

Markus Knig

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.

95 papers	934 citations	15 h-index	26 g-index
123 ext. papers	1,276 ext. citations	3.8 avg, IF	5.11 L-index

#	Paper	IF	Citations
95	BIM-Based Organization of Inspection Data Using Semantic Web Technology for Infrastructure Asset Management. <i>Lecture Notes in Civil Engineering</i> , 2022 , 1117-1126	0.3	1
94	Use of BIM for the optimized operation of road tunnels: Modelling approach, information requirements, and exemplary implementation. <i>Geomechanik Und Tunnelbau</i> , 2022 , 15, 167-174	0.6	1
93	A hybrid exploration approach for the prediction of geological changes ahead of mechanized tunnel excavation. <i>Journal of Applied Geophysics</i> , 2022 , 104684	1.7	1
92	Ausarbeitungsgrade von BIM-Modellen. <i>VDI-Buch</i> , 2021 , 165-191	0.1	0
91	BIM für die Mengenermittlung. <i>VDI-Buch</i> , 2021 , 463-473	0.1	
90	Prinzipien und Techniken der modellgestützten Zusammenarbeit. <i>VDI-Buch</i> , 2021 , 309-333	0.1	
89	Die BIM-Methode im Überblick. <i>VDI-Buch</i> , 2021 , 1-31	0.1	
88	Building Information Modeling 2021 , 1643-1652		
87	Common Data Environment. <i>VDI-Buch</i> , 2021 , 335-351	0.1	
86	BIM im Tunnelbau. <i>VDI-Buch</i> , 2021 , 667-685	0.1	
85	Rule-Based Semantic Validation for Standardized Linked Building Models. <i>Lecture Notes in Civil Engineering</i> , 2021 , 772-787	0.3	1
84	Integrated Platform for Interactive and Collaborative Exploration of Tunnel Alignments. <i>Lecture Notes in Civil Engineering</i> , 2021 , 320-334	0.3	1
83	Germany's Governmental BIM Initiative – The BIM4INFRA2020 Project Implementing the BIM Roadmap. <i>Lecture Notes in Civil Engineering</i> , 2021 , 452-465	0.3	1
82	Framework for Automated Billing in the Construction Industry Using BIM and Smart Contracts. <i>Lecture Notes in Civil Engineering</i> , 2021 , 824-838	0.3	10
81	Do right PLS and do PLS right: A critical review of the application of PLS-SEM in construction management research. <i>Frontiers of Engineering Management</i> , 2021 , 8, 356-369	2.7	14
80	Smart Maintenance Services for Buildings with Digital Twins and Augmented Reality 2021 , 130-163		
79	Industrializing precast productions. <i>Civil Engineering Design</i> , 2021 , 3, 87-98	1	1

78	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	5.7	6
77	Digitalisierung der Arbeitssicherheit auf Baustellen 2021 , 399-414		1
76	Vom Handwerk zur individualisierten Serienfertigung. <i>Bautechnik</i> , 2021 , 98, 243-256	0.5	9
75	Optimisation of geotechnical surveys using a BIM-based geostatistical analysis. <i>Smart and Sustainable Built Environment</i> , 2021 , ahead-of-print,	3	1
74	Automated Payment and Contract Management in the Construction Industry by Integrating Building Information Modeling and Blockchain-Based Smart Contracts. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 7653	2.6	11
73	Towards autonomous cloud-based close call data management for construction equipment safety. <i>Automation in Construction</i> , 2021 , 132, 103962	9.6	0
72	Comparing Classical and Modern Machine Learning Techniques for Monitoring Pedestrian Workers in Top-View Construction Site Video Sequences. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 8466	2.6	1
71	Construction resource efficiency improvement by Long Range Wide Area Network tracking and monitoring. <i>Automation in Construction</i> , 2020 , 116, 103245	9.6	14
70	Stochastic field simulation of slope stability problems: Improvement and reduction of computational effort. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020 , 369, 113167	5.7	3
69	Integrated BIM-to-FEM approach in mechanised tunnelling. <i>Geomechanik Und Tunnelbau</i> , 2020 , 13, 212-226		10
68	Synthetic Data for Evaluating the Visual Tracking of Construction Workers 2020 ,		1
67	Integrating BIM- and Cost-included Information Container with Blockchain for Construction Automated Payment using Billing Model and Smart Contracts 2020 ,		4
66	Consistent management and evaluation of building models in the early design stages. <i>Journal of Information Technology in Construction</i> , 2020 , 25, 212-232	2.5	5
65	Integrated parametric multi-level information and numerical modelling of mechanised tunnelling projects. <i>Advanced Engineering Informatics</i> , 2020 , 43, 101011	7.4	14
64	Using Synthetic Data to Improve and Evaluate the Tracking Performance of Construction Workers on Site. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 4948	2.6	2
63	A hybrid model for estimation of ground movements due to mechanized tunnel excavation. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2019 , 34, 586-601	8.4	4
62	An Empirical Study on the Acceptance of 4D BIM in EPC Projects in China. <i>Sustainability</i> , 2019 , 11, 1316	3.6	15
61	A Framework for Automated Acquisition and Processing of As-Built Data with Autonomous Unmanned Aerial Vehicles. <i>Sensors</i> , 2019 , 19,	3.8	5

60	Using Serious Games in Virtual Reality for Automated Close Call and Contact Collision Analysis in Construction Safety 2019 ,		6
59	Applying Eye Tracking in Virtual Construction Environments to Improve Cognitive Data Collection and Human-Computer Interaction of Site Hazard Identification 2019 ,		3
58	Improved Window Detection in Facade Images 2019 , 537-543		2
57	Computer Vision and Deep Learning for Real-Time Pavement Distress Detection 2019 , 601-607		6
56	Indoor Localization for Augmented Reality Devices Using BIM, Point Clouds, and Template Matching. <i>Applied Sciences (Switzerland)</i> , 2019 , 9, 4260	2.6	9
55	Algorithm for quantitative analysis of close call events and personalized feedback in construction safety. <i>Automation in Construction</i> , 2019 , 99, 206-222	9.6	13
54	Employment of the bootstrap method for optimal sensor location considering uncertainties in a coupled hydro-mechanical application. <i>Applied Soft Computing Journal</i> , 2019 , 75, 298-309	7.5	4
53	Applying rule-based model-checking to construction site layout planning tasks. <i>Automation in Construction</i> , 2019 , 97, 205-219	9.6	38
52	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	1.9	7
51	Implementing textural features on GPUs for improved real-time pavement distress detection. <i>Journal of Real-Time Image Processing</i> , 2019 , 16, 1383-1394	1.9	7
50	Robustness evaluation of cutting tool maintenance planning for soft ground tunneling projects. <i>Underground Space (China)</i> , 2018 , 3, 72-85	3.7	6
49	Optimal measurement design for parameter identification in mechanized tunneling. <i>Underground Space (China)</i> , 2018 , 3, 34-44	3.7	9
48	Process Analysis of Cable-Driven Parallel Robots for Automated Construction. <i>Intelligent Systems, Control and Automation: Science and Engineering</i> , 2018 , 63-83	0.6	2
47	Removing duplicated geometries in IFC models using rigid body transformation estimation and flyweight design pattern. <i>Visualization in Engineering</i> , 2018 , 6,	3	4
46	Window detection in facade images for risk assessment in tunneling. <i>Visualization in Engineering</i> , 2018 , 6,	3	11
45	BIM-based modeling and management of design options at early planning phases. <i>Advanced Engineering Informatics</i> , 2018 , 38, 316-329	7.4	10
44	Quantitative Analysis of Close Call Events. <i>Lecture Notes in Computer Science</i> , 2018 , 359-384	0.9	
43	Real-time Positioning via LoRa for Construction Site Logistics 2018 ,		3

42	Construction Worker Detection and Tracking in Bird's-Eye View Camera Images 2018 ,		5
41	Interior construction state recognition with 4D BIM registered image sequences. <i>Automation in Construction</i> , 2018 , 86, 11-32	9.6	57
40	Building Information Modeling: Why? What? How? 2018 , 1-24		21
39	BIM Project Management 2018 , 235-249		7
38	Collaborative Data Management 2018 , 251-277		1
37	Common Data Environment 2018 , 279-291		3
36	COBie: A Specification for the Construction Operations Building Information Exchange 2018 , 167-180		1
35	Automatic window detection in facade images. <i>Automation in Construction</i> , 2018 , 96, 527-539	9.6	6
34	Planning and executing construction inspections with unmanned aerial vehicles. <i>Automation in Construction</i> , 2018 , 96, 540-553	9.6	34
33	Investigating the Relationship between Construction Supply Chain Integration and Sustainable Use of Material: Evidence from China. <i>Sustainability</i> , 2018 , 10, 3581	3.6	11
32	BIM-Based Quantity Take-Off 2018 , 383-391		3
31	BIM for 3D Printing in Construction 2018 , 421-446		3
30	Data Modeling 2018 , 43-62		1
29	Process Modeling 2018 , 63-78		
28	Erhöhung der Arbeitssicherheit im Tunnelbau durch proaktive Kollisionsvermeidung 2018 , 175-220		1
27	Combining visual natural markers and IMU for improved AR based indoor navigation. <i>Advanced Engineering Informatics</i> , 2017 , 31, 18-31	7.4	43
26	Recognition of process patterns for BIM-based construction schedules. <i>Advanced Engineering Informatics</i> , 2017 , 33, 456-472	7.4	33
25	Assessing maintenance strategies for cutting tool replacements in mechanized tunneling using process simulation. <i>Journal of Simulation</i> , 2017 , 11, 51-61	1.9	13

24	Die INFRABIM-Reifegradmetrik. <i>Bautechnik</i> , 2017 , 94, 215-219	0.5	1
23	BIM-Anwendungen im Tunnelbau. <i>Bautechnik</i> , 2017 , 94, 227-231	0.5	4
22	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	7.4	25
21	A tunnel information modelling framework to support management, simulations and visualisations in mechanised tunnelling projects. <i>Automation in Construction</i> , 2017 , 83, 78-90	9.6	41
20	GPU-Enabled Pavement Distress Image Classification in Real Time. <i>Journal of Computing in Civil Engineering</i> , 2017 , 31, 04016061	5	9
19	A scenario-based simulation framework of on- and off-site construction logistics 2017 ,		1
18	A Cascaded Classifier Approach to Window Detection in Facade Images 2017 ,		3
17	Radar interferometry based settlement monitoring in tunnelling: Visualisation and accuracy analyses. <i>Visualization in Engineering</i> , 2016 , 4,	3	18
16	First Person Virtual Reality for Evaluation and Learning of Construction Site Safety 2016 ,		20
15	BIM Applications of Rule-Based Checking in Construction Site Layout Planning Tasks 2016 ,		10
14	Automated Construction of Masonry Buildings using Cable-Driven Parallel Robots 2016 ,		11
13	Evaluation of Disturbances in Mechanized Tunneling Using Process Simulation. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2016 , 31, 176-192	8.4	14
12	Prozesssimulation für die Leistungsermittlung und -planung beim maschinellen Tunnelbau 2016 , 166-198		2
11	Simulation of automated construction using wire robots 2016 ,		6
10	Simulation-Based Analysis of Integrated Production and Jobsite Logistics in Mechanized Tunneling. <i>Journal of Computing in Civil Engineering</i> , 2016 , 30,	5	9
9	Reactive scheduling based on actual logistics data by applying simulation-based optimization. <i>Visualization in Engineering</i> , 2015 , 3,	3	8
8	Scalable real-time parking lot classification: An evaluation of image features and supervised learning algorithms 2015 ,		15
7	Natural markers for augmented reality-based indoor navigation and facility maintenance. <i>Automation in Construction</i> , 2014 , 48, 18-30	9.6	84

6	Hybrid Ground Data Model for Interacting Simulations in Mechanized Tunneling. <i>Journal of Computing in Civil Engineering</i> , 2013 , 27, 708-718	5	13
5	Intelligent BIM-based construction scheduling using discrete event simulation 2012 ,		15
4	Knowledge-based schedule generation and evaluation. <i>Advanced Engineering Informatics</i> , 2010 , 24, 389-403	403	41
3	Bridge construction schedule generation with pattern-based construction methods and constraint-based simulation. <i>Advanced Engineering Informatics</i> , 2010 , 24, 379-388	7.4	47
2	Generating Construction Schedules with Case-Based Reasoning Support 2007 , 119		5
1	Systematic literature review on smart contracts in the construction industry: Potentials, benefits, and challenges. <i>Frontiers of Engineering Management</i> ,	2.7	4