

Ben Somers

List of Publications by Year in descending order

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Version: 2024-02-01

105
papers

5,106
citations

126858

33
h-index

95218

68
g-index

110
all docs

110
docs citations

110
times ranked

7706
citing authors

#	ARTICLE	IF	CITATIONS
1	TRY plant trait database "enhanced coverage and open access. <i>Global Change Biology</i> , 2020, 26, 119-188.	4.2	1,038
2	Endmember variability in Spectral Mixture Analysis: A review. <i>Remote Sensing of Environment</i> , 2011, 115, 1603-1616.	4.6	536
3	Nonlinear Hyperspectral Mixture Analysis for tree cover estimates in orchards. <i>Remote Sensing of Environment</i> , 2009, 113, 1183-1193.	4.6	211
4	A model quantifying global vegetation resistance and resilience to short-term climate anomalies and their relationship with vegetation cover. <i>Global Ecology and Biogeography</i> , 2015, 24, 539-548.	2.7	182
5	Satellite remote sensing of ecosystem functions: opportunities, challenges and way forward. <i>Remote Sensing in Ecology and Conservation</i> , 2018, 4, 71-93.	2.2	176
6	A generic EEG artifact removal algorithm based on the multi-channel Wiener filter. <i>Journal of Neural Engineering</i> , 2018, 15, 036007.	1.8	174
7	The fourth phase of the radiative transfer model intercomparison (RAMI) exercise: Actual canopy scenarios and conformity testing. <i>Remote Sensing of Environment</i> , 2015, 169, 418-437.	4.6	170
8	Automated Extraction of Image-Based Endmember Bundles for Improved Spectral Unmixing. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2012, 5, 396-408.	2.3	159
9	MUSIC-CSR: Hyperspectral Unmixing via Multiple Signal Classification and Collaborative Sparse Regression. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2014, 52, 4364-4382.	2.7	123
10	SoilTemp: A global database of near-surface temperature. <i>Global Change Biology</i> , 2020, 26, 6616-6629.	4.2	122
11	Multi-temporal hyperspectral mixture analysis and feature selection for invasive species mapping in rainforests. <i>Remote Sensing of Environment</i> , 2013, 136, 14-27.	4.6	121
12	Support vector regression and synthetically mixed training data for quantifying urban land cover. <i>Remote Sensing of Environment</i> , 2013, 137, 184-197.	4.6	120
13	How to measure ecosystem stability? An evaluation of the reliability of stability metrics based on remote sensing time series across the major global ecosystems. <i>Global Change Biology</i> , 2014, 20, 2149-2161.	4.2	86
14	A Quantitative Analysis of Virtual Endmembers' Increased Impact on the Collinearity Effect in Spectral Unmixing. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2011, 49, 2945-2956.	2.7	78
15	Invasion by the Alien Tree <i>Prunus serotina</i> Alters Ecosystem Functions in a Temperate Deciduous Forest. <i>Frontiers in Plant Science</i> , 2017, 8, 179.	1.7	67
16	Invasive Species Mapping in Hawaiian Rainforests Using Multi-Temporal Hyperion Spaceborne Imaging Spectroscopy. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2013, 6, 351-359.	2.3	61
17	Mapping an invasive bryophyte species using hyperspectral remote sensing data. <i>Biological Invasions</i> , 2017, 19, 239-254.	1.2	59
18	A unified framework to model the potential and realized distributions of invasive species within the invaded range. <i>Diversity and Distributions</i> , 2017, 23, 806-819.	1.9	58

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19	Hyperspectral Time Series Analysis of Native and Invasive Species in Hawaiian Rainforests. Remote Sensing, 2012, 4, 2510-2529.	1.8	57
20	The functional characterization of grass- and shrubland ecosystems using hyperspectral remote sensing: trends, accuracy and moderating variables. Remote Sensing of Environment, 2018, 209, 747-763.	4.6	57
21	Hyperspectral Reflectance and Fluorescence Imaging to Detect Scab Induced Stress in Apple Leaves. Remote Sensing, 2009, 1, 858-874.	1.8	54
22	Assessment of Regional Vegetation Response to Climate Anomalies: A Case Study for Australia Using GIMMS NDVI Time Series between 1982 and 2006. Remote Sensing, 2017, 9, 34.	1.8	45
23	Species-rich semi-natural grasslands have a higher resistance but a lower resilience than intensively managed agricultural grasslands in response to climate anomalies. Journal of Applied Ecology, 2016, 53, 430-439.	1.9	44
24	Canopy height measurements and non-destructive biomass estimation of <i>Lolium perenne</i> swards using UAV imagery. Grass and Forage Science, 2019, 74, 356-369.	1.2	44
25	Global-scale characterization of turning points in arid and semi-arid ecosystem functioning. Global Ecology and Biogeography, 2020, 29, 1230-1245.	2.7	43
26	Unmixing-Based Fusion of Hyperspatial and Hyperspectral Airborne Imagery for Early Detection of Vegetation Stress. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 2571-2582.	2.3	42
27	A Comparison of Nonlinear Mixing Models for Vegetated Areas Using Simulated and Real Hyperspectral Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1869-1878.	2.3	42
28	A Conceptual Framework for the Simultaneous Extraction of Sub-pixel Spatial Extent and Spectral Characteristics of Crops. Photogrammetric Engineering and Remote Sensing, 2009, 75, 57-68.	0.3	40
29	Spectral Unmixing of Forest Crown Components at Close Range, Airborne and Simulated Sentinel-2 and EnMAP Spectral Imaging Scale. Remote Sensing, 2015, 7, 15361-15387.	1.8	36
30	Optical trait indicators for remote sensing of plant species composition: Predictive power and seasonal variability. Ecological Indicators, 2017, 73, 825-833.	2.6	35
31	Do Looks Matter? A Case Study on Extensive Green Roofs Using Discrete Choice Experiments. Sustainability, 2018, 10, 309.	1.6	35
32	Magnitude- and Shape-Related Feature Integration in Hyperspectral Mixture Analysis to Monitor Weeds in Citrus Orchards. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 3630-3642.	2.7	34
33	A Novel Spectral Library Pruning Technique for Spectral Unmixing of Urban Land Cover. Remote Sensing, 2017, 9, 565.	1.8	34
34	Quantifying Nonlinear Spectral Mixing in Vegetated Areas: Computer Simulation Model Validation and First Results. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1956-1965.	2.3	33
35	Closing the Phenotyping Gap: High Resolution UAV Time Series for Soybean Growth Analysis Provides Objective Data from Field Trials. Remote Sensing, 2020, 12, 1644.	1.8	32
36	Stem Water Potential Monitoring in Pear Orchards through WorldView-2 Multispectral Imagery. Remote Sensing, 2013, 5, 6647-6666.	1.8	31

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37	Plant Species Diversity Mediates Ecosystem Stability of Natural Dune Grasslands in Response to Drought. <i>Ecosystems</i> , 2015, 18, 1383-1394.	1.6	31
38	Vegetation reflectance spectroscopy for biomonitoring of heavy metal pollution in urban soils. <i>Environmental Pollution</i> , 2018, 243, 1912-1922.	3.7	31
39	Generalizing machine learning regression models using multi-site spectral libraries for mapping vegetation-impervious-soil fractions across multiple cities. <i>Remote Sensing of Environment</i> , 2018, 216, 482-496.	4.6	31
40	Tree pollen allergy risks and changes across scenarios in urban green spaces in Brussels, Belgium. <i>Landscape and Urban Planning</i> , 2021, 207, 104001.	3.4	30
41	The Potential and Limitations of a Clustering Approach for the Improved Efficiency of Multiple Endmember Spectral Mixture Analysis in Plant Production System Monitoring. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2012, 50, 2273-2286.	2.7	29
42	Hyperspectral shape-based unmixing to improve intra- and interclass variability for forest and agro-ecosystem monitoring. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2012, 74, 163-174.	4.9	27
43	Residential green space and medication sales for childhood asthma: A longitudinal ecological study in Belgium. <i>Environmental Research</i> , 2020, 189, 109914.	3.7	27
44	Integration of in situ measured soil status and remotely sensed hyperspectral data to improve plant production system monitoring: Concept, perspectives and limitations. <i>Remote Sensing of Environment</i> , 2013, 128, 197-211.	4.6	26
45	Mapping Functional Urban Green Types Using High Resolution Remote Sensing Data. <i>Sustainability</i> , 2020, 12, 2144.	1.6	26
46	Unmixing-based Sentinel-2 downscaling for urban land cover mapping. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2021, 171, 133-154.	4.9	26
47	Exposure to green space and pollen allergy symptom severity: A case-crossover study in Belgium. <i>Science of the Total Environment</i> , 2021, 781, 146682.	3.9	25
48	A Dynamic Unmixing Framework for Plant Production System Monitoring. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2014, 7, 2016-2034.	2.3	24
49	The impact of data quality filtering of opportunistic citizen science data on species distribution model performance. <i>Ecological Modelling</i> , 2021, 444, 109453.	1.2	24
50	Mesoscale assessment of changes in tropical tree species richness across a bioclimatic gradient in Panama using airborne imaging spectroscopy. <i>Remote Sensing of Environment</i> , 2015, 167, 111-120.	4.6	22
51	Multitemporal Chlorophyll Mapping in Pome Fruit Orchards from Remotely Piloted Aircraft Systems. <i>Remote Sensing</i> , 2019, 11, 1468.	1.8	21
52	Mapping impervious surface fractions using automated Fisher transformed unmixing. <i>Remote Sensing of Environment</i> , 2019, 232, 111311.	4.6	19
53	Weeds and gaps on extensive green roofs: Ecological insights and recommendations for design and maintenance. <i>Urban Forestry and Urban Greening</i> , 2019, 46, 126484.	2.3	18
54	Residential green space and seasonal distress in a cohort of tree pollen allergy patients. <i>International Journal of Hygiene and Environmental Health</i> , 2020, 223, 71-79.	2.1	18

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55	Transferability of species distribution models for the detection of an invasive alien bryophyte using imaging spectroscopy data. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2018, 68, 61-72.	1.4	17
56	Inter- and intraspecific trait variation shape multidimensional trait overlap between two plant invaders and the invaded communities. <i>Oikos</i> , 2020, 129, 677-688.	1.2	17
57	Temporal Dependency of Yield and Quality Estimation through Spectral Vegetation Indices in Pear Orchards. <i>Remote Sensing</i> , 2015, 7, 9886-9903.	1.8	16
58	Is there more than meets the eye? Seed bank analysis of a typical novel ecosystem, the extensive green roof. <i>Applied Vegetation Science</i> , 2018, 21, 419-430.	0.9	16
59	Thirty Years of Land Cover and Fraction Cover Changes over the Sudano-Sahel Using Landsat Time Series. <i>Remote Sensing</i> , 2020, 12, 3817.	1.8	16
60	Residential Exposure to Urban Trees and Medication Sales for Mood Disorders and Cardiovascular Disease in Brussels, Belgium: An Ecological Study. <i>Environmental Health Perspectives</i> , 2022, 130, 57003.	2.8	16
61	Reducing background effects in orchards through spectral vegetation index correction. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2015, 34, 167-177.	1.4	14
62	Towards an objective evaluation of persistency of <i>Lolium perenne</i> swards using UAV imagery. <i>Euphytica</i> , 2018, 214, 1.	0.6	14
63	Urban Tree Health Classification Across Tree Species by Combining Airborne Laser Scanning and Imaging Spectroscopy. <i>Remote Sensing</i> , 2020, 12, 2435.	1.8	14
64	The Contribution of the Fruit Component to the Hyperspectral Citrus Canopy Signal. <i>Photogrammetric Engineering and Remote Sensing</i> , 2010, 76, 37-47.	0.3	13
65	Pan-European urban green space dynamics: A view from space between 1990 and 2015. <i>Landscape and Urban Planning</i> , 2022, 226, 104477.	3.4	13
66	Can wetland plant functional groups be spectrally discriminated?. <i>Remote Sensing of Environment</i> , 2018, 210, 25-34.	4.6	12
67	An evaluation of species distribution models to estimate tree diversity at genus level in a heterogeneous urban-rural landscape. <i>Landscape and Urban Planning</i> , 2020, 198, 103770.	3.4	12
68	Residential green space types, allergy symptoms and mental health in a cohort of tree pollen allergy patients. <i>Landscape and Urban Planning</i> , 2021, 210, 104070.	3.4	11
69	Site-Specific Plant Condition Monitoring Through Hyperspectral Alternating Least Squares Unmixing. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2014, 7, 3606-3618.	2.3	10
70	The importance of city trees for reducing net rainfall: comparing measurements and simulations. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 3865-3884.	1.9	10
71	Resilience and the reliability of spectral entropy to assess ecosystem stability. <i>Global Change Biology</i> , 2018, 24, e393-e394.	4.2	9
72	Analyzing remotely sensed structural and chemical canopy traits of a forest invaded by <i>Prunus serotina</i> over multiple spatial scales. <i>Biological Invasions</i> , 2018, 20, 2257-2271.	1.2	9

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73	Community assembly on extensive green roofs: Effects of dispersal, abiotic and biotic filtering on the spontaneous species and functional diversity. <i>Journal of Vegetation Science</i> , 2019, 30, 1078-1088.	1.1	9
74	A combination of climate, tree diversity and local human disturbance determine the stability of dry Afromontane forests. <i>Forest Ecosystems</i> , 2021, 8, .	1.3	9
75	A trait-based approach across the native and invaded range to understand plant invasiveness and community impact. <i>Oikos</i> , 2021, 130, 1001-1013.	1.2	9
76	Off-nadir Viewing for Reducing Spectral Mixture Issues in Citrus Orchards. <i>Photogrammetric Engineering and Remote Sensing</i> , 2010, 76, 1261-1274.	0.3	8
77	A Geometric Unmixing Concept for the Selection of Optimal Binary Endmember Combinations. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2015, 12, 82-86.	1.4	8
78	Soil organic matter rather than ectomycorrhizal diversity is related to urban tree health. <i>PLoS ONE</i> , 2019, 14, e0225714.	1.1	8
79	Optical traits perform equally well as directly measured functional traits in explaining the impact of an invasive plant on litter decomposition. <i>Journal of Ecology</i> , 2020, 108, 2000-2011.	1.9	8
80	Evaluating different methods for retrieving intraspecific leaf trait variation from hyperspectral leaf reflectance. <i>Ecological Indicators</i> , 2021, 130, 108111.	2.6	8
81	A novel procedure for measuring functional traits of herbaceous species through field spectroscopy. <i>Methods in Ecology and Evolution</i> , 2019, 10, 1332-1338.	2.2	7
82	Assessing the impact of an invasive bryophyte on plant species richness using high resolution imaging spectroscopy. <i>Ecological Indicators</i> , 2020, 110, 105882.	2.6	7
83	Remotely sensed plant traits can provide insights into ecosystem impacts of plant invasions: a case study covering two functionally different invaders. <i>Biological Invasions</i> , 2020, 22, 3533-3550.	1.2	7
84	Evaluation and Normalization of Cloud Obscuration Related BRDF Effects in Field Spectroscopy. <i>Remote Sensing</i> , 2009, 1, 496-518.	1.8	6
85	Foliar optical traits indicate that sealed planting conditions negatively affect urban tree health. <i>Ecological Indicators</i> , 2018, 95, 895-906.	2.6	6
86	Spectrally defined plant functional types adequately capture multidimensional trait variation in herbaceous communities. <i>Ecological Indicators</i> , 2021, 120, 106970.	2.6	6
87	Mapping abundance distributions of allergenic tree species in urbanized landscapes: A nation-wide study for Belgium using forest inventory and citizen science data. <i>Landscape and Urban Planning</i> , 2022, 218, 104286.	3.4	6
88	Mapping the Urban Atmospheric Carbon Stock by LiDAR and WorldView-3 Data. <i>Forests</i> , 2021, 12, 692.	0.9	5
89	Foliar optical traits capture physiological and phenological leaf plasticity in <i>Tilia</i> – <i>euchlora</i> in the urban environment. <i>Science of the Total Environment</i> , 2022, 805, 150219.	3.9	4
90	Improving the efficiency of MESMA through geometric unmixing principles. <i>Proceedings of SPIE</i> , 2013, , .	0.8	2

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91	Species profiles support recommendations for quality filtering of opportunistic citizen science data. <i>Ecological Modelling</i> , 2022, 467, 109910.	1.2	2
92	Alternating least-squares unmixing for the extraction of sub-pixel information from agricultural areas. , 2013, , .		1
93	Mapping tropical rainforest canopies using multi-temporal spaceborne imaging spectroscopy. , 2013, , .		1
94	On the use of collaborative sparse regression in hyperspectral unmixing chains. , 2014, , .		1
95	Viewing Geometry Sensitivity of Commonly Used Vegetation Indices towards the Estimation of Biophysical Variables in Orchards. <i>Journal of Imaging</i> , 2016, 2, 15.	1.7	1
96	Spectral unmixing of urban land cover using a generic library approach. <i>Proceedings of SPIE</i> , 2016, , .	0.8	1
97	Plant functional trait data and reflectance spectra for 22 palmiet wetland species. <i>Data in Brief</i> , 2018, 20, 1209-1219.	0.5	1
98	Improved signal unmixing of vegetation using sparse group selection. , 2013, , .		0
99	Plant production system monitoring via multiple signal classification and sparse regression. , 2013, , .		0
100	Nonlinear unmixing of vegetated areas: A model comparison based on simulated and real hyperspectral data. , 2014, , .		0
101	Vegetation index correction to reduce background effects in orchards with high spatial resolution imagery. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0
102	Monitor Mangrove Forest Dynamics from Multi-temporal Landsat 8-OLI Images in the Southern Coast of Sancti Spiritus Province (Cuba). <i>Lecture Notes in Computer Science</i> , 2021, , 169-182.	1.0	0
103	Surveying Green Spaces in European Human Settlements at 30 m Sub-Pixel Level. , 2021, , .		0
104	Urban Tree Species Classification Using Airborne Lidar and Hyperspectral Imagery. , 2021, , .		0
105	Thirty Years of Land Cover and Fraction Cover Changes Over the Sudano-Sahel Using Landsat Time Series. , 2021, , .		0