

Debra F Laefer

List of Publications by Year in descending order

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142
papers

2,621
citations

201385

27
h-index

223531

46
g-index

145
all docs

145
docs citations

145
times ranked

2163
citing authors

#	ARTICLE	IF	CITATIONS
1	Octree-based region growing for point cloud segmentation. ISPRS Journal of Photogrammetry and Remote Sensing, 2015, 104, 88-100.	4.9	436
2	Combining an Angle Criterion with Voxelization and the Flying Voxel Method in Reconstructing Building Models from LiDAR Data. Computer-Aided Civil and Infrastructure Engineering, 2013, 28, 112-129.	6.3	109
3	UAV Bridge Inspection through Evaluated 3D Reconstructions. Journal of Bridge Engineering, 2019, 24, .	1.4	109
4	Crack detection limits in unit based masonry with terrestrial laser scanning. NDT and E International, 2014, 62, 66-76.	1.7	92
5	Toward automatic generation of 3D steel structures for building information modelling. Automation in Construction, 2017, 74, 66-77.	4.8	77
6	Point Cloud Data Conversion into Solid Models via Point-Based Voxelization. Journal of Surveying Engineering, - ASCE, 2013, 139, 72-83.	1.0	70
7	Cold and moderate ambient temperatures effects on expansive pressure development in soundless chemical demolition agents. Construction and Building Materials, 2016, 110, 117-127.	3.2	62
8	Slicing Method for curved facade and window extraction from point clouds. ISPRS Journal of Photogrammetry and Remote Sensing, 2016, 119, 334-346.	4.9	58
9	State of Technology Review of Civilian UAVs. Recent Patents on Engineering, 2016, 10, 160-174.	0.3	55
10	Building Reuse Assessment for Sustainable Urban Reconstruction. Journal of Construction Engineering and Management - ASCE, 2008, 134, 217-227.	2.0	49
11	Expansive fracture agent behaviour for concrete cracking. Magazine of Concrete Research, 2010, 62, 443-452.	0.9	49
12	Infrastructure Management Information System Framework Requirements for Disasters. Journal of Computing in Civil Engineering, 2007, 21, 90-101.	2.5	46
13	Flying Voxel Method with Delaunay Triangulation Criterion for Facade/Feature Detection for Computation. Journal of Computing in Civil Engineering, 2012, 26, 691-707.	2.5	45
14	Flight Optimization Algorithms for Aerial LiDAR Capture for Urban Infrastructure Model Generation. Journal of Computing in Civil Engineering, 2009, 23, 330-339.	2.5	44
15	Quantitative evaluation strategies for urban 3D model generation from remote sensing data. Computers and Graphics, 2015, 49, 82-91.	1.4	44
16	Robust statistical approaches for circle fitting in laser scanning three-dimensional point cloud data. Pattern Recognition, 2018, 81, 417-431.	5.1	43
17	Reliability of Crack Detection Methods for Baseline Condition Assessments. Journal of Infrastructure Systems, 2010, 16, 129-137.	1.0	42
18	Application of the Wavelet Multi-resolution Analysis and Hilbert transform for the prediction of gear tooth defects. Meccanica, 2012, 47, 1601-1612.	1.2	39

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19	Processing of Extremely High Resolution LiDAR and RGB Data: Outcome of the 2015 IEEE GRSS Data Fusion Contest – Part B: 3-D Contest. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 5560-5575.	2.3	37
20	Urban Point Cloud Mining Based on Density Clustering and MapReduce. Journal of Computing in Civil Engineering, 2017, 31, .	2.5	37
21	Three-dimensional building façade segmentation and opening area detection from point clouds. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 143, 134-149.	4.9	37
22	Octree-based, automatic building façade generation from LiDAR data. CAD Computer Aided Design, 2014, 53, 46-61.	1.4	36
23	Evaluation of risk assessment procedures for buildings adjacent to tunnelling works. Tunnelling and Underground Space Technology, 2014, 40, 333-342.	3.0	36
24	Impact of thermal transfer on hydration heat of a Soundless Chemical Demolition Agent. Construction and Building Materials, 2018, 187, 348-359.	3.2	33
25	The Need for Baseline Data Characteristics for GIS-Based Disaster Management Systems. Journal of the Urban Planning and Development Division, ASCE, 2006, 132, 115-119.	0.8	32
26	Automatic extraction of road features in urban environments using dense ALS data. International Journal of Applied Earth Observation and Geoinformation, 2018, 64, 226-236.	1.4	32
27	Evacuation Route Selection Based on Tree-Based Hazards Using Light Detection and Ranging and GIS. Journal of Transportation Engineering, 2006, 132, 312-320.	0.9	30
28	Dynamic amplification of a multi-span, continuous orthotropic bridge deck under vehicular movement. Engineering Structures, 2015, 100, 718-730.	2.6	29
29	Numerical model tests of building response to excavation-induced ground movements. Canadian Geotechnical Journal, 2008, 45, 1611-1621.	1.4	28
30	Predicting RC Frame Response to Excavation-Induced Settlement. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2009, 135, 1605-1619.	1.5	27
31	Lateral Image Degradation in Terrestrial Laser Scanning. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2009, 19, 184-189.	0.5	24
32	Manufacturing, assembly, and testing of scaled, historic masonry for one-gravity, pseudo-static, soil-structure experiments. Construction and Building Materials, 2011, 25, 4362-4373.	3.2	24
33	Selective demolition of masonry unit walls with a soundless chemical demolition agent. Construction and Building Materials, 2020, 248, 118635.	3.2	24
34	Octree-based indexing for 3D pointclouds within an Oracle Spatial DBMS. Computers and Geosciences, 2013, 51, 430-438.	2.0	23
35	Airborne laser scanning data storage and indexing: state-of-the-art review. International Journal of Remote Sensing, 2016, 37, 6187-6204.	1.3	22
36	Validating Computational Models from Laser Scanning Data for Historic Facades. Journal of Testing and Evaluation, 2013, 41, 481-496.	0.4	22

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37	Big-Data Approach for Three-Dimensional Building Extraction from Aerial Laser Scanning. Journal of Computing in Civil Engineering, 2016, 30, .	2.5	21
38	3D Reconstructions Using Unstabilized Video Footage from an Unmanned Aerial Vehicle. Journal of Imaging, 2017, 3, 15.	1.7	20
39	A semi-random field finite element method to predict the maximum eccentric compressive load for masonry prisms. Construction and Building Materials, 2015, 77, 489-500.	3.2	19
40	Evaluating the Benefits of Octree-based Indexing for Lidar Data. Photogrammetric Engineering and Remote Sensing, 2012, 78, 927-934.	0.3	17
41	Impact of modeling architectural detailing for predicting unreinforced masonry response to subsidence. Automation in Construction, 2013, 30, 191-204.	4.8	16
42	The feasibility of short-wave infrared spectrometry in assessing water-to-cement ratio and density of hardened concrete. Construction and Building Materials, 2018, 185, 661-669.	3.2	16
43	Per-point processing for detailed urban solar estimation with aerial laser scanning and distributed computing. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 155, 119-135.	4.9	16
44	The electronic structure and optical properties of rutile TiO ₂ co-doped with nickel and cerium. Chinese Journal of Physics, 2017, 55, 2393-2399.	2.0	15
45	Temperature-related performance factors for chemical demolition agents. International Journal of Masonry Research and Innovation, 2017, 2, 220.	0.3	15
46	LiDAR point-cloud mapping of building façades for building energy performance simulation. Automation in Construction, 2019, 107, 102905.	4.8	15
47	A Ritz's method based solution for the contact problem of a deformable rectangular plate on an elastic quarter-space. International Journal of Solids and Structures, 2010, 47, 1822-1829.	1.3	14
48	Visualisation of urban airborne laser scanning data with occlusion images. ISPRS Journal of Photogrammetry and Remote Sensing, 2015, 104, 77-87.	4.9	13
49	Uncertainty analysis of the effect of grout injection on the deformation of multi-wythe stone masonry walls. Construction and Building Materials, 2016, 126, 661-672.	3.2	13
50	Effect of sludge pH and treatment time on the electrokinetic removal of aluminum from water potabilization treatment sludge. Comptes Rendus Chimie, 2016, 19, 511-516.	0.2	13
51	Maximizing feature detection in aerial unmanned aerial vehicle datasets. Journal of Applied Remote Sensing, 2017, 11, 025015.	0.6	13
52	Processing of Terrestrial Laser Scanning Point Cloud Data for Computational Modelling of Building Facades. Recent Patents on Computer Science, 2011, 4, 16-29.	0.5	13
53	Experimental Investigation of Grouted Helical Piers for Use in Foundation Rehabilitation. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2008, 134, 1280-1289.	1.5	12
54	Semi-analytical determination of natural frequencies and mode shapes of multi-span bridge decks. Journal of Sound and Vibration, 2009, 328, 291-300.	2.1	12

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55	An Open-Source Vision for HAZUS. Journal of Computing in Civil Engineering, 2010, 24, 1-2.	2.5	10
56	Aerial laser scanning and imagery data fusion for road detection in city scale. , 2015, , .		10
57	Axial load effects on flush end-plate moment connections. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2017, 170, 199-210.	0.4	10
58	Laser scan-based structural assessment of wrought iron bridges: Guinness Bridge, Ireland. Proceedings of the ICE - Engineering History and Heritage, 2018, 171, 76-89.	0.1	10
59	Harnessing Remote Sensing for Civil Engineering: Then, Now, and Tomorrow. Lecture Notes in Civil Engineering, 2020, , 3-30.	0.3	10
60	Voxel Change: Big Data-Based Change Detection for Aerial Urban LiDAR of Unequal Densities. Journal of Surveying Engineering, - ASCE, 2021, 147, .	1.0	10
61	Characterizing building materials using multispectral imagery and LiDAR intensity data. Journal of Building Engineering, 2021, 44, 102603.	1.6	10
62	Recent Trends and Remaining Limitations in Urban Microclimate Models. Open Urban Studies and Demography Journal, 2015, 1, 1-12.	1.3	10
63	Assessment of Excavation-Induced Building Damage. , 2010, , .		9
64	Toward a new approach for massive LiDAR data processing. , 2015, , .		9
65	Temperature-Induced Chemical Changes in Soundless Chemical Demolition Agents. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	9
66	Introduction of the Intermeshed Steel Connection—A New Universal Steel Connection. Buildings, 2020, 10, 37.	1.4	9
67	Investigation of the Rail-Induced Vibrations on a Masonry Historical Building. Advanced Materials Research, 2010, 133-134, 569-574.	0.3	8
68	New Advances in Automated Urban Modelling from Airborne Laser Scanning Data. Recent Patents on Engineering, 2011, 5, 196-208.	0.3	8
69	Systematic Approach for Large-Scale, Rapid, Dilapidation Surveys of Historic Masonry Buildings. International Journal of Architectural Heritage, 2014, 8, 290-310.	1.7	8
70	Selection, production, and testing of scaled reinforced concrete models and their components. Construction and Building Materials, 2016, 126, 398-409.	3.2	8
71	Use of negative stiffness in failure analysis of concrete beams. Engineering Structures, 2016, 126, 187-199.	2.6	8
72	Viability Assessment of Terrestrial LiDAR for Retaining Wall Monitoring. , 2008, , .		7

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73	Application of Terrestrial Laser Scanner In Bridge Inspection: Review and an Opportunity. IABSE Symposium Report, 2014, , .	0.0	7
74	Gender Disparity in Engineering as a Function of Physics Enrollment and Its Implications for Civil Engineering. Journal of Professional Issues in Engineering Education and Practice, 2009, 135, 95-101.	0.9	6
75	Numerical study of the behavior of intermeshed steel connections under mixed-mode loading. Journal of Constructional Steel Research, 2019, 160, 89-100.	1.7	6
76	Experimental study of intermeshed steel connections manufactured using advanced cutting techniques. Journal of Constructional Steel Research, 2020, 172, 106169.	1.7	6
77	Metrics for aerial, urban lidar point clouds. ISPRS Journal of Photogrammetry and Remote Sensing, 2021, 175, 268-281.	4.9	6
78	Three-Dimensional Spatial Information Systems: State of the Art Review. Recent Patents on Computer Science, 2010, 2, 21-31.	0.5	6
79	Adopting flexibility of the end-plate connections in steel moment frames. Steel and Composite Structures, 2015, 18, 1215-1237.	1.3	6
80	Engineering Properties of Historic Brick: Variability Considerations as a Function of Stationary versus Nonstationary Kiln Types. Journal of the American Institute for Conservation, 2004, 43, 255-272.	0.2	5
81	Dynamic analysis of a beam resting on an elastic half-space with inertial properties. Soil Dynamics and Earthquake Engineering, 2009, 29, 1198-1207.	1.9	5
82	America's Research-Active, Geotechnical Faculty Membersâ€™ A Snapshot of the Community. , 2010, , .		5
83	Web-Enabling of Architectural Heritage Inventories. International Journal of Architectural Heritage, 2010, 4, 16-37.	1.7	5
84	Documentation of bridges by terrestrial laser scanner. , 2015, , .		5
85	Lessons Learned with Laser Scanning Point Cloud Management in Hadoop HBase. Lecture Notes in Computer Science, 2018, , 231-253.	1.0	5
86	Experimental testing and analysis of the axial behaviour of intermeshed steel connections. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2022, 175, 153-173.	0.4	5
87	Extension of a semi-analytical approach to determine natural frequencies and mode shapes of a multi-span orthotropic bridge deck. Structural Engineering and Mechanics, 2012, 43, 71-87.	1.0	5
88	Optimizing Urban LiDAR Flight Path Planning Using a Genetic Algorithm and a Dual Parallel Computing Framework. Remote Sensing, 2021, 13, 4437.	1.8	5
89	A comparison of ground-based hyperspectral imaging and red-edge multispectral imaging for faÃ§ade material classification. Automation in Construction, 2022, 136, 104164.	4.8	5
90	Seismic based strengthening of steel and RC telecommunication poles based on fem analysis. Engineering Structures, 2004, 26, 2101-2111.	2.6	4

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91	Processing of Terrestrial Laser Scanning Point Cloud Data for Computational Modelling of Building Facades. Recent Patents on Computer Science, 2011, 4, 16-29.	0.5	4
92	A spatio-temporal index for aerial full waveform laser scanning data. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 138, 232-251.	4.9	4
93	An empirical study to evaluate students'™ conceptual modeling skills using UML. Computer Science Education, 2019, 29, 407-427.	2.7	4
94	Efficient LiDAR point cloud data encoding for scalable data management within the Hadoop eco-system. , 2019, , .		4
95	Using Short-wave Infrared Range Spectrometry Data to Determine Brick Characteristics. International Journal of Architectural Heritage, 2020, 14, 38-50.	1.7	4
96	Fostering Development of Women Faculty in Geotechnical Engineering. , 2007, , 1.		3
97	Quantitative Support for a Qualitative Foundation Reuse Assessment Tool. , 2011, , .		3
98	A hybrid method for foundation reuse evaluation. Environmental Geotechnics, 2015, 2, 224-236.	1.3	3
99	A Semi-automatic Member Detection for Metal Bridges. , 2015, , .		3
100	Meshfree Sequentially Linear Analysis of Concrete. Journal of Computing in Civil Engineering, 2016, 30, .	2.5	3
101	Adaptive optimal transport. Information and Inference, 2019, 8, 789-816.	0.9	3
102	Integration of Lidar Data and GIS Data for Point Cloud Semantic Enrichment at the Point Level. Photogrammetric Engineering and Remote Sensing, 2019, 85, 29-42.	0.3	3
103	An Integrated Octree-RANSAC Technique for Automated LiDAR Building Data Segmentation for Decorative Buildings. Lecture Notes in Computer Science, 2016, , 454-463.	1.0	3
104	Review of Strategies for the Geometric Creation and Population of Urban Microclimate Models. The Open Urban Studies Journal, 2012, 5, 22-31.	0.2	3
105	Assessment and Code Considerations for the Combined Effect of Seismic Base Isolation and Viscoelastic Dampers. ISRN Civil Engineering, 2011, 2011, 1-10.	0.4	3
106	The Temporary Use of Drilled Shafts in the Renovation of Carnegie Hall. , 2002, , 320.		2
107	Opportunities and Impediments to the Use of Three-Dimensional Laser Scanning for Adjacent Excavations. , 2006, , 1.		2
108	Determining Minimum Data Input Levels for Reliable Three-Dimensional Soil Profiling. , 2009, , .		2

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109	Predicted Tunnel-Induced Settlement and Damage to Findlater's Church with Respect to Freefield and Constructed Side Considerations. , 2010, , .		2
110	Reduction of lateral loads in abutments using ground anchors. Proceedings of the Institution of Civil Engineers: Ground Improvement, 2013, 166, 209-220.	0.7	2
111	Structure " Property Relationships in Microcrystalline Waxes for Museum Seismic Protection Applications. Progress in Rubber, Plastics and Recycling Technology, 2015, 31, 281-295.	0.8	2
112	AMASS: Advanced Manufacturing for the Assembly of Structural Steel. Practice Periodical on Structural Design and Construction, 2021, 26, .	0.7	2
113	Structural mechanics characterization of steel intermeshed connection using nonlinear finite element analysis. Engineering Structures, 2021, 238, 112264.	2.6	2
114	The effect of angles and distance on image-based, three-dimensional reconstructions. , 2017, , .		2
115	Theoretical Solutions for Strength-Scaled Unreinforced Masonry for Scaled Soil-Structure Experimentation. Journal of Testing and Evaluation, 2010, 38, 449-457.	0.4	2
116	Three-Dimensional Spatial Information Systems: State of the Art Review. Recent Patents on Computer Science, 2009, 2, 21-31.	0.5	2
117	Three-Dimensional Spatial Information Systems: State of the Art Review. Recent Patents on Computer Science, 2009, 2, 21-31.	0.5	2
118	Cost-Effective Decision Making for Blast Mitigation. , 2005, , 1.		1
119	Challenges and Solutions to Model-Scale Testing for Composite Deep Foundations for Existing Foundation Enhancement. , 2007, , 1.		1
120	Performance Expectations of Early 20th Century Urban American Building Foundations. , 2008, , .		1
121	Solutions for Model-Scale, Tied-Back Anchors and Sheet Pile Walls. , 2014, , .		1
122	Advantages of Infinite Elements over Prespecified Boundary Conditions in Unbounded Problems. Journal of Computing in Civil Engineering, 2015, 29, 04014085.	2.5	1
123	Nonlinear analysis of isotropic slab bridges under extreme traffic loading. Canadian Journal of Civil Engineering, 2015, 42, 808-817.	0.7	1
124	America's Research-Active, Geotechnical Faculty Members "A Snapshot of the Community 7 Years On. , 2018, , .		1
125	VECTOR-RASTER DATA FUSION FOR OBJECT EXTRACTION. Advances in Computer Science and Engineering, 2016, 15, 13-26.	0.2	1
126	Sample Preparation and Testing Methods for the Evaluation of Microcrystalline Waxes for the Seismic Protection of Art Objects. Journal of Testing and Evaluation, 2008, 36, 100202.	0.4	1

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127	Managing wind resource variation for rooftop turbine placement. European Physical Journal: Special Topics, 0, , 1.	1.2	1
128	Predicting Tunneling-Induced Ground Movement. Transportation Research Record, 2004, 1892, 208-217.	1.0	0
129	Engineering Properties of Historic Brick: Variability Considerations as a Function of Stationary versus Nonstationary Kiln Types. Journal of the American Institute for Conservation, 2004, 43, 255.	0.2	0
130	Integrated Modeling Agenda for Sustainable Communities Via Reconfigurability. , 2004, , 214.		0
131	Understanding Microcrystalline Waxes for the Seismic Protection of Art Objects. Journal of the American Institute for Conservation, 2008, 47, 119-138.	0.2	0
132	Soil Nailing in Glacial Till: A Design Guide Evaluation Based on Irish and American Field Sites. , 2010, , .		0
133	America's Research-Active, Geotechnical Faculty Membersâ€™ An Investigation of National Science Foundation Funding Trends. , 2011, , .		0
134	Undergraduate Research Models Applicable for Geotechnics. , 2011, , .		0
135	Planning Infrastructure Documentation with Aerial Laser Scanning. IABSE Symposium Report, 2013, , .	0.0	0
136	Dynamic Amplification of an Orthotropic, Multi Span Bridge Deck under Moving Truck with Tandem Axles. Lecture Notes in Mechanical Engineering, 2015, , 523-535.	0.3	0
137	Dynamic Behavior and Stability of a Flexible Rotor. Applied Condition Monitoring, 2019, , 37-50.	0.4	0
138	Evaluation of the integrals of Greenâ€™s function of Lambâ€™s model used in contact problems. Acta Mechanica, 2020, 231, 4145-4156.	1.1	0
139	Applications of digital manufacturing to steel frames: The Intermeshed Steel Connection. Ce/Papers, 2021, 4, 817-824.	0.1	0
140	Impediments to Vertical Data Capture from Aerial LiDAR for Three-dimensional Building Extraction. IABSE Symposium Report, 2007, , .	0.0	0
141	IQPC 2015 Track: EVALUATION OF AUTOMATICALLY GENERATED 2D FOOTPRINTS FROM URBAN LIDAR DATA. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-3/W3, 527-534.	0.2	0
142	Tunneling Appropriate Computational Models from Laser Scanning Data. , 2017, , .		0