Rafael Sacks

List of Publications by Year in Descending Order

108 papers	5,335 citations	39 h-index	72 g-index
126 ext. papers	6,400 ext. citations	5.4 avg, IF	6.22 L-index

#	Paper	IF	Citations
108	Exploring graph neural networks for semantic enrichment: Room type classification. *Automation in Construction*, **2021**, 104039	4	0
107	Quantitative assessment of the impacts of BIM and lean on process and operations flow in construction projects. *Engineering, Construction and Architectural Management*, **2021**, ahead-of-print,	1.2	4
106	Agent-Based Simulation of General Contractor–Subcontractor Interactions in a Multiproject Environment. *Journal of Construction Engineering and Management - ASCE*, **2021**, 147, 04020151	1.5	3
105	Exploring the influence of socio-historical constructs on BIM implementation: an activity theory perspective. *Construction Management and Economics*, **2021**, 39, 1-20	0.8	8
104	Empirical investigation of the applicability of constructability methods to prevent design errors. *Built Environment Project and Asset Management*, **2021**, ahead-of-print,	0.6	1
103	Production Control in Earthworks: Concepts and Metrics. *Journal of Construction Engineering and Management - ASCE*, **2021**, 147, 04021127	1.5	
102	Construction with digital twin information systems. *Data-Centric Engineering*, **2020**, 1,	2	52
101	Longitudinal Study of BIM Adoption by Public Construction Clients. *Journal of Management in Engineering - ASCE*, **2020**, 36, 05020008	1.7	11
100	Building Information Modelling, Artificial Intelligence and Construction Tech. *Developments in the Built Environment*, **2020**, 4, 100011	2.7	27
99	An immersive virtual reality serious game to enhance earthquake behavioral responses and post-earthquake evacuation preparedness in buildings. *Advanced Engineering Informatics*, **2020**, 45, 101118	3.4	24
98	Discussion of "Metrics That Matter: Core Predictive and Diagnostic Metrics for Improved Project Controls and Analytics" by Resulali Emre Orgut, Jin Zhu, Mostafa Batouli, Ali Mostafavi, and Edward J. Jaselskis. *Journal of Construction Engineering and Management - ASCE*, **2020**, 146, 07020001	1.5	
97	ROADELS: discrete information objects for production planning and control of road construction. *Journal of Information Technology in Construction*, **2020**, 25, 254-271	1	2
96	Clustering Information Types for Semantic Enrichment of Building Information Models to Support Automated Code Compliance Checking. *Journal of Computing in Civil Engineering*, **2020**, 34, 04020040	2.5	16
95	. *IEEE Transactions on Automation Science and Engineering*, **2019**, 16, 1825-1835	1.1	4
94	Automating Design Review with Artificial Intelligence and BIM: State of the Art and Research Framework **2019**,		11
93	Automated model checking for topologically complex code requirements "security room case study **2019**,		2
92	SeeBridge as next generation bridge inspection: Overview, Information Delivery Manual and Model View Definition. *Automation in Construction*, **2018**, 90, 134-145	4	45

91	Integrating RC Bridge Defect Information into BIM Models. *Journal of Computing in Civil Engineering* , **2018**, 32, 04018013	2.5	23
90	Comparing machine learning and rule-based inferencing for semantic enrichment of BIM models. *Automation in Construction*, **2018**, 91, 256-272	4	57
89	Core Technologies and Software **2018**, 32-84		
88	Collaboration and Interoperability **2018**, 85-129		0
87	BIM for Subcontractors and Fabricators **2018**, 275-322		
86	A specialized information schema for production planning and control of road construction **2018**, 257-264		1
85	3D Object Classification Using Geometric Features and Pairwise Relationships. *Computer-Aided Civil and Infrastructure Engineering*, **2018**, 33, 152-164	3.1	29
84	**2018**,		196
83	Prototyping virtual reality serious games for building earthquake preparedness: The Auckland City Hospital case study. *Advanced Engineering Informatics*, **2018**, 38, 670-682	3.4	72
82	Construction flow index: a metric of production flow quality in construction. *Construction Management and Economics*, **2017**, 35, 45-63	0.8	27
81	Simulating the behavior of trade crews in construction using agents and building information modeling. *Automation in Construction*, **2017**, 74, 12-27	4	27
80	BIM adoption by public facility agencies: impacts on occupant value. *Building Research and Information*, **2017**, 45, 610-630	1.4	28
79	Semantic Enrichment for Building Information Modeling: Procedure for Compiling Inference Rules and Operators for Complex Geometry. *Journal of Computing in Civil Engineering*, **2017**, 31, 04017062	2.5	47
78	What constitutes good production flow in construction?. *Construction Management and Economics*, **2016**, 34, 641-656	0.8	42
77	Semantic Enrichment for Building Information Modeling. *Computer-Aided Civil and Infrastructure Engineering*, **2016**, 31, 261-274	3.1	95
76	Impacts of the Social Subcontract and Last Planner System Interventions on the Trade-Crew Workflows of Multistory Residential Construction Projects. *Journal of Construction Engineering and Management - ASCE*, **2016**, 142, 04016013	1.5	18
75	Interior models of earthquake damaged buildings for search and rescue. *Advanced Engineering Informatics*, **2016**, 30, 65-76	3.4	13
74	Preparation of Synthetic As-Damaged Models for Post-Earthquake BIM Reconstruction Research. *Journal of Computing in Civil Engineering*, **2016**, 30, 04015032	2.5	17

73	A Cloud-Based BIM Platform for Information Collaboration **2016**,		3
72	SeeBridge Information Delivery Manual (IDM) for Next Generation Bridge Inspection **2016**,		8
71	Towards generation of as-damaged BIM models using laser-scanning and as-built BIM: First estimate of as-damaged locations of reinforced concrete frame members in masonry infill structures. *Advanced Engineering Informatics*, **2016**, 30, 312-326	3.4	37
70	Information modeling of earthquake-damaged reinforced concrete structures. *Advanced Engineering Informatics*, **2015**, 29, 396-407	3.4	25
69	Effects of the Last Planner System on Social Networks among Construction Trade Crews. *Journal of Construction Engineering and Management - ASCE*, **2015**, 141, 04015006	1.5	36
68	Hybrid Discrete Event Simulation and Virtual Reality Experimental Setup for Construction Management Research. *Journal of Computing in Civil Engineering*, **2015**, 29, 04014029	2.5	15
67	Safety by design: dialogues between designers and builders using virtual reality. *Construction Management and Economics*, **2015**, 33, 55-72	0.8	53
66	A Computational Procedure for Generating Specimens of BIM and Point Cloud Data for Building Change Detection **2015**,		1
65	Hazard recognition and risk perception in construction. *Safety Science*, **2014**, 64, 22-31	2.5	175
64	Examination of the effects of a KanBIM production control system on subcontractors' task selections in interior works. *Automation in Construction*, **2014**, 37, 81-87	4	31
63	Similarities and Differences between Humans' and Social Insects' Building Processes and Building Behaviors **2014**,		3
62	Interoperability for precast concrete building models. *PCI Journal*, **2014**, 59, 144-155	0.9	11
61	Building Information Modeling Education for Construction Engineering and Management. I: Industry Requirements, State of the Art, and Gap Analysis. *Journal of Construction Engineering and Management - ASCE*, **2013**, 139, 04013016	1.5	84
60	Building Information Modeling Education for Construction Engineering and Management. II: Procedures and Implementation Case Study. *Journal of Construction Engineering and Management - ASCE*, **2013**, 139, 05013002	1.5	52
59	Requirements for BIM platforms in the concrete reinforcement supply chain. *Automation in Construction*, **2013**, 35, 1-17	4	49
58	Stabilizing Production Flow of Interior and Finishing Works with Reentrant Flow in Building Construction. *Journal of Construction Engineering and Management - ASCE*, **2013**, 139, 665-674	1.5	26
57	Construction safety training using immersive virtual reality. *Construction Management and Economics*, **2013**, 31, 1005-1017	0.8	246
56	Construction safety and digital design: A review. *Automation in Construction*, **2012**, 22, 102-111	4	144

55	Utilizing BIM to Improve the Concrete Reinforcement Supply Chain **2012**,		1
54	Configurable Model Exchanges for the Precast/Pre-Stressed Concrete Industry Using Semantic Exchange Modules (SEM) **2012**,		1
53	Semantics of model views for information exchanges using the industry foundation class schema. *Advanced Engineering Informatics*, **2012**, 26, 411-428	3.4	106
52	Relationships between Methods for Constructability Analysis during Design and Constructability Failures in Projects **2012**,		7
51	An Empirical Study of Information Flows in Multidisciplinary Civil Engineering Design Teams using Lean Measures. *Architectural Engineering and Design Management*, **2011**, 7, 85-101	0.5	35
50	A workflow model for systems and interior finishing works in building construction. *Construction Management and Economics*, **2011**, 29, 1209-1227	0.8	14
49	Improving the Robustness of Model Exchanges Using Product Modeling "Concepts" for IFC Schema **2011**,		4
48	Preparing Civil Engineers for International Collaboration in Construction Management. *Journal of Professional Issues in Engineering Education and Practice*, **2011**, 137, 141-150	0.7	12
47	Empire State Building Project: Archetype of Mass Construction *Journal of Construction Engineering and Management - ASCE*, **2010**, 136, 702-710	1.5	15
46	Interaction of Lean and Building Information Modeling in Construction. *Journal of Construction Engineering and Management - ASCE*, **2010**, 136, 968-980	1.5	249
45	Teaching Building Information Modeling as an Integral Part of Freshman Year Civil Engineering Education. *Journal of Professional Issues in Engineering Education and Practice*, **2010**, 136, 30-38	0.7	93
44	Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards. *Journal of Computing in Civil Engineering*, **2010**, 24, 25-34	2.5	128
43	Measuring information flow in the detailed design of construction projects. *Research in Engineering Design - Theory, Applications, and Concurrent Engineering*, **2010**, 21, 189-206	0.9	30
42	Toward automated generation of parametric BIMs based on hybrid video and laser scanning data. *Advanced Engineering Informatics*, **2010**, 24, 456-465	3.4	126
41	The Rosewood experiment Building information modeling and interoperability for architectural precast facades. *Automation in Construction*, **2010**, 19, 419-432	4	79
40	Construction Job Safety Analysis. *Safety Science*, **2010**, 48, 491-498	2.5	185
39	Requirements for building information modeling based lean production management systems for construction. *Automation in Construction*, **2010**, 19, 641-655	4	153
38	Visualization of Work Flow to Support Lean Construction. *Journal of Construction Engineering and Management - ASCE*, **2009**, 135, 1307-1315	1.5	101

37	CHASTE: construction hazard assessment with spatial and temporal exposure. *Construction Management and Economics*, **2009**, 27, 625-638	0.8	29
36	Production Flow in the Construction of Tall Buildings **2009**,		1
35	Spatial and Temporal Exposure to Safety Hazards in Construction. *Journal of Construction Engineering and Management - ASCE*, **2009**, 135, 726-736	1.5	93
34	Benchmark tests for BIM data exchanges of precast concrete. *Automation in Construction*, **2009**, 18, 469-484	4	94
33	Unique Requirements of Building Information Modeling for Cast-in-Place Reinforced Concrete. *Journal of Computing in Civil Engineering*, **2009**, 23, 64-74	2.5	26
32	Relative Productivity in the AEC Industries in the United States for On-Site and Off-Site Activities. *Journal of Construction Engineering and Management - ASCE*, **2008**, 134, 517-526	1.5	96
31	Impact of three-dimensional parametric modeling of buildings on productivity in structural engineering practice. *Automation in Construction*, **2008**, 17, 439-449	4	78
30	Production System Instability and Subcontracted Labor **2008**, 8-1-8-22		1
29	**2008**,		457
28	LEAPCON: Simulation of Lean Construction of High-Rise Apartment Buildings. *Journal of Construction Engineering and Management - ASCE*, **2007**, 133, 529-539	1.5	49
27	Lean Management Model for Construction of High-Rise Apartment Buildings. *Journal of Construction Engineering and Management - ASCE*, **2007**, 133, 374-384	1.5	65
26	Eliciting information for product modeling using process modeling. *Data and Knowledge Engineering*, **2007**, 62, 292-307	0.9	31
25	Product data modeling using GTPPM: A case study. *Automation in Construction*, **2007**, 16, 392-407	4	13
24	Assessing research issues in Automated Project Performance Control (APPC). *Automation in Construction*, **2007**, 16, 474-484	4	137
23	Twelve Design Patterns for Integrating and Normalizing Product Model Schemas. *Computer-Aided Civil and Infrastructure Engineering*, **2007**, 22, 163-181	3.1	3
22	Life-cycle data management of engineered-to-order components using radio frequency identification. *Advanced Engineering Informatics*, **2007**, 21, 356-366	3.4	78
21	Tracking and locating components in a precast storage yard utilizing radio frequency identification technology and GPS. *Automation in Construction*, **2007**, 16, 354-367	4	156
20	Specifying parametric building object behavior (BOB) for a building information modeling system. *Automation in Construction*, **2006**, 15, 758-776	4	195

19	Interpretation of Automatically Monitored Lifting Equipment Data for Project Control. *Journal of Computing in Civil Engineering*, **2006**, 20, 111-120	2.5	9
18	An economic game theory model of subcontractor resource allocation behaviour. *Construction Management and Economics*, **2006**, 24, 869-881	0.8	54
17	Grammatical rules for specifying information for automated product data modeling. *Advanced Engineering Informatics*, **2006**, 20, 155-170	3.4	22
16	Feasibility of Automated Monitoring of Lifting Equipment in Support of Project Control. *Journal of Construction Engineering and Management - ASCE*, **2005**, 131, 604-614	1.5	51
15	A Methodology for Assessment of the Impact of 3D Modeling of Buildings on Structural Engineering Productivity **2005**, 1		5
14	A Target Benchmark of the Impact of Three-Dimensional Parametric Modeling in Precast Construction. *PCI Journal*, **2005**, 50, 126-139	0.9	24
13	Practical Multifactor Approach to Evaluating Risk of Investment in Engineering Projects. *Journal of Construction Engineering and Management - ASCE*, **2004**, 130, 357-367	1.5	17
12	Process Model Perspectives on Management and Engineering Procedures in the Precast/Prestressed Concrete Industry. *Journal of Construction Engineering and Management - ASCE* , **2004**, 130, 206-215	1.5	57
11	Parametric 3D modeling in building construction with examples from precast concrete. *Automation in Construction*, **2004**, 13, 291-312	4	127
10	Evaluation of Economic Impact of Three-Dimensional Modeling in Precast Concrete Engineering. *Journal of Computing in Civil Engineering*, **2004**, 18, 301-312	2.5	14
9	Closure to Building Project Model Support for Automated Labor Monitoring by R. Sacks, R. Navon, and E. Goldschmidt. *Journal of Computing in Civil Engineering*, **2004**, 18, 383-383	2.5	1
8	Building Project Model Support for Automated Labor Monitoring. *Journal of Computing in Civil Engineering*, **2003**, 17, 19-27	2.5	28
7	Process Improvements in Precast Concrete Construction Using Top-Down Parametric 3-D Computer Modeling. *PCI Journal*, **2003**, 48, 46-55	0.9	8
6	Integrated AEC Information Services Using Object Methods and a Central Project Model. *Computer-Aided Civil and Infrastructure Engineering*, **2002**, 17, 449-456	3.1	2
5	Structural design in an automated building system. *Automation in Construction*, **2000**, 10, 181-197	4	20
4	A project model for an automated building system: design and planning phases. *Automation in Construction*, **1997**, 7, 21-34	4	20
3	Building Model Object Classification for Semantic Enrichment Using Geometric Features and Pairwise Spatial Relationships		3
2	The Need for Enhancing Earthquake Evacuee Safety by Using Virtual Reality Serious Games		14

1 Work structuring and product design for customized repetitive projects. *Construction Management and Economics*,1-22 0.8 2