Michael J Olsen

List of Publications by Year
in descending order

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Version: 2024-02-01

86 papers	2,485 citations	218677 26 h-index	214800 47 g-index
88 all docs	88 docs citations	88 times ranked	2589 citing authors

#	Article	IF	Citations
1	A Review of LIDAR Radiometric Processing: From Ad Hoc Intensity Correction to Rigorous Radiometric Calibration. Sensors, 2015, 15, 28099-28128.	3.8	241
2	Terrestrial Laser Scanning-Based Structural Damage Assessment. Journal of Computing in Civil Engineering, 2010, 24, 264-272.	4.7	224
3	Object Recognition, Segmentation, and Classification of Mobile Laser Scanning Point Clouds: A State of the Art Review. Sensors, 2019, 19, 810.	3.8	162
4	Synthesis of Transportation Applications of Mobile LIDAR. Remote Sensing, 2013, 5, 4652-4692.	4.0	141
5	Prediction of understory vegetation cover with airborne lidar in an interior ponderosa pine forest. Remote Sensing of Environment, 2012, 124, 730-741.	11.0	125
6	Comparison of Airborne and Terrestrial Lidar Estimates of Seacliff Erosion in Southern California. Photogrammetric Engineering and Remote Sensing, 2010, 76, 421-427.	0.6	79
7	Liquefaction effects and associated damages observed at the Wellington CentrePort from the 2016 Kaikoura earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2017, 50, 152-173.	0.5	74
8	Terrestrial Laser Scanning of Extended Cliff Sections in Dynamic Environments: Parameter Analysis. Journal of Surveying Engineering, - ASCE, 2009, 135, 161-169.	1.7	67
9	Evaluation of landslide susceptibility mapping techniques using lidar-derived conditioning factors (Oregon case study). Geomatics, Natural Hazards and Risk, 2016, 7, 1884-1907.	4.3	66
10	Efficient and robust lane marking extraction from mobile lidar point clouds. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 147, 1-18.	11.1	62
11	Individual snag detection using neighborhood attribute filtered airborne lidar data. Remote Sensing of Environment, 2015, 163, 165-179.	11.0	55
12	Damage Reconnaissance of Unreinforced Masonry Bearing Wall Buildings after the 2015 Gorkha, Nepal, Earthquake. Earthquake Spectra, 2017, 33, 243-273.	3.1	55
13	New Automated Point-Cloud Alignment for Ground-Based Light Detection and Ranging Data of Long Coastal Sections. Journal of Surveying Engineering, - ASCE, 2011, 137, 14-25.	1.7	53
14	Performance of Medium-to-High Rise Reinforced Concrete Frame Buildings with Masonry Infill in the 2015 Gorkha, Nepal, Earthquake. Earthquake Spectra, 2017, 33, 197-218.	3.1	49
15	3D virtual intersection sight distance analysis using lidar data. Transportation Research Part C: Emerging Technologies, 2018, 86, 563-579.	7.6	49
16	Multi-scan segmentation of terrestrial laser scanning data based on normal variation analysis. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 143, 233-248.	11.1	47
17	A simplified three-dimensional shallow landslide susceptibility framework considering topography and seismicity. Landslides, 2017, 14, 1677-1697.	5.4	45
18	Evaluation of the influence of source and spatial resolution of DEMs on derivative products used in landslide mapping. Geomatics, Natural Hazards and Risk, 2016, 7, 1835-1855.	4.3	39

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19	Influence of both anisotropic friction and cohesion on the formation of tension cracks and stability of slopes. Engineering Geology, 2019, 249, 31-44.	6.3	34
20	Optical techniques for multiscale damage assessment. Geomatics, Natural Hazards and Risk, 2013, 4, 49-70.	4.3	33
21	Automated and efficient powerline extraction from laser scanning data using a voxel-based subsampling with hierarchical approach. ISPRS Journal of Photogrammetry and Remote Sensing, 2020, 163, 343-361.	11.1	33
22	Contour Connection Method for automated identification and classification of landslide deposits. Computers and Geosciences, 2015, 74, 27-38.	4.2	32
23	Rockfall Activity Index (RAI): A lidar-derived, morphology-based method for hazard assessment. Engineering Geology, 2017, 221, 184-192.	6.3	32
24	To Fill or Not to Fill: Sensitivity Analysis of the Influence of Resolution and Hole Filling on Point Cloud Surface Modeling and Individual Rockfall Event Detection. Remote Sensing, 2015, 7, 12103-12134.	4.0	30
25	Fast ground filtering for TLS data via Scanline Density Analysis. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 129, 226-240.	11.1	29
26	In Situ Change Analysis and Monitoring through Terrestrial Laser Scanning. Journal of Computing in Civil Engineering, 2015, 29, 04014040.	4.7	26
27	A Simplified, Object-Based Framework for Efficient Landslide Inventorying Using LIDAR Digital Elevation Model Derivatives. Remote Sensing, 2019, 11, 303.	4.0	25
28	Policy processes and recommendations for Unmanned Aerial System operations near roadways based on visual attention of drivers. Transportation Research Part C: Emerging Technologies, 2019, 108, 207-222.	7.6	24
29	Post-Earthquake and Tsunami 3D Laser Scanning Forensic Investigations. , 2012, , .		21
30	Evaluation of Technologies for Road Profile Capture, Analysis, and Evaluation. Journal of Surveying Engineering, - ASCE, 2015, 141, .	1.7	21
31	Case study: Post-earthquake model updating of a heritage pagoda masonry temple using AEM and FEM. Engineering Structures, 2020, 206, 109950.	5.3	19
32	Tsunami Modeling, Fluid Load Simulation, and Validation Using Geospatial Field Data. Journal of Structural Engineering, 2014, 140, .	3.4	18
33	An Efficient Framework for Mobile Lidar Trajectory Reconstruction and Mo-norvana Segmentation. Remote Sensing, 2019, 11, 836.	4.0	18
34	Dense Point Cloud Quality Factor as Proxy for Accuracy Assessment of Image-Based 3D Reconstruction. Journal of Surveying Engineering, - ASCE, 2021, 147, .	1.7	18
35	Suitability of structure from motion for rockâ€slope assessment. Photogrammetric Record, 2018, 33, 217-242.	0.4	17
36	TopCATâ€"Topographical Compartment Analysis Tool to analyze seacliff and beach change in GIS. Computers and Geosciences, 2012, 45, 284-292.	4.2	16

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37	Tale of Two RTNs: Rigorous Evaluation of Real-Time Network GNSS Observations. Journal of Surveying Engineering, - ASCE, 2018, 144, .	1.7	16
38	Efficient terrestrial laser scan segmentation exploiting data structure. ISPRS Journal of Photogrammetry and Remote Sensing, 2016, 119, 135-150.	11.1	15
39	To Level or Not to Level: Laser Scanner Inclination Sensor Stability and Application. Journal of Surveying Engineering, - ASCE, 2012, 138, 117-125.	1.7	14
40	Automated quantification of distributed landslide movement using circular tree trunks extracted from terrestrial laser scan data. Computers and Geosciences, 2014, 67, 31-39.	4.2	13
41	Geologic Trends in Shear Strength Properties Inferred Through Threeâ€Dimensional Back Analysis of Landslide Inventories. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005461.	2.8	13
42	Lateral Spread Hazard Mapping of the Northern Salt Lake Valley, Utah, for a M7.0 Scenario Earthquake. Earthquake Spectra, 2007, 23, 95-113.	3.1	12
43	Superpixel Clustering and Planar Fit Segmentation of 3D LIDAR Point Clouds. , 2013, , .		12
44	Performance-based, seismically-induced landslide hazard mapping of Western Oregon. Soil Dynamics and Earthquake Engineering, 2017, 103, 38-54.	3.8	12
45	Mitigating coastal landslide damage. Science, 2017, 357, 981-982.	12.6	12
46	Estimates of three-dimensional rupture surface geometry of deep-seated landslides using landslide inventories and high-resolution topographic data. Geomorphology, 2020, 367, 107332.	2.6	12
47	Multihazard Damage and Loss Assessment of Bridges in a Highway Network Subjected to Earthquake and Tsunami Hazards. Natural Hazards Review, 2021, 22, .	1.5	12
48	Terrestrial Laser Scanning. , 2022, , 233-302.		12
49	Morphological Expressions of Coastal Cliff Erosion Processes in San Diego County. Journal of Coastal Research, 2016, 76, 174-184.	0.3	11
50	Using terrestrial laser scanning to support ecological research in the rocky intertidal zone. Journal of Coastal Conservation, 2014, 18, 701-714.	1.6	10
51	The impact of rockfalls on dwellings during the 2011 Christchurch, New Zealand, earthquakes. Landslides, 2018, 15, 31-42.	5.4	10
52	Evaluation of Uncrewed Aircraft Systemsâ€™ Lidar Data Quality. ISPRS International Journal of Geo-Information, 2019, 8, 532.	2.9	10
53	Efficient segment-based ground filtering and adaptive road detection from mobile light detection and ranging (LiDAR) data. International Journal of Remote Sensing, 2021, 42, 3633-3659.	2.9	10
54	Alternative Information Signs: Evaluation of Driver Comprehension and Visual Attention. Journal of Transportation Engineering, 2016, 142, 04015036.	0.9	9

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55	MULTI-PASS APPROACH FOR MOBILE TERRESTRIAL LASER SCANNING. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, II-3/W5, 105-112.	0.0	9
56	Quantifying the Sensitivity of Progressive Landslide Movements to Failure Geometry, Undercutting Processes and Hydrological Changes. Journal of Geophysical Research F: Earth Surface, 2019, 124, 616-638.	2.8	8
57	Hinged, Pseudo-Grid Triangulation Method for Long, Near-Linear Cliff Analyses. Journal of Surveying Engineering, - ASCE, 2013, 139, 105-109.	1.7	7
58	Spatial distribution of yield accelerations and permanent displacements: A diagnostic tool for assessing seismic slope stability. Soil Dynamics and Earthquake Engineering, 2019, 126, 105811.	3.8	7
59	Quantification of Surface Roughness Using Laser Scanning with Application to the Frictional Resistance of Sand-Timber Pile Interfaces. Geotechnical Testing Journal, 2020, 43, 966-984.	1.0	7
60	Rockfall Activity Rates Before, During and After the 2010/2011 Canterbury Earthquake Sequence. Journal of Geophysical Research F: Earth Surface, 2022, 127, .	2.8	7
61	Fate and Transport of Seacliff Failure Sediment in Southern California. Journal of Coastal Research, 2016, 76, 185-199.	0.3	6
62	Role of BIM and 3D Laser Scanning on Job sites from the Perspective of Construction Project Management Personnel. , 2016, , .		6
63	Limit Equilibrium Stability Analysis of Layered Slopes: a Generalized Approach. Transportation Infrastructure Geotechnology, 2018, 5, 366-378.	3.1	6
64	Data Gap Classification for Terrestrial Laser Scanning-Derived Digital Elevation Models. ISPRS International Journal of Geo-Information, 2020, 9, 749.	2.9	6
65	SlideSim: 3D Landslide Displacement Monitoring through a Physics-Based Simulation Approach to Self-Supervised Learning. Remote Sensing, 2022, 14, 2644.	4.0	6
66	Rapid Response to Seacliff Erosion in San Diego County, California Using Terrestrial LIDAR. , 2008, , .		5
67	Analysis of the Multipass Approach for Collection and Processing of Mobile Laser Scan Data. Journal of Surveying Engineering, - ASCE, 2017, 143, 04017004.	1.7	5
68	Lateral spreading within a limit equilibrium framework: Newmark sliding blocks with degrading yield accelerations. Geotechnique, 2018, 68, 699-712.	4.0	5
69	Interactive Visualization of 3D Coordinate Uncertainties in Terrestrial Laser <scp>-</scp> Scanning Point Clouds Using OpenGL Shader Language. Journal of Surveying Engineering, - ASCE, 2019, 145, .	1.7	5
70	FAST EDGE DETECTION AND SEGMENTATION OF TERRESTRIAL LASER SCANS THROUGH NORMAL VARIATION ANALYSIS. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, IV-2/W4, 51-57.	0.0	5
71	VR-based visual analytics of LIDAR data for cliff erosion assessment. , 2007, , .		4
72	Detecting sudden moving objects in a series of digital images with different exposure times. Computer Vision and Image Understanding, 2017, 158, 17-30.	4.7	4

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73	An Assessment of UAS-Based Photogrammetry for Civil Integrated Management (CIM) Modeling of Pipes. , 2017, , .		4
74	Efficient Planning and Acquisition of Terrestrial Laser Scanningâ€“Derived Digital Elevation Models: Proof of Concept Study. Journal of Surveying Engineering, - ASCE, 2019, 145, 06018003.	1.7	4
75	A Geotechnical Database for Utah (GeoDU) enabling quantification of geotechnical properties of surficial geologic units for geohazard assessments. Earthquake Spectra, 2020, 36, 422-451.	3.1	4
76	Approximations, Errors, and Misconceptions in the Use of Map Projections. Mathematical Problems in Engineering, 2021, 2021, 1-12.	1.1	4
77	A Wave of New Information: LIDAR Investigations of the 2009 Samoan Tsunami. , 2011, , .		4
78	Probabilistic liquefaction-induced lateral spread hazard mapping and its application to Utah County, Utah. Engineering Geology, 2018, 237, 76-91.	6.3	3
79	Reconstructing the Velocity and Deformation of a Rapid Landslide Using Multiview Video. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005348.	2.8	3
80	Discussion of â€œUse of terrestrial laser scanning for the characterization of retrogressive landslides in sensitive clay and rotational landslides in river banksâ€Appears in the Canadian Geotechnical Journal: 46(12): 1379â€“1390.. Canadian Geotechnical Journal, 2010, 47, 1164-1168.	2.8	2
81	Mobile Lidar Guidelines to Support Utility Asset Management along Highways. , 2016, , .		2
82	Linking Surveying, Engineering, GIS, and Computer Science into Geomatics through a Digital Terrain Modeling Course. Journal of Surveying Engineering, - ASCE, 2011, 137, 37-39.	1.7	1
83	Geospatial Characterization of Causative Factors for Recent Landslides in the Oregon Coast Range. , 2013, , .		1
84	Lateral spreading within a limit equilibrium framework: Newmark's sliding blocks with degrading yield accelerations. Geotechnique, 2020, 70, 559-561.	4.0	1
85	Prepare for Cascadia's next earthquake. Science, 2018, 362, 1007-1007.	12.6	0
86	Mobile Terrestrial Laser Scanning and Mapping. , 2022, , 303-340.		0