Teemu A Hakala

List of Publications by Year
in descending order

78 papers	3,659 citations	159585 30 h-index	138484 58 g-index
80 all docs	80 docs citations	80 times ranked	3814 citing authors

#	Article	IF	Citations
1	Direct and automatic measurements of stem curve and volume using a high-resolution airborne laser scanning system. Science of Remote Sensing, 2022, 5, 100050.	4.8	8
2	What Does the NDVI Really Tell Us About Crops? Insight from Proximal Spectral Field Sensors. Springer Optimization and Its Applications, 2022, , 251-265.	0.9	1
3	Effect of small-scale snow surface roughness on snow albedo and reflectance. Cryosphere, 2021, 15, 793-820.	3.9	15
4	Seamless integration of above- and under-canopy unmanned aerial vehicle laser scanning for forest investigation. Forest Ecosystems, 2021, 8, .	3.1	18
5	The Penetration Analysis of Airborne Ku-Band Radar Versus Satellite Infrared Lidar Based on the Height and Energy Percentiles in the Boreal Forest. Remote Sensing, 2021, 13, 1650.	4.0	0
6	Under-Canopy UAV Laser Scanning Providing Canopy Height and Stem Volume Accurately. Forests, 2021, 12, 856.	2.1	9
7	Structural and photosynthetic dynamics mediate the response of SIF to water stress in a potato crop. Remote Sensing of Environment, 2021, 263, 112555.	11.0	60
8	Direct reflectance transformation methodology for drone-based hyperspectral imaging. Remote Sensing of Environment, 2021, 266, 112691.	11.0	21
9	Using Microwave Profile Radar to Estimate Forest Canopy Leaf Area Index: Linking 3D Radiative Transfer Model and Forest Gap Model. Remote Sensing, 2021, 13, 297.	4.0	2
10	The Determination of Effective Beamwidth of Ku Band Profiling Radar Based on Waveform Matching Method in the Boreal Forest of Finland. Remote Sensing, 2020, 12, 2710.	4.0	1
11	Comparison of Backpack, Handheld, Under-Canopy UAV, and Above-Canopy UAV Laser Scanning for Field Reference Data Collection in Boreal Forests. Remote Sensing, 2020, 12, 3327.	4.0	70
12	Machine learning estimators for the quantity and quality of grass swards used for silage production using drone-based imaging spectrometry and photogrammetry. Remote Sensing of Environment, 2020, 246, 111830.	11.0	60
13	Lidar-aided analysis of boreal forest backscatter at Ku band. International Journal of Applied Earth Observation and Geoinformation, 2020, 91, 102133.	2.8	3
14	Simulation of Ku-Band Profile Radar Waveform by Extending Radiosity Applicable to Porous Individual Objects (RAPID2) Model. Remote Sensing, 2020, 12, 684.	4.0	4
15	Under-canopy UAV laser scanning for accurate forest field measurements. ISPRS Journal of Photogrammetry and Remote Sensing, 2020, 164, 41-60.	11.1	83
16	Using Aerial Platforms in Predicting Water Quality Parameters from Hyperspectral Imaging Data with Deep Neural Networks. Computational Methods in Applied Sciences (Springer), 2020, , 213-238.	0.3	1
17	On the Estimation of the Leaf Angle Distribution from Drone Based Photogrammetry. , 2020, , .		2
18	Characterizing Seedling Stands Using Leaf-Off and Leaf-On Photogrammetric Point Clouds and Hyperspectral Imagery Acquired from Unmanned Aerial Vehicle. Forests, 2019, 10, 415.	2.1	33

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19	Airborne Wind Vector Scatterometer for Sea Surface Measurements. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 2470-2476.	4.9	3
20	A Clustering Framework for Monitoring Circadian Rhythm in Structural Dynamics in Plants From Terrestrial Laser Scanning Time Series. Frontiers in Plant Science, 2019, 10, 486.	3.6	16
21	Different Remote Sensing Data in Relative Biomass Determination and in Precision Fertilization Task Generation for Cereal Crops. Communications in Computer and Information Science, 2019, , 164-176.	0.5	2
22	Improved waveform reconstruction and parameter accuracy retrieval for hyperspectral lidar data. Applied Optics, 2019, 58, 9624.	1.8	3
23	Remote sensing of bark beetle damage in urban forests at individual tree level using a novel hyperspectral camera from UAV and aircraft. Urban Forestry and Urban Greening, 2018, 30, 72-83.	5.3	146
24	Estimating Ground Level and Canopy Top Elevation With Airborne Microwave Profiling Radar. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 2283-2294.	6.3	9
25	Uncertainty in multispectral lidar signals caused by incidence angle effects. Interface Focus, 2018, 8, 20170033.	3.0	20
26	Tree Species Identification Using 3D Spectral Data and 3D Convolutional Neural Network. , 2018, , .		5
27	Estimating Biomass and Nitrogen Amount of Barley and Grass Using UAV and Aircraft Based Spectral and Photogrammetric 3D Features. Remote Sensing, 2018, 10, 1082.	4.0	113
28	Fully Polarimetric Airborne Wind Vector Scatterometer to Support Space-Borne Gnss-R Measurements. , 2018, , .		0
29	A Novel Tilt Correction Technique for Irradiance Sensors and Spectrometers On-Board Unmanned Aerial Vehicles. Remote Sensing, 2018, 10, 2068.	4.0	22
30	Assessment of Classifiers and Remote Sensing Features of Hyperspectral Imagery and Stereo-Photogrammetric Point Clouds for Recognition of Tree Species in a Forest Area of High Species Diversity. Remote Sensing, 2018, 10, 714.	4.0	49
31	Estimation of Canopy Height Using an Airborne *Ku*-Band Frequency-Modulated Continuous Waveform Profiling Radar. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 3590-3597.	4.9	4
32	The Comparison of Canopy Height Profiles Extracted from Ku-band Profile Radar Waveforms and LiDAR Data. Remote Sensing, 2018, 10, 701.	4.0	5
33	Assessing Biodiversity in Boreal Forests with UAV-Based Photogrammetric Point Clouds and Hyperspectral Imaging. Remote Sensing, 2018, 10, 338.	4.0	61
34	A Novel Machine Learning Method for Estimating Biomass of Grass Swards Using a Photogrammetric Canopy Height Model, Images and Vegetation Indices Captured by a Drone. Agriculture (Switzerland), 2018, 8, 70.	3.1	129
35	A Backpack-Mounted Omnidirectional Camera with Off-the-Shelf Navigation Sensors for Mobile Terrestrial Mapping: Development and Forest Application. Sensors, 2018, 18, 827.	3.8	22
36	Direct Reflectance Measurements from Drones: Sensor Absolute Radiometric Calibration and System Tests for Forest Reflectance Characterization. Sensors, 2018, 18, 1417.	3.8	56

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37	Possibility of Applying SLAM-Aided LiDAR in Deep Space Exploration. Springer Proceedings in Physics, 2017, , 239-248.	0.2	5
38	Towards multispectral, multi€sensor indoor positioning and target identification. Electronics Letters, 2017, 53, 1008-1011.	1.0	8
39	UAV-Borne Profiling Radar for Forest Research. Remote Sensing, 2017, 9, 58.	4.0	19
40	An Analysis of Ku-Band Profiling Radar Observations of Boreal Forest. Remote Sensing, 2017, 9, 1252.	4.0	4
41	Individual Tree Detection and Classification with UAV-Based Photogrammetric Point Clouds and Hyperspectral Imaging. Remote Sensing, 2017, 9, 185.	4.0	307
42	Hyperspectral UAV-imagery and photogrammetric canopy height model in estimating forest stand variables. Silva Fennica, 2017, 51, .	1.3	22
43	Incidence Angle Dependency of Leaf Vegetation Indices from Hyperspectral Lidar Measurements. Photogrammetrie, Fernerkundung, Geoinformation, 2016, 2016, 75-84.	1.2	16
44	Remote Sensing of 3-D Geometry and Surface Moisture of a Peat Production Area Using Hyperspectral Frame Cameras in Visible to Short-Wave Infrared Spectral Ranges Onboard a Small Unmanned Airborne Vehicle (UAV). IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 5440-5454.	6.3	63
45	Range calibration of airborne profiling radar used in forest inventory. , 2016, , .		5
46	Scan matching technology for forest navigation with map information. , 2016, , .		5
47	Optical measurements of chemically heterogeneous particulate surfaces. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 178, 422-431.	2.3	13
48	Calibrating laser scanner data from snow surfaces: Correction of intensity effects. Cold Regions Science and Technology, 2016, 121, 52-59.	3.5	7
49	Growth and development of Norway spruce and Scots pine seedlings under different light spectra. Environmental and Experimental Botany, 2016, 121, 112-120.	4.2	54
50	Soot on Snow experiment: bidirectional reflectance factor measurements of contaminated snow. Cryosphere, 2015, 9, 2323-2337.	3.9	50
51	Technical Note: Multispectral lidar time series of pine canopy chlorophyll content. Biogeosciences, 2015, 12, 1629-1634.	3.3	24
52	Investigating Bi-Temporal Hyperspectral Lidar Measurements from Declined Treesâ€"Experiences from Laboratory Test. Remote Sensing, 2015, 7, 13863-13877.	4.0	20
53	Using UAV-Based Photogrammetry and Hyperspectral Imaging for Mapping Bark Beetle Damage at Tree-Level. Remote Sensing, 2015, 7, 15467-15493.	4.0	277
54	SLAM-Aided Stem Mapping for Forest Inventory with Small-Footprint Mobile LiDAR. Forests, 2015, 6, 4588-4606.	2.1	72

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55	Artificial target detection with a hyperspectral LiDAR over 26-h measurement. Optical Engineering, 2015, 54, 013105.	1.0	56
56	Hemispherical-directional reflectance factor measurements of snow on the Greenland Ice Sheet during the Radiation, Snow Characteristics and Albedo at Summit (RASCALS) campaign. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 146, 280-289.	2.3	12
57	The uses of ambient light for ubiquitous positioning. , 2014, , .		9
58	Fast and nondestructive method for leaf level chlorophyll estimation using hyperspectral LiDAR. Agricultural and Forest Meteorology, 2014, 198-199, 250-258.	4.8	69
59	Technical notes: A detailed study for the provision of measurement uncertainty and traceability for goniospectrometers. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 146, 376-390.	2.3	31
60	Messung von gerichteten Reflektanzen bei hyperspektralen Flächenkameras auf UAVs. Photogrammetrie, Fernerkundung, Geoinformation, 2014, 2014, 175-188.	1.2	19
61	Classification of Spruce and Pine Trees Using Active Hyperspectral LiDAR. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 1138-1141.	3.1	58
62	Miniaturized hyperspectral imager calibration and UAV flight campaigns. Proceedings of SPIE, 2013, , .	0.8	22
63	Processing and Assessment of Spectrometric, Stereoscopic Imagery Collected Using a Lightweight UAV Spectral Camera for Precision Agriculture. Remote Sensing, 2013, 5, 5006-5039.	4.0	392
64	Full waveform hyperspectral LiDAR for terrestrial laser scanning. Optics Express, 2012, 20, 7119.	3.4	324
65	A Process for Radiometric Correction of UAV Image Blocks. Photogrammetrie, Fernerkundung, Geoinformation, 2012, 2012, 115-127.	1.2	34
66	Demonstration of a virtual active hyperspectral LiDAR in automated point cloud classification. ISPRS Journal of Photogrammetry and Remote Sensing, 2011, 66, 637-641.	11.1	51
67	Radiometric stability assessment of an airborne photogrammetric sensor in a test field. ISPRS Journal of Photogrammetry and Remote Sensing, 2010, 65, 409-421.	11.1	13
68	Acquisition of Bidirectional Reflectance Factor Dataset Using a Micro Unmanned Aerial Vehicle and a Consumer Camera. Remote Sensing, 2010, 2, 819-832.	4.0	57
69	Analysis of Properties of Reflectance Reference Targets for Permanent Radiometric Test Sites of High Resolution Airborne Imaging Systems. Remote Sensing, 2010, 2, 1892-1917.	4.0	14
70	Land Surface Albedos Computed from BRF Measurements with a Study of Conversion Formulae. Remote Sensing, 2010, 2, 1918-1940.	4.0	16
71	Two-channel Hyperspectral LiDAR with a Supercontinuum Laser Source. Sensors, 2010, 10, 7057-7066.	3.8	157
72	Tree species classification from fused active hyperspectral reflectance and LIDAR measurements. Forest Ecology and Management, 2010, 260, 1843-1852.	3.2	61

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73	Active hyperspectral LIDAR methods for object classification. , 2010, , .		1
74	Reflectance of various snow types: measurements, modeling, and potential for snow melt monitoring. , 2010, , 393-449.		3
75	Polarised Multiangular Reflectance Measurements Using the Finnish Geodetic Institute Field Goniospectrometer. Sensors, 2009, 9, 3891-3907.	3.8	63
76	Polarised bidirectional reflectance factor measurements from vegetated land surfaces. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 1044-1056.	2.3	46
77	Polarised bidirectional reflectance factor measurements from soil, stones, and snow. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 1940-1953.	2.3	77
78	Measurement of Reflectance Properties of Asphalt Surfaces and Their Usability as Reference Targets for Aerial Photos. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 2330-2339.	6.3	47