integrated Platform for Interactive and Collaborative Exploration of Tunnel Alignments. Lecture Notes in Civil Engineering, 2021, , 320-334.	0.4	1
20	Germany's Governmental BIM Initiative "The BIM4INFRA2020 Project Implementing the BIM Roadmap. Lecture Notes in Civil Engineering, 2021, , 452-465.	0.4	5
21	Framework for Automated Billing in the Construction Industry Using BIM and Smart Contracts. Lecture Notes in Civil Engineering, 2021, , 824-838.	0.4	23
22	Rule-Based Semantic Validation for Standardized Linked Building Models. Lecture Notes in Civil Engineering, 2021, , 772-787.	0.4	3
23	BIM-based variant retrieval of building designs using case-based reasoning and pattern matching. , 2021, , .		2
24	From the graphical representation to the smart contract language: a use case in the construction industry. , 2021, , .		5
25	Deep Learning-Based Entity Recognition in Construction Regulatory Documents. , 2021, , .		2
26	Prinzipien und Techniken der modellgestützten Zusammenarbeit. VDI-Buch, 2021, , 309-333.	0.1	0
27	Building Information Modeling. , 2021, , 1643-1652.		0
28	Ausarbeitungsgrade von BIM-Modellen. VDI-Buch, 2021, , 165-191.	0.1	3
29	Integrated parametric multi-level information and numerical modelling of mechanised tunnelling projects. Advanced Engineering Informatics, 2020, 43, 101011.	8.0	29
30	Using Synthetic Data to Improve and Evaluate the Tracking Performance of Construction Workers on Site. Applied Sciences (Switzerland), 2020, 10, 4948.	2.5	19
31	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
32	Construction resource efficiency improvement by Long Range Wide Area Network tracking and monitoring. Automation in Construction, 2020, 116, 103245.	9.8	33
33	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
34	Consistent management and evaluation of building models in the early design stages. Journal of Information Technology in Construction, 2020, 25, 212-232.	2.1	14
35	Analytische und Simulationsbasierte Planungsansätze im mechanisierten Tunnelbau/Analytic and simulation based planning approaches in mechanized tunneling. Bauingenieur, 2020, 95, 230-241.	0.1	0
36	Synthetic Data for Evaluating the Visual Tracking of Construction Workers. , 2020, , .		3

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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	Rule-Based Generation of Assembly Sequences for Simulation in Large-Scale Plant Construction. , 2020, , .		0
39	A Framework for Automated Acquisition and Processing of As-Built Data with Autonomous Unmanned Aerial Vehicles. Sensors, 2019, 19, 4513.	3.8	13
40	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
41	An Empirical Study on the Acceptance of 4D BIM in EPC Projects in China. Sustainability, 2019, 11, 1316.	3.2	21
42	Indoor Localization for Augmented Reality Devices Using BIM, Point Clouds, and Template Matching. Applied Sciences (Switzerland), 2019, 9, 4260.	2.5	20
43	Algorithm for quantitative analysis of close call events and personalized feedback in construction safety. Automation in Construction, 2019, 99, 206-222.	9.8	23
44	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
45	Applying rule-based model-checking to construction site layout planning tasks. Automation in Construction, 2019, 97, 205-219.	9.8	57
46	On the Global Sensitivity Analysis Methods in Geotechnical Engineering: A Comparative Study on a Rock Salt Energy Storage. International Journal of Civil Engineering, 2019, 17, 131-143.	2.0	16
47	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
48	Improved Window Detection in Facade Images. , 2019, , 537-543.		3
49	Computer Vision and Deep Learning for Real-Time Pavement Distress Detection. , 2019, , 601-607.		8
50	Ontology for Logistics Requirements on a 4D BIM for Semi-Automatic Storage Space Planning. , 2019, , .		2
51	Using Serious Games in Virtual Reality for Automated Close Call and Contact Collision Analysis in Construction Safety. , 2019, , .		11
52	Applying Kanban System in Construction Logistics for Real-time Material Demand Report and Pulled Replenishment. , 2019, , .		2
53	Applying Eye Tracking in Virtual Construction Environments to Improve Cognitive Data Collection and Human-Computer Interaction of Site Hazard Identification. , 2019, , .		6
54	A toolchain for automated acquisition and processing of as-built data with autonomous UAVs. , 2019, , .		2

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55	Reliability-based Robust Design Optimization of a Rock Salt Cavern. , 2019, , .		0
56	Robustness evaluation of cutting tool maintenance planning for soft ground tunneling projects. Underground Space (China), 2018, 3, 72-85.	7.5	12
57	Optimal measurement design for parameter identification in mechanized tunneling. Underground Space (China), 2018, 3, 34-44.	7.5	12
58	Process Analysis of Cable-Driven Parallel Robots for Automated Construction. Intelligent Systems, Control and Automation: Science and Engineering, 2018, , 63-83.	0.5	4
59	Interior construction state recognition with 4D BIM registered image sequences. Automation in Construction, 2018, 86, 11-32.	9.8	102
60	Building Information Modeling: Why? What? How?. , 2018, , 1-24.		59
61	BIM Project Management. , 2018, , 235-249.		12
62	Collaborative Data Management. , 2018, , 251-277.		5
63	Common Data Environment. , 2018, , 279-291.		8
64	COBie: A Specification for the Construction Operations Building Information Exchange. , 2018, , 167-180.		4
65	Automatic window detection in facade images. Automation in Construction, 2018, 96, 527-539.	9.8	10
66	Planning and executing construction inspections with unmanned aerial vehicles. Automation in Construction, 2018, 96, 540-553.	9.8	64
67	Investigating the Relationship between Construction Supply Chain Integration and Sustainable Use of Material: Evidence from China. Sustainability, 2018, 10, 3581.	3.2	17
68	BIM-Based Quantity Take-Off. , 2018, , 383-391.		5
69	BIM for 3D Printing in Construction. , 2018, , 421-446.		11
70	Process Modeling. , 2018, , 63-78.		0
71	Removing duplicated geometries in IFC models using rigid body transformation estimation and flyweight design pattern. Visualization in Engineering, 2018, 6, .	8.8	6
72	Window detection in facade images for risk assessment in tunneling. Visualization in Engineering, 2018, 6, .	8.8	14

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73	BIM-based modeling and management of design options at early planning phases. <i>Advanced Engineering Informatics</i> , 2018, 38, 316-329.	8.0	26
74	Quantitative Analysis of Close Call Events. <i>Lecture Notes in Computer Science</i> , 2018, , 359-384.	1.3	0
75	Real-time Positioning via LoRa for Construction Site Logistics. , 2018, , .		6
76	Predictive Analytics for Close Calls in Construction Safety. , 2018, , .		1
77	Construction Worker Detection and Tracking in Bird's-Eye View Camera Images. , 2018, , .		5
78	Using Wearable Devices to Explore the Relationship Among the Work Productivity, Psychological State, and Physical Status of Construction Workers. , 2018, , .		1
79	Applying Object-Oriented Analysis and Design to Digital Construction Logistics Planning from a Material Flow Perspective. , 2018, , .		0
80	Combining visual natural markers and IMU for improved AR based indoor navigation. <i>Advanced Engineering Informatics</i> , 2017, 31, 18-31.	8.0	65
81	Recognition of process patterns for BIM-based construction schedules. <i>Advanced Engineering Informatics</i> , 2017, 33, 456-472.	8.0	49
82	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
83	Assessment and weighting of meteorological ensemble forecast members based on supervised machine learning with application to runoff simulations and flood warning. <i>Advanced Engineering Informatics</i> , 2017, 33, 427-439.	8.0	39
84	A tunnel information modelling framework to support management, simulations and visualisations in mechanised tunnelling projects. <i>Automation in Construction</i> , 2017, 83, 78-90.	9.8	69
85	GPU-Enabled Pavement Distress Image Classification in Real Time. <i>Journal of Computing in Civil Engineering</i> , 2017, 31, .	4.7	13
86	A scenario-based simulation framework of on- and off-site construction logistics. , 2017, , .		2
87	A Cascaded Classifier Approach to Window Detection in Facade Images. , 2017, , .		4
88	Evaluation of Disturbances in Mechanized Tunneling Using Process Simulation. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2016, 31, 176-192.	9.8	21
89	Simulation of maintenance strategies in mechanized tunneling. , 2016, , .		0
90	Simulation of automated construction using wire robots. , 2016, , .		8

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91	Simulation-Based Analysis of Integrated Production and Jobsite Logistics in Mechanized Tunneling. Journal of Computing in Civil Engineering, 2016, 30, .	4.7	13
92	Radar interferometry based settlement monitoring in tunnelling: Visualisation and accuracy analyses. Visualization in Engineering, 2016, 4, .	8.8	21
93	First Person Virtual Reality for Evaluation and Learning of Construction Site Safety. , 2016, , .		34
94	BIM Applications of Rule-Based Checking in Construction Site Layout Planning Tasks. , 2016, , .		11
95	Automated Construction of Masonry Buildings using Cable-Driven Parallel Robots. , 2016, , .		17
96	Reactive scheduling based on actual logistics data by applying simulation-based optimization. Visualization in Engineering, 2015, 3, .	8.8	10
97	Scalable real-time parking lot classification: An evaluation of image features and supervised learning algorithms. , 2015, , .		24
98	Aktuelle Entwicklungen und Herausforderungen der Bauinformatik/Advances and Challenges of Computing in Civil Engineering. Bauingenieur, 2015, 90, 320-329.	0.1	0
99	Natural markers for augmented reality-based indoor navigation and facility maintenance. Automation in Construction, 2014, 48, 18-30.	9.8	121
100	Reactive Adaptation of Construction Schedules by Applying Simulation-Based Optimization. , 2014, , .		1
101	Hybrid Ground Data Model for Interacting Simulations in Mechanized Tunneling. Journal of Computing in Civil Engineering, 2013, 27, 708-718.	4.7	14
102	Intelligent BIM-based construction scheduling using discrete event simulation. , 2012, , .		18
103	Knowledge-based schedule generation and evaluation. Advanced Engineering Informatics, 2010, 24, 389-403.	8.0	59
104	Bridge construction schedule generation with pattern-based construction methods and constraint-based simulation. Advanced Engineering Informatics, 2010, 24, 379-388.	8.0	63
105	Generating Construction Schedules with Case-Based Reasoning Support. , 2007, , 119.		7
106	Simulation als Bestandteil eines BIM-basierten Vorgehens zur Planung der Baustellenlogistik im Großanlagenbau. , 0, , .		0
107	From Forecasting to Real-Time Process Controlling with Continuous Simulation Model Updates. , 0, , .		3