

List of Publications by Year in descending order

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98
papers

1,734
citations

279487

23
h-index

360668

35
g-index

112
all docs

112
docs citations

112
times ranked

1075
citing authors

#	ARTICLE	IF	CITATIONS
1	Ensemble-learning approach for the classification of Levels Of Geometry (LOG) of building elements. Advanced Engineering Informatics, 2022, 51, 101497.	4.0	10
2	Graph Rewriting Techniques in Engineering Design. Frontiers in Built Environment, 2022, 7, .	1.2	8
3	Levels of detail, development, definition, and information need: a critical literature review. Journal of Information Technology in Construction, 2022, 27, 363-392.	1.4	6
4	Creating digital twins of existing bridges through AI-based methods. IABSE Symposium Report, 2022, , .	0.0	2
5	Shape encoding for semantic healing of design models and knowledge transfer to scan-to-BIM. Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction, 2022, 175, 160-180.	1.1	1
6	Graph-based version control for asynchronous BIM collaboration. Advanced Engineering Informatics, 2022, 53, 101664.	4.0	6
7	Analysis of early-design timber models for sound insulation. Advanced Engineering Informatics, 2022, 53, 101675.	4.0	0
8	A generic and density-sensitive method for multi-scale pedestrian dynamics. Automation in Construction, 2021, 122, 103489.	4.8	5
9	Code compliance checking of railway designs by integrating BIM, BPMN and DMN. Automation in Construction, 2021, 121, 103427.	4.8	36
10	Knowledge-based engineering in the context of railway design by integrating BIM, BPMN, DMN and the methodology for knowledge-based engineering applications (MOKA). Journal of Information Technology in Construction, 2021, 26, 193-226.	1.4	4
11	Industrializing precast productions. Civil Engineering Design, 2021, 3, 87-98.	0.8	12
12	Germany's Governmental BIM Initiative "The BIM4INFRA2020 Project Implementing the BIM Roadmap. Lecture Notes in Civil Engineering, 2021, , 452-465.	0.3	5
13	Analyzing Contextual Linking of Heterogeneous Information Models from the Domains BIM and UIM. ISPRS International Journal of Geo-Information, 2021, 10, 807.	1.4	7
14	Model-based quality assurance in railway infrastructure planning. Automation in Construction, 2020, 109, 102971.	4.8	18
15	Georeferencing in the context of building information modelling. Automation in Construction, 2020, 118, 103211.	4.8	14
16	Mixed integer programming for dynamic tower crane and storage area optimization on construction sites. Automation in Construction, 2020, 120, 103259.	4.8	28
17	Improving progress monitoring by fusing point clouds, semantic data and computer vision. Automation in Construction, 2020, 116, 103210.	4.8	81
18	Vagueness visualization in building models across different design stages. Advanced Engineering Informatics, 2020, 45, 101107.	4.0	16

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19	BIM policy and management. Construction Management and Economics, 2020, 38, 413-419.	1.8	35
20	A meta-model approach for formal specification and consistent management of multi-LOD building models. Advanced Engineering Informatics, 2019, 40, 135-153.	4.0	31
21	Recognising railway infrastructure elements in videos and drawings using neural networks. Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction, 2019, 172, 19-33.	1.1	2
22	Integrating rules of modular coordination to improve model authoring in BIM. International Journal of Construction Management, 2019, 19, 15-31.	2.2	18
23	Automatic detection of plan symbols in railway equipment engineering using a machine learning approach. , 2019, , .		1
24	Integrating RC Bridge Defect Information into BIM Models. Journal of Computing in Civil Engineering, 2018, 32, .	2.5	49
25	Spice: a cognitive agent framework for computational crowd simulations in complex environments. Autonomous Agents and Multi-Agent Systems, 2018, 32, 387-416.	1.3	14
26	Building Information Modeling. , 2018, , 1475-1485.		6
27	A unified pedestrian routing model for graph-based wayfinding built on cognitive principles. Transportmetrica A: Transport Science, 2018, 14, 406-432.	1.3	15
28	Service bottlenecks in pedestrian dynamics. Transportmetrica A: Transport Science, 2018, 14, 392-405.	1.3	8
29	Improvement of Realism of 4D Objects Using Augmented Reality Objects and Actual Images of a Construction Site. KSCE Journal of Civil Engineering, 2018, 22, 2735-2746.	0.9	26
30	Building Information Modeling: Why? What? How?. , 2018, , 1-24.		59
31	BIM Programming. , 2018, , 217-231.		3
32	Collaborative Data Management. , 2018, , 251-277.		5
33	Common Data Environment. , 2018, , 279-291.		8
34	BIM-Based Progress Monitoring. , 2018, , 463-476.		5
35	Principles of Geometric Modeling. , 2018, , 27-41.		6
36	BIM-Based Code Compliance Checking. , 2018, , 367-381.		7

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37	Industry Foundation Classes: A Standardized Data Model for the Vendor-Neutral Exchange of Digital Building Models. , 2018, , 81-126.		19
38	Process-Based Definition of Model Content. , 2018, , 127-138.		2
39	Semi-automated site equipment selection and configuration through formal knowledge representation and inference. Advanced Engineering Informatics, 2018, 38, 488-500.	4.0	14
40	Benefits and Limitations of Linked Data Approaches for Road Modeling and Data Exchange. Lecture Notes in Computer Science, 2018, , 245-261.	1.0	12
41	Supporting Feature-Based Parametric Modeling Through Graph Rewriting. , 2018, , .		0
42	Process- and Computer Vision-based Detection of As-Built Components on Construction Sites. , 2018, , .		4
43	Bridging qualitative spatial constraints and feature-based parametric modelling: Expressing visibility and movement constraints. Advanced Engineering Informatics, 2017, 31, 2-17.	4.0	10
44	Acquisition and Consecutive Registration of Photogrammetric Point Clouds for Construction Progress Monitoring Using a 4DABIM. PFG - Journal of Photogrammetry, Remote Sensing and Geoinformation Science, 2017, 85, 3-15.	0.7	38
45	BIM â€œ Mit Modellcharakter in die Zukunft. Bautechnik, 2017, 94, 213-214.	0.2	0
46	Semantic Enrichment for Building Information Modeling: Procedure for Compiling Inference Rules and Operators for Complex Geometry. Journal of Computing in Civil Engineering, 2017, 31, .	2.5	81
47	Using graph rewriting methods for the semi-automatic generation of parametric infrastructure models. Advanced Engineering Informatics, 2017, 33, 502-515.	4.0	26
48	Data retrieval from building information models based on visual programming. Visualization in Engineering, 2017, 5, .	8.8	32
49	A Hybrid and Multiscale Approach to Model and Simulate Mobility in the Context of Public Events. Transportation Research Procedia, 2016, 19, 350-363.	0.8	8
50	Embedding Procedural Knowledge into Building Information Models: The IFC Procedural Language and Its Application for Flexible Transition Curve Representation. Journal of Computing in Civil Engineering, 2016, 30, .	2.5	18
51	Modeling pedestriansâ€™ interest in locations: A concept to improve simulations of pedestrian destination choice. Simulation Modelling Practice and Theory, 2016, 61, 47-62.	2.2	29
52	A Unified Pedestrian Routing Model Combining Multiple Graph-Based Navigation Methods. , 2016, , 241-248.		8
53	Oppilatio: The Forecast of Crowd Congestions on Street Networks During Public Events. , 2016, , 321-328.		1
54	Simulation Based Construction Project Schedule Optimization. Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series, 2016, , 482-507.	0.5	0

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55	The Relationship Between the Waiting Crowd and the Average Service Time. , 2016, , 209-216.		0
56	Simulation Based Construction Project Schedule Optimization. , 2016, , 173-195.		0
57	Assessing and updating the reliability of concrete bridges subjected to spatial deterioration â€œ principles and software implementation. Structural Concrete, 2015, 16, 356-365.	1.5	27
58	ProzessgestÃ¼tzte Defintion von Modellinhalten. , 2015, , 129-147.		1
59	Modular Coordination and BIM: Development of Rule Based Smart Building Components. Procedia Engineering, 2015, 123, 519-527.	1.2	29
60	Grundlagen der geometrischen Modellierung. , 2015, , 25-41.		3
61	Software-InteroperabilitÃ¤t im Bauwesen â€œ Hintergrund und Motivation. , 2015, , 77-81.		4
62	Automated Code Compliance Checking Based on a Visual Language and Building Information Modeling. , 2015, , .		29
63	Automated Progress Monitoring Based on Photogrammetric Point Clouds and Precedence Relationship Graphs. , 2015, , .		17
64	BIM-Programmierwerkzeuge. , 2015, , 193-204.		0
65	Kooperative Datenverwaltung. , 2015, , 207-236.		2
66	Automatic Detailing of Parametric Sketches by Graph Transformation. , 2015, , .		1
67	Concurrent Hierarchical Finite State Machines for Modeling Pedestrian Behavioral Tendencies. Transportation Research Procedia, 2014, 2, 576-584.	0.8	10
68	Processing of Topological BIM Queries using Boundary Representation Based Methods. Advanced Engineering Informatics, 2014, 28, 272-286.	4.0	82
69	A System Dynamics based Perspective to Help to Understand the Managerial Big Picture in Respect of Urban Event Dynamics. Transportation Research Procedia, 2014, 2, 669-674.	0.8	7
70	Synchronous collaborative tunnel design based on consistency-preserving multi-scale models. Advanced Engineering Informatics, 2014, 28, 499-517.	4.0	39
71	Using Swap-Based Search Trees to obtain Solutions for Resource Constrained Project Scheduling Problems. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 809-810.	0.2	4
72	Towards TransiTUM: A Generic Framework for Multiscale Coupling of Pedestrian Simulation Models based on Transition Zones. Transportation Research Procedia, 2014, 2, 495-500.	0.8	9

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73	Exchange of Parametric Bridge Models Using a Neutral Data Format. Journal of Computing in Civil Engineering, 2013, 27, 593-606.	2.5	48
74	Network-Level Infrastructure Management Based on Metaheuristics. , 2013, , 497-518.		0
75	Determination of float time for individual construction tasks using constraint-based discrete-event simulation. , 2012, , .		3
76	Generation and use of sparse navigation graphs for microscopic pedestrian simulation models. Advanced Engineering Informatics, 2012, 26, 669-680.	4.0	46
77	Bidirectional coupling of macroscopic and microscopic pedestrian evacuation models. Safety Science, 2012, 50, 1695-1703.	2.6	40
78	BIM-Based Life-Cycle Management for Reinforced Concrete Buildings. International Journal of 3-D Information Modeling, 2012, 1, 1-24.	0.2	5
79	Planning of Earthwork Processes Using Discrete Event Simulation. , 2012, , 27-43.		0
80	Integrating pedestrian simulation, tracking and event detection for crowd analysis. , 2011, , .		38
81	Employing Product Data Management Systems in Civil Engineering Projects: Functionality Analysis and Assessment. Journal of Computing in Civil Engineering, 2011, 25, 430-441.	2.5	7
82	Toward the Exchange of Parametric Bridge Models Using a Neutral Data Format. , 2011, , .		12
83	SimulationsgestÄ¼tzte Bauablaufplanung SimulationsgestÄ¼tzte Bauablaufplanung. , 2011, , 159-203.		0
84	Bauen heute und morgen. , 2011, , 1-21.		0
85	Integrierte Planung auf Basis von 3D-Modellen. , 2011, , 23-115.		0
86	Minimizing the Traffic Impact Caused by Infrastructure Maintenance Using Ant Colony Optimization. , 2011, , .		2
87	Bridge construction schedule generation with pattern-based construction methods and constraint-based simulation. Advanced Engineering Informatics, 2010, 24, 379-388.	4.0	63
88	Graph-based approaches for simulating pedestrian dynamics in building models. , 2010, , 389-394.		24
89	Query Support for BIMs using Semantic and Spatial Conditions. Advances in Civil and Industrial Engineering Book Series, 2010, , 405-450.	0.2	9
90	Using Product Data Management Systems for Civil Engineering Projects â€” Potentials and Obstacles. , 2009, , .		7

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91	Implementing Metric Operators of a Spatial Query Language for 3D Building Models: Octree and B-Rep Approaches. <i>Journal of Computing in Civil Engineering</i> , 2009, 23, 34-46.	2.5	43
92	Specification and implementation of directional operators in a 3D spatial query language for building information models. <i>Advanced Engineering Informatics</i> , 2009, 23, 32-44.	4.0	87
93	Topological analysis of 3D building models using a spatial query language. <i>Advanced Engineering Informatics</i> , 2009, 23, 370-385.	4.0	90
94	An Iterative, Octree-Based Algorithm for Distance Computation Between Polyhedra with Complex Surfaces. , 2007, , 103.		5
95	Computational steering on distributed systems: Indoor comfort simulations as a case study of interactive CFD on supercomputers. <i>International Journal of Parallel, Emergent and Distributed Systems</i> , 2007, 22, 275-291.	0.7	21
96	An Interactive Thermal Fluid Simulator for the Design of HVAC Systems. , 2007, , .		0
97	Collaborative computational steering: Principles and application in HVAC layout. <i>Integrated Computer-Aided Engineering</i> , 2006, 13, 361-376.	2.5	8
98	Evaluation of a Case Study to Design a BIM-Based Cycle Planning Concept. , 0, , .		0