

James H Garrett

List of Publications by Citations

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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.

92
papers

2,468
citations

25
h-index

47
g-index

97
ext. papers

2,821
ext. citations

4.7
avg, IF

4.78
L-index

#	Paper	IF	Citations
92	Knowledge-Based Modeling of Material Behavior with Neural Networks. <i>Journal of Engineering Mechanics - ASCE</i> , 1991 , 117, 132-153	2.4	407
91	Use of neural networks in detection of structural damage. <i>Computers and Structures</i> , 1992 , 42, 649-659	4.4	344
90	Neural network-based screening for groundwater reclamation under uncertainty. <i>Water Resources Research</i> , 1993 , 29, 563-574	5.3	150
89	Intelligent light control using sensor networks 2005 ,		116
88	. <i>IEEE Transactions on Signal Processing</i> , 2014 , 62, 2879-2893	4.3	93
87	Automated defect detection for sewer pipeline inspection and condition assessment. <i>Automation in Construction</i> , 2009 , 18, 587-596	9.4	78
86	Toward Data-Driven Structural Health Monitoring: Application of Machine Learning and Signal Processing to Damage Detection. <i>Journal of Computing in Civil Engineering</i> , 2013 , 27, 667-680	4.9	77
85	A knowledge-based standards processor for structural component design. <i>Engineering With Computers</i> , 1987 , 2, 219-238	4.4	54
84	Analysis of Three Indoor Localization Technologies for Supporting Operations and Maintenance Field Tasks. <i>Journal of Computing in Civil Engineering</i> , 2012 , 26, 708-719	4.9	39
83	Track-monitoring from the dynamic response of an operational train. <i>Mechanical Systems and Signal Processing</i> , 2017 , 87, 1-16	7.5	38
82	Indirect structural health monitoring of a simplified laboratory-scale bridge model. <i>Smart Structures and Systems</i> , 2014 , 13, 849-868		38
81	Algorithms for automated generation of navigation models from building information models to support indoor map-matching. <i>Automation in Construction</i> , 2016 , 61, 24-41	9.4	37
80	Sensing and Field Data Capture for Construction and Facility Operations. <i>Journal of Construction Engineering and Management - ASCE</i> , 2011 , 137, 870-881	4.1	36
79	Detection of Patterns in Water Distribution Pipe Breakage Using Spatial Scan Statistics for Point Events in a Physical Network. <i>Journal of Computing in Civil Engineering</i> , 2011 , 25, 21-30	4.9	33
78	Visual Pattern Recognition Supporting Defect Reporting and Condition Assessment of Wastewater Collection Systems. <i>Journal of Computing in Civil Engineering</i> , 2009 , 23, 160-169	4.9	32
77	A density-based spatial clustering approach for defining local indicators of drinking water distribution pipe breakage. <i>Advanced Engineering Informatics</i> , 2011 , 25, 380-389	7.3	31
76	Diagnosis algorithms for indirect structural health monitoring of a bridge model via dimensionality reduction. <i>Mechanical Systems and Signal Processing</i> , 2020 , 136, 106454	7.5	29

75	A framework for representing design intent. <i>Design Studies</i> , 1994 , 15, 59-84	3.5	28
74	Track monitoring from the dynamic response of a passing train: A sparse approach. <i>Mechanical Systems and Signal Processing</i> , 2017 , 90, 141-153	7.5	27
73	Object-Oriented Model of Engineering Design Standards. <i>Journal of Computing in Civil Engineering</i> , 1992 , 6, 323-347	4.9	27
72	Data-Fusion Approaches and Applications for Construction Engineering. <i>Journal of Construction Engineering and Management - ASCE</i> , 2011 , 137, 863-869	4.1	26
71	A data fusion approach for track monitoring from multiple in-service trains. <i>Mechanical Systems and Signal Processing</i> , 2017 , 95, 363-379	7.5	25
70	Signal inpainting on graphs via total variation minimization 2014 ,		25
69	Framework for Providing Customized Data Representations for Effective and Efficient Interaction with Mobile Computing Solutions on Construction Sites. <i>Journal of Computing in Civil Engineering</i> , 2005 , 19, 109-118	4.9	25
68	Extending the information delivery manual approach to identify information requirements for performance analysis of HVAC systems. <i>Advanced Engineering Informatics</i> , 2013 , 27, 496-505	7.3	24
67	Managing Critical Infrastructure Interdependence through Economic Input-Output Methods. <i>Journal of Infrastructure Systems</i> , 2009 , 15, 200-210	2.8	23
66	An approach to combine progressively captured point clouds for BIM update. <i>Advanced Engineering Informatics</i> , 2015 , 29, 1001-1012	7.3	22
65	A neural network for image-based vehicle detection. <i>Transportation Research Part C: Emerging Technologies</i> , 1993 , 1, 235-247	7.9	22
64	Knowledge based standards processing. <i>Advanced Engineering Informatics</i> , 1986 , 1, 3-14		21
63	Exploration and evaluation of AR, MPCA and KL anomaly detection techniques to embankment dam piezometer data. <i>Advanced Engineering Informatics</i> , 2015 , 29, 902-917	7.3	20
62	CAD usage in an architectural office: from observations to active assistance. <i>Automation in Construction</i> , 1996 , 5, 243-255	9.4	18
61	Navigational Models for Computer Supported Project Management Tasks on Construction Sites. <i>Journal of Computing in Civil Engineering</i> , 2004 , 18, 281-290	4.9	17
60	Knowledge-Based Standard-Independent Member Design. <i>Journal of Structural Engineering</i> , 1989 , 115, 1396-1411	2.9	17
59	Detection of free chloride in concrete by NMR. <i>Cement and Concrete Research</i> , 2004 , 34, 379-390	10.1	16
58	A description logic approach for representing engineering design standards. <i>Engineering With Computers</i> , 1993 , 9, 108-124	4.4	16

57	Damage Detection in Pipes under Changing Environmental Conditions Using Embedded Piezoelectric Transducers and Pattern Recognition Techniques. <i>Journal of Pipeline Systems Engineering and Practice</i> , 2013 , 4, 17-23	1.5	14
56	Formalism for Construction Inspection Planning: Requirements and Process Concept. <i>Journal of Computing in Civil Engineering</i> , 2007 , 21, 29-38	4.9	14
55	Engineering applications of neural networks. <i>Journal of Intelligent Manufacturing</i> , 1993 , 4, 1-21	6.5	14
54	Evaluation of Different Features for Matching Point Clouds to Building Information Models. <i>Journal of Computing in Civil Engineering</i> , 2016 , 30, 04014107	4.9	11
53	Data Management for Geospatial Vulnerability Assessment of Interdependencies in U.S. Power Generation. <i>Journal of Infrastructure Systems</i> , 2009 , 15, 179-189	2.8	11
52	Application of Mellin transform features for robust ultrasonic guided wave structural health monitoring 2012 ,		11
51	Java Inspection Framework: Developing Field Inspection Support Systems for Civil Systems Inspection. <i>Journal of Computing in Civil Engineering</i> , 2003 , 17, 209-218	4.9	11
50	Building-Information-Modeling Based Earthquake Damage Assessment for Reinforced Concrete Walls. <i>Journal of Computing in Civil Engineering</i> , 2016 , 30, 04015076	4.9	10
49	Semi-automated model matching using version difference. <i>Advanced Engineering Informatics</i> , 2009 , 23, 1-11	7.3	10
48	Automated Procedure to Assess Civil Infrastructure Data Quality: Method and Validation. <i>Journal of Infrastructure Systems</i> , 2005 , 11, 180-189	2.8	10
47	Information requirements for earthquake damage assessment of structural walls. <i>Advanced Engineering Informatics</i> , 2016 , 30, 54-64	7.3	9
46	Proactive Productivity Management at Job Sites: Understanding Characteristics of Assumptions Made for Construction Processes during Planning Based on Case Studies and Interviews. <i>Journal of Construction Engineering and Management - ASCE</i> , 2014 , 140, 04013054	4.1	9
45	Robust change detection in highly dynamic guided wave signals with singular value decomposition 2012 ,		9
44	Characterization of Laser Scanners for Detecting Cracks for Post-Earthquake Damage Inspection 2013 ,		9
43	Formalism for Detecting Version Differences in Data Models. <i>Journal of Computing in Civil Engineering</i> , 2007 , 21, 321-330	4.9	8
42	Multiresolution classification with semi-supervised learning for indirect bridge structural health monitoring 2013 ,		7
41	A Knowledge Discovery Framework for Civil Infrastructure: A Case Study of the Intelligent Workplace. <i>Engineering With Computers</i> , 2000 , 16, 264-274	4.4	7
40	A neural network-based machine learning approach for supporting synthesis. <i>Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM</i> , 1994 , 8, 143-161	1.3	7

39	Effects of Positioning Data Quality and Navigation Models on Map-Matching of Indoor Positioning Data. <i>Journal of Computing in Civil Engineering</i> , 2016 , 30, 04014113	4.9	6
38	Fault perturbations in building sensor network data streams. <i>International Journal of Sensor Networks</i> , 2010 , 7, 152	0.3	6
37	Automated planning support for on-site construction inspection. <i>Automation in Construction</i> , 2008 , 17, 705-718	9.4	6
36	Web-Vacuum: Web-Based Environment for Automated Assessment of Civil Infrastructure Data. <i>Journal of Computing in Civil Engineering</i> , 2005 , 19, 137-147	4.9	6
35	Standards Usage Language (SUL). <i>Journal of Computing in Civil Engineering</i> , 2001 , 15, 118-128	4.9	6
34	Standards Modeling Language. <i>Journal of Computing in Civil Engineering</i> , 1998 , 12, 129-135	4.9	6
33	Machine learning for simulation-based support of early collaborative design. <i>Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM</i> , 1998 , 12, 123-139	1.3	6
32	Detecting anomalies in longitudinal elevation of track geometry using train dynamic responses via a variational autoencoder 2019 ,		6
31	Wearable computers for field inspectors: Delivering data and knowledge-based support in the field. <i>Lecture Notes in Computer Science</i> , 1998 , 146-164	0.8	6
30	Delivering the Infrastructure for Digital Building Regulations. <i>Journal of Computing in Civil Engineering</i> , 2014 , 28, 167-169	4.9	5
29	Domain-Specific Querying Formalisms for Retrieving Information about HVAC Systems. <i>Journal of Computing in Civil Engineering</i> , 2014 , 28, 40-49	4.9	5
28	Singular value decomposition for novelty detection in ultrasonic pipe monitoring 2013 ,		5
27	Imagery enhancement and interpretation for remote visual inspection of aging civil infrastructure. <i>Tsinghua Science and Technology</i> , 2008 , 13, 375-380	3.1	5
26	Providing Formal Support for Standards Usage Within SEED. <i>Journal of Architectural Engineering</i> , 1995 , 1, 187-194	1.4	5
25	Knowledge-Based Advisory System for Public-Sector Design-Build. <i>Journal of Computing in Civil Engineering</i> , 1992 , 6, 456-471	4.9	5
24	Dynamic responses, GPS positions and environmental conditions of two light rail vehicles in Pittsburgh. <i>Scientific Data</i> , 2019 , 6, 146	8	4
23	A damage localization and quantification algorithm for indirect structural health monitoring of bridges using multi-task learning 2019 ,		4
22	Characterization and Search of Construction Inspection Plan Spaces Developed Using a Component-Based Planning Approach. <i>Journal of Computing in Civil Engineering</i> , 2009 , 23, 211-220	4.9	4

21	An integrated performance analysis framework for HVAC systems using heterogeneous data models and building automation systems 2012 ,		4
20	SYMBOL RECOGNITION IN A CAD ENVIRONMENT USING A NEURAL NETWORK. <i>International Journal on Artificial Intelligence Tools</i> , 1994 , 03, 157-185	0.8	4
19	Knowledge-Based System for Design of Signalized Intersections. <i>Journal of Transportation Engineering</i> , 1992 , 118, 241-257		4
18	Application of knowledge-based system techniques to standards representation and usage. <i>Building and Environment</i> , 1990 , 25, 241-251	6.5	4
17	XML-Based Inspection Modeling for Developing Field Inspection Support Systems. <i>Journal of Infrastructure Systems</i> , 2005 , 11, 190-200	2.8	3
16	Java-Based Regulation Broker. <i>Journal of Computing in Civil Engineering</i> , 2000 , 14, 100-108	4.9	3
15	Computer Tools to Facilitate Brownfield Development. <i>Public Works Management Policy</i> , 1998 , 2, 231-242	2.6	3
14	2010 ,		2
13	Formalism for Applying Domain Constraints in Domain-Oriented Schema Matching. <i>Journal of Computing in Civil Engineering</i> , 2008 , 22, 170-180	4.9	2
12	Information Technology in Civil Engineering Future Trends. <i>Journal of Computing in Civil Engineering</i> , 2004 , 18, 185-186	4.9	2
11	Speech-Controlled Wearable Computers for Automotive Shop Workers 2001 ,		2
10	Closure to Knowledge-Based Modeling of Material Behavior with Neural Networks [by J. Ghaboussi, J. H. Garrett Jr. and X. Wu (January, 1991, Vol. 117, No. 1). <i>Journal of Engineering Mechanics - ASCE</i> , 1992 , 118, 1059-1059	2.4	2
9	Sensor Data Driven Proactive Management of Infrastructure Systems. <i>Lecture Notes in Computer Science</i> , 2006 , 262-284	0.8	2
8	Single Antenna Time Reversal of Guided Waves in Pipelines 2009 ,		1
7	Cognitive sensor networks for structure defect monitoring and classification using guided wave signals 2010 ,		1
6	The New Editors and Their Plans for the Journal of Computing in Civil Engineering. <i>Journal of Computing in Civil Engineering</i> , 2008 , 22, 231-232	4.9	1
5	Special Issue on Computer Aided Engineering in Honor of Professor Steven J. Fenves. <i>Engineering With Computers</i> , 2001 , 17, 93-94	4.4	1
4	Information and Communication Technology in Structural Engineering: An Introduction. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2005 , 15, 122-122	1	

- 3 Progress Manager: IT-Support for Progress Data Collection on Construction Sites. *Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)*, **2005**, 15, 135-138 1
- 2 Special Issue on Computer Aided Engineering in Honor of Professor Steven J. Fenves. *Engineering With Computers*, **2000**, 16, 145-146 4-4
- 1 The computer-aided engineer: Prospects and risks. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM*, **1998**, 12, 61-63 1-3