Jack C P Cheng

List of Publications by Year
in descending order

104 papers	6,510 citations	44042 48 h-index	69214 77 g-index
106 all docs	106 docs citations	106 times ranked	4225 citing authors

#	ARTICLE	IF	CITATIONS
1	Comparative environmental evaluation of aggregate production from recycled waste materials and virgin sources by LCA. Resources, Conservation and Recycling, 2016, 109, 67-77.	5.3	320
2	A BIM-based system for demolition and renovation waste estimation and planning. Waste Management, 2013, 33, 1539-1551.	3.7	289
3	A State-of-the-Art Review on the Integration of Building Information Modeling (BIM) and Geographic Information System (GIS). ISPRS International Journal of Geo-Information, 2017, 6, 53.	1.4	248
4	Data-driven predictive maintenance planning framework for MEP components based on BIM and IoT using machine learning algorithms. Automation in Construction, 2020, 112, 103087.	4.8	237
5	Automated detection of sewer pipe defects in closed-circuit television images using deep learning techniques. Automation in Construction, 2018, 95, 155-171.	4.8	224
6	Mapping between BIM and 3D GIS in different levels of detail using schema mediation and instance comparison. Automation in Construction, 2016, 67, 1-21.	4.8	199
7	A framework for dimensional and surface quality assessment of precast concrete elements using BIM and 3D laser scanning. Automation in Construction, 2015, 49, 225-238.	4.8	175
8	BIM-based framework for automatic scheduling of facility maintenance work orders. Automation in Construction, 2018, 91, 15-30.	4.8	160
9	Improving air quality prediction accuracy at larger temporal resolutions using deep learning and transfer learning techniques. Atmospheric Environment, 2019, 214, 116885.	1.9	154
10	Estimation of the building energy use intensity in the urban scale by integrating GIS and big data technology. Applied Energy, 2016, 183, 182-192.	5.1	151
11	Trends and Opportunities of BIM-GIS Integration in the Architecture, Engineering and Construction Industry: A Review from a Spatio-Temporal Statistical Perspective. ISPRS International Journal of Geo-Information, 2017, 6, 397.	1.4	145
12	A BIM-based automated site layout planning framework for congested construction sites. Automation in Construction, 2015, 59, 24-37.	4.8	142
13	Identifying potential opportunities of building information modeling for construction and demolition waste management and minimization. Automation in Construction, 2017, 79, 3-18.	4.8	134
14	A temporal-spatial interpolation and extrapolation method based on geographic Long Short-Term Memory neural network for PM2.5. Journal of Cleaner Production, 2019, 237, 117729.	4.6	133
15	Quantification of construction waste prevented by BIM-based design validation: Case studies in South Korea. Waste Management, 2016, 49, 170-180.	3.7	130
16	A financial decision making framework for construction projects based on 5D Building Information Modeling (BIM). International Journal of Project Management, 2016, 34, 3-21.	2.7	124
17	Identifying the influential features on the regional energy use intensity of residential buildings based on Random Forests. Applied Energy, 2016, 183, 193-201.	5.1	113
18	Air quality prediction at new stations using spatially transferred bi-directional long short-term memory network. Science of the Total Environment, 2020, 705, 135771.	3.9	104

#	Article	IF	Citations
19	Analytical review and evaluation of civil information modeling. Automation in Construction, 2016, 67, 31-47.	4.8	100
20	Full body pose estimation of construction equipment using computer vision and deep learning techniques. Automation in Construction, 2020, 110, 103016.	4.8	98
21	A bi-directional missing data imputation scheme based on LSTM and transfer learning for building energy data. Energy and Buildings, 2020, 216, 109941.	3.1	96
22	Holistic BIM framework for sustainable low carbon design of high-rise buildings. Journal of Cleaner Production, 2018, 195, 1091-1104.	4.6	95
23	Automated Estimation of Reinforced Precast Concrete Rebar Positions Using Colored Laser Scan Data. Computer-Aided Civil and Infrastructure Engineering, 2017, 32, 787-802.	6.3	93
24	Integrating 4D BIM and GIS for Construction Supply Chain Management. Journal of Construction Engineering and Management - ASCE, 2019, 145, .	2.0	89
25	Deep Learning–Based Automated Detection of Sewer Defects in CCTV Videos. Journal of Computing in Civil Engineering, 2020, 34, .	2.5	87
26	Identification of high impact factors of air quality on a national scale using big data and machine learning techniques. Journal of Cleaner Production, 2020, 244, 118955.	4.6	87
27	A unified convolutional neural network integrated with conditional random field for pipe defect segmentation. Computer-Aided Civil and Infrastructure Engineering, 2020, 35, 162-177.	6.3	87
28	A comparative analysis of embodied carbon in high-rise buildings regarding different design parameters. Journal of Cleaner Production, 2017, 161, 663-675.	4.6	85
29	A non-linear case-based reasoning approach for retrieval of similar cases and selection of target credits in LEED projects. Building and Environment, 2015, 93, 349-361.	3.0	80
30	Semi-automated generation of parametric BIM for steel structures based on terrestrial laser scanning data. Automation in Construction, 2020, 112, 103037.	4.8	79
31	A framework for 3D traffic noise mapping using data from BIM and GIS integration. Structure and Infrastructure Engineering, 2016, 12, 1267-1280.	2.0	71
32	A Lag-FLSTM deep learning network based on Bayesian Optimization for multi-sequential-variant PM2.5 prediction. Sustainable Cities and Society, 2020, 60, 102237.	5.1	68
33	BIM security: A critical review and recommendations using encryption strategy and blockchain. Automation in Construction, 2021, 126, 103682.	4.8	67
34	Modeling and monitoring of construction supply chains. Advanced Engineering Informatics, 2010, 24, 435-455.	4.0	66
35	An integrated underground utility management and decision support based on BIM and GIS. Automation in Construction, 2019, 107, 102931.	4.8	66
36	Analyzing the Leading Causes of Traffic Fatalities Using XGBoost and Grid-Based Analysis: A City Management Perspective. IEEE Access, 2019, 7, 148059-148072.	2.6	65

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37	Evaluation of environmental friendliness of concrete paving eco-blocks using LCA approach. International Journal of Life Cycle Assessment, 2016, 21, 70-84.	2.2	63
38	Automated optimization of steel reinforcement in RC building frames using building information modeling and hybrid genetic algorithm. Automation in Construction, 2018, 90, 39-57.	4.8	63
39	Development of social sustainability assessment method and a comparative case study on assessing recycled construction materials. International Journal of Life Cycle Assessment, 2018, 23, 1654-1674.	2.2	63
40	Analyzing driving factors of land values in urban scale based on big data and non-linear machine learning techniques. Land Use Policy, 2020, 94, 104537.	2.5	59
41	Data-driven study on the achievement of LEED credits using percentage of average score and association rule analysis. Building and Environment, 2016, 98, 121-132.	3.0	57
42	Automatic As-Built BIM Creation of Precast Concrete Bridge Deck Panels Using Laser Scan Data. Journal of Computing in Civil Engineering, 2018, 32, .	2.5	55
43	State-of-the-Art Review on Mixed Reality Applications in the AECO Industry. Journal of Construction Engineering and Management - ASCE, 2020, 146, .	2.0	54
44	Spatial and temporal variations of spatial population accessibility to public hospitals: a case study of ruralâ€"urban comparison. GIScience and Remote Sensing, 2018, 55, 718-744.	2.4	53
45	Soft detection of 5-day BOD with sparse matrix in city harbor water using deep learning techniques. Water Research, 2020, 170, 115350.	5.3	53
46	Simulation-based evolutionary optimization for energy-efficient layout plan design of high-rise residential buildings. Journal of Cleaner Production, 2019, 231, 1375-1388.	4.6	52
47	Life cycle carbon footprint measurement of Portland cement and ready mix concrete for a city with local scarcity of resources like Hong Kong. International Journal of Life Cycle Assessment, 2014, 19, 745-757.	2.2	51
48	Developing an evacuation evaluation model for offshore oil and gas platforms using BIM and agent-based model. Automation in Construction, 2018, 89, 214-224.	4.8	51
49	Top 10 technologies for indoor positioning on construction sites. Automation in Construction, 2020, 118, 103309.	4.8	51
50	Transfer learning for long-interval consecutive missing values imputation without external features in air pollution time series. Advanced Engineering Informatics, 2020, 44, 101092.	4.0	50
51	Selection of target LEED credits based on project information and climatic factors using data mining techniques. Advanced Engineering Informatics, 2017, 32, 224-236.	4.0	49
52	A blockchain-based integrated document management framework for construction applications. Automation in Construction, 2022, 133, 104001.	4.8	49
53	Identification of the most influential areas for air pollution control using XGBoost and Grid Importance Rank. Journal of Cleaner Production, 2020, 274, 122835.	4.6	47
54	Digital Twins for Construction Sites: Concepts, LoD Definition, and Applications. Journal of Management in Engineering - ASCE, 2022, 38, .	2.6	46

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55	Formulation and analysis of dynamic supply chain of backfill in construction waste management using agent-based modeling. Advanced Engineering Informatics, 2015, 29, 878-888.	4.0	45
56	A BIM-based framework for lift planning in topsides disassembly of offshore oil and gas platforms. Automation in Construction, 2017, 79, 19-30.	4.8	45
57	An ontology-based web service framework for construction supply chain collaboration and management. Engineering, Construction and Architectural Management, 2015, 22, 551-572.	1.8	44
58	A data-driven study of important climate factors on the achievement of LEED-EB credits. Building and Environment, 2015, 90, 232-244.	3.0	42
59	Comparison of Marker-Based and Markerless AR: A Case Study of An Indoor Decoration System. , 0, , .		41
60	Towards an automated condition assessment framework of underground sewer pipes based on closed-circuit television (CCTV) images. Tunnelling and Underground Space Technology, 2021, 110, 103840.	3.0	37
61	Critical Success and Failure Factors for Managing Green Building Projects. Journal of Architectural Engineering, 2018, 24, .	0.8	35
62	Automated sewer pipe defect tracking in CCTV videos based on defect detection and metric learning. Automation in Construction, 2021, 121, 103438.	4.8	33
63	A comprehensive approach to mitigation of embodied carbon in reinforced concrete buildings. Journal of Cleaner Production, 2019, 229, 582-597.	4.6	31
64	Online geometry monitoring during directed energy deposition additive manufacturing using laser line scanning. Precision Engineering, 2022, 73, 104-114.	1.8	28
65	Real-time detection of wildfire risk caused by powerline vegetation faults using advanced machine learning techniques. Advanced Engineering Informatics, 2020, 44, 101070.	4.0	27
66	Optimizing lift operations and vessel transport schedules for disassembly of multiple offshore platforms using BIM and GIS. Automation in Construction, 2018, 94, 328-339.	4.8	25
67	Physics-based, data-driven approach for predicting natural ventilation of residential high-rise buildings. Building Simulation, 2022, 15, 129-148.	3.0	25
68	Recognition of pedestrian trajectories and attributes with computer vision and deep learning techniques. Advanced Engineering Informatics, 2021, 49, 101356.	4.0	23
69	BIM-BVBS integration with openBIM standards for automatic prefabrication of steel reinforcement. Automation in Construction, 2021, 125, 103654.	4.8	22
70	Automatic relative humidity optimization in underground heritage sites through ventilation system based on digital twins. Building and Environment, 2022, 216, 108999.	3.0	22
71	Integrating life cycle assessment and multi-objective optimization for economical and environmentally sustainable supply of aggregate. Journal of Cleaner Production, 2016, 113, 76-85.	4.6	19
72	Developing Efficient Mechanisms for BIM-to-AR/VR Data Transfer. Journal of Computing in Civil Engineering, 2020, 34, .	2.5	19

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73	BIM-supported 4D acoustics simulation approach to mitigating noise impact on maintenance workers on offshore oil and gas platforms. Automation in Construction, 2019, 100, 1-10.	4.8	18
74	A semi-automated approach to generate 4D/5D BIM models for evaluating different offshore oil and gas platform decommissioning options. Visualization in Engineering, 2017, 5, .	8.8	17
75	A framework for synthetic image generation and augmentation for improving automatic sewer pipe defect detection. Automation in Construction, 2022, 137, 104213.	4.8	17
76	A knowledge model-based BIM framework for automatic code-compliant quantity take-off. Automation in Construction, 2022, 133, 104024.	4.8	16
77	Cost and environmental impact estimation methodology and potential impact factors in offshore oil and gas platform decommissioning: A review. Environmental Impact Assessment Review, 2021, 87, 106536.	4.4	15
78	Automated clash-free optimization of steel reinforcement in RC frame structures using building information modeling and two-stage genetic algorithm. Automation in Construction, 2021, 126, 103676.	4.8	15
79	A Secure and Distributed Construction Document Management System Using Blockchain. Lecture Notes in Civil Engineering, 2021, , 850-862.	0.3	15
80	Graph-based network generation and CCTV processing techniques for fire evacuation. Building Research and Information, 2021, 49, 179-196.	2.0	14
81	Long-time gap crowd prediction using time series deep learning models with two-dimensional single attribute inputs. Advanced Engineering Informatics, 2022, 51, 101482.	4.0	14
82	Transfer learning enhanced AR spatial registration for facility maintenance management. Automation in Construction, 2020, 113, 103135.	4.8	13
83	Sensitivity analysis of influence factors on multi-zone indoor airflow CFD simulation. Science of the Total Environment, 2021, 761, 143298.	3.9	13
84	BIM-Based Dynamic Construction Safety Rule Checking Using Ontology and Natural Language Processing. Buildings, 2022, 12, 564.	1.4	13
85	Sustainability analyses of embodied carbon and construction cost in high-rise buildings using different materials and structural forms. HKIE Transactions, 2017, 24, 216-227.	1.9	12
86	Towards an Ontology-based Approach for Information Interoperability Between BIM and Facility Management. Lecture Notes in Computer Science, 2018, , 447-469.	1.0	12
87	Automatic generation of fabrication drawings for faÃ§ade mullions and transoms through BIM models. Advanced Engineering Informatics, 2019, 42, 100964.	4.0	12
88	Multi-zone indoor CFD under limited information: An approach coupling solar analysis and BIM for improved accuracy. Journal of Cleaner Production, 2020, 244, 118912.	4.6	12
89	Smart construction sites: A promising approach to improving on-site HSE management performance. Journal of Building Engineering, 2022, 49, 104007.	1.6	12
90	MINOE: A Software Tool to Analyze Ocean Management Efforts in the Context of Ecosystems. Coastal Management, 2010, 38, 457-473.	1.0	10

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91	A BIM-based framework for automated generation of fabrication drawings for faÃ§ade panels. Computers in Industry, 2021, 126, 103395.	5.7	10
92	DfMA-oriented design optimization for steel reinforcement using BIM and hybrid metaheuristic algorithms. Journal of Building Engineering, 2021, 44, 103310.	1.6	9
93	A Study of the Relationship between Credits in the LEED-EB&OM Green Building Rating System. International Journal of Engineering and Technology, 0, , 438-442.	0.1	9
94	Impact of shaft design to thermal comfort and indoor air quality of floors using BIM technology. Journal of Building Engineering, 2022, 51, 104326.	1.6	7
95	Enriched and discriminative convolutional neural network features for pedestrian reâ€‘identification and trajectory modeling. Computer-Aided Civil and Infrastructure Engineering, 2022, 37, 573-592.	6.3	6
96	Evaluation of IFC4 for the GIS and Green Building Domains. , 2014, , .		4
97	Automating the Generation of 3D Multiple Pipe Layout Design Using BIM and Heuristic Search Methods. Lecture Notes in Civil Engineering, 2021, , 54-72.	0.3	4
98	Ontology-Based Data Integration and Sharing for Facility Maintenance Management. , 2020, , .		3
99	Automatic Transformation of Different Levels of Detail in 3D GIS City Models in CityGML. International Journal of 3-D Information Modeling, 2015, 4, 1-21.	0.2	2
100	Enriched and Discriminative Human Features for Person Re-Identification Based on Explainable Behaviors of Convolutional Neural Networks. Lecture Notes in Civil Engineering, 2021, , 41-53.	0.3	2
101	Study of IMU Installation Position for Posture Estimation of Excavators. Lecture Notes in Civil Engineering, 2021, , 980-991.	0.3	2
102	Vision-Based Pose Forecasting of Construction Equipment for Monitoring Construction Site Safety. Lecture Notes in Civil Engineering, 2021, , 1127-1138.	0.3	2
103	Integrated Data Model and Mapping for Interoperable Information Exchange Between BIM and Energy Simulation Tools. Lecture Notes in Civil Engineering, 2021, , 496-506.	0.3	0
104	Digital modelling layer: two digital modelling methodsPART 1: SCAN-TO-BIM APPROACHES: REVIEW IN A HOLISTIC WORKFLOWPART 2: REVIEW OF GEOMETRIC DIGITAL TWINNING APPROACHES BASED ON PHOTOGRAMMETRY. , 2022, , 101-159.		0