

# Mirco Boschetti

## List of Publications by Year in descending order

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123  
papers

7,883  
citations

76326

40  
h-index

51608

86  
g-index

125  
all docs

125  
docs citations

125  
times ranked

8739  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep learning and process understanding for data-driven Earth system science. <i>Nature</i> , 2019, 566, 195-204.	27.8	2,176
2	Advanced methods of plant disease detection. A review. <i>Agronomy for Sustainable Development</i> , 2015, 35, 1-25.	5.3	579
3	Optical remote sensing and the retrieval of terrestrial vegetation bio-geophysical properties – A review. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2015, 108, 273-290.	11.1	482
4	Experimental Sentinel-2 LAI estimation using parametric, non-parametric and physical retrieval methods – A comparison. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2015, 108, 260-272.	11.1	267
5	Quantifying Vegetation Biophysical Variables from Imaging Spectroscopy Data: A Review on Retrieval Methods. <i>Surveys in Geophysics</i> , 2019, 40, 589-629.	4.6	265
6	A Survey on Gaussian Processes for Earth-Observation Data Analysis: A Comprehensive Investigation. <i>IEEE Geoscience and Remote Sensing Magazine</i> , 2016, 4, 58-78.	9.6	172
7	Multi-year monitoring of rice crop phenology through time series analysis of MODIS images. <i>International Journal of Remote Sensing</i> , 2009, 30, 4643-4662.	2.9	161
8	Comparative Analysis of Normalised Difference Spectral Indices Derived from MODIS for Detecting Surface Water in Flooded Rice Cropping Systems. <i>PLoS ONE</i> , 2014, 9, e88741.	2.5	151
9	Multitemporal and multiresolution leaf area index retrieval for operational local rice crop monitoring. <i>Remote Sensing of Environment</i> , 2016, 187, 102-118.	11.0	147
10	Plant nitrogen concentration in paddy rice from field canopy hyperspectral radiometry. <i>Field Crops Research</i> , 2009, 111, 119-129.	5.1	146
11	Nitrogen Status Assessment for Variable Rate Fertilization in Maize through Hyperspectral Imagery. <i>Remote Sensing</i> , 2014, 6, 6549-6565.	4.0	130
12	Spectral band selection for vegetation properties retrieval using Gaussian processes regression. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2016, 52, 554-567.	2.8	125
13	A method for extracting burned areas from Landsat TM/ETM+ images by soft aggregation of multiple Spectral Indices and a region growing algorithm. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2012, 69, 88-102.	11.1	115
14	RiceAtlas, a spatial database of global rice calendars and production. <i>Scientific Data</i> , 2017, 4, 170074.	5.3	101
15	Understanding deep learning in land use classification based on Sentinel-2 time series. <i>Scientific Reports</i> , 2020, 10, 17188.	3.3	99
16	PhenoRice: A method for automatic extraction of spatio-temporal information on rice crops using satellite data time series. <i>Remote Sensing of Environment</i> , 2017, 194, 347-365.	11.0	95
17	Assessment of pasture production in the Italian Alps using spectrometric and remote sensing information. <i>Agriculture, Ecosystems and Environment</i> , 2007, 118, 267-272.	5.3	91
18	Remote sensing-based crop lodging assessment: Current status and perspectives. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2019, 151, 124-140.	11.1	83

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19	Spatial explicit assessment of rural land abandonment in the Mediterranean area. <i>Global and Planetary Change</i> , 2011, 79, 20-36.	3.5	78
20	Global Estimation of Biophysical Variables from Google Earth Engine Platform. <i>Remote Sensing</i> , 2018, 10, 1167.	4.0	75
21	â€œsen2râ€: An R toolbox for automatically downloading and preprocessing Sentinel-2 satellite data. <i>Computers and Geosciences</i> , 2020, 139, 104473.	4.2	74
22	Retrieval of aboveground crop nitrogen content with a hybrid machine learning method. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2020, 92, 102174.	2.8	70
23	Integration of Optical and SAR Data for Burned Area Mapping in Mediterranean Regions. <i>Remote Sensing</i> , 2015, 7, 1320-1345.	4.0	69
24	Evaluation of LAI-2000 for leaf area index monitoring in paddy rice. <i>Field Crops Research</i> , 2006, 99, 167-170.	5.1	68
25	Derivation of global vegetation biophysical parameters from EUMETSAT Polar System. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2018, 139, 57-74.	11.1	68
26	Physics-aware Gaussian processes in remote sensing. <i>Applied Soft Computing Journal</i> , 2018, 68, 69-82.	7.2	67
27	Fusing optical and SAR time series for LAI gap filling with multioutput Gaussian processes. <i>Remote Sensing of Environment</i> , 2019, 235, 111452.	11.0	64
28	Active Learning Methods for Efficient Hybrid Biophysical Variable Retrieval. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2016, 13, 1012-1016.	3.1	60
29	Identification of environmental anomaly hot spots in West Africa from time series of NDVI and rainfall. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2013, 78, 26-40.	11.1	59
30	Tree species mapping with Airborne hyperâ€pectral MIVIS data: the Ticino Park study case. <i>International Journal of Remote Sensing</i> , 2007, 28, 1251-1261.	2.9	57
31	Exploitation of SAR and Optical Sentinel Data to Detect Rice Crop and Estimate Seasonal Dynamics of Leaf Area Index. <i>Remote Sensing</i> , 2017, 9, 248.	4.0	57
32	Accumulation Parameters and Seasonal Trends for PCBs in Temperate and Boreal Forest Plant Species. <i>Environmental Science &amp; Technology</i> , 2008, 42, 5911-5916.	10.0	56
33	Towards an automated approach to map flooded areas from Sentinel-2 MSI data and soft integration of water spectral features. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2020, 84, 101951.	2.8	52
34	Assessing in-season crop classification performance using satellite data: a test case in Northern Italy. <i>European Journal of Remote Sensing</i> , 2016, 49, 361-380.	3.5	50
35	Multi-Scale Evaluation of Drone-Based Multispectral Surface Reflectance and Vegetation Indices in Operational Conditions. <i>Remote Sensing</i> , 2020, 12, 514.	4.0	50
36	Downscaling rice yield simulation at sub-field scale using remotely sensed LAI data. <i>European Journal of Agronomy</i> , 2019, 103, 108-116.	4.1	47

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37	Spatial Rice Yield Estimation Based on MODIS and Sentinel-1 SAR Data and ORYZA Crop Growth Model. <i>Remote Sensing</i> , 2018, 10, 293.	4.0	46
38	Early season weed mapping in rice crops using multi-spectral UAV data. <i>International Journal of Remote Sensing</i> , 2018, 39, 5432-5452.	2.9	45
39	Estimation of crop angle of inclination for lodged wheat using multi-sensor SAR data. <i>Remote Sensing of Environment</i> , 2020, 236, 111488.	11.0	45
40	Understanding wheat lodging using multi-temporal Sentinel-1 and Sentinel-2 data. <i>Remote Sensing of Environment</i> , 2020, 243, 111804.	11.0	45
41	A conceptual model for assessing rainfall and vegetation trends in sub-Saharan Africa from satellite data. <i>International Journal of Climatology</i> , 2015, 35, 3582-3592.	3.5	43
42	A Critical Comparison of Remote Sensing Leaf Area Index Estimates over Rice-Cultivated Areas: From Sentinel-2 and Landsat-7/8 to MODIS, GEOV1 and EUMETSAT Polar System. <i>Remote Sensing</i> , 2018, 10, 763.	4.0	40
43	Multitemporal Monitoring of Plant Area Index in the Valencia Rice District with PocketLAI. <i>Remote Sensing</i> , 2016, 8, 202.	4.0	38
44	Field-level crop yield estimation with PRISMA and Sentinel-2. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2022, 187, 191-210.	11.1	38
45	Mapping Burned Areas in a Mediterranean Environment Using Soft Integration of Spectral Indices from High-Resolution Satellite Images. <i>Earth Interactions</i> , 2010, 14, 1-20.	1.5	37
46	Downstream Services for Rice Crop Monitoring in Europe: From Regional to Local Scale. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2017, 10, 5423-5441.	4.9	37
47	Joint Gaussian Processes for Biophysical Parameter Retrieval. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018, 56, 1718-1727.	6.3	37
48	Active emulation of computer codes with Gaussian processes “ Application to remote sensing. <i>Pattern Recognition</i> , 2020, 100, 107103.	8.1	37
49	Hybrid retrieval of crop traits from multi-temporal PRISMA hyperspectral imagery. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2022, 187, 362-377.	11.1	37
50	Detection and Classification of Non-Photosynthetic Vegetation from PRISMA Hyperspectral Data in Croplands. <i>Remote Sensing</i> , 2020, 12, 3903.	4.0	35
51	Bioenergy and ecosystem services trade-offs and synergies in marginal agricultural lands: A remote-sensing-based assessment method. <i>Journal of Cleaner Production</i> , 2019, 237, 117672.	9.3	34
52	Analysis and Interpretation of Spectral Indices for Soft Multicriteria Burned-Area Mapping in Mediterranean Regions. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2009, 6, 499-503.	3.1	33
53	A Spatial Data Infrastructure Integrating Multisource Heterogeneous Geospatial Data and Time Series: A Study Case in Agriculture. <i>ISPRS International Journal of Geo-Information</i> , 2016, 5, 73.	2.9	33
54	A high-resolution, integrated system for rice yield forecasting at district level. <i>Agricultural Systems</i> , 2019, 168, 181-190.	6.1	32

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55	Evaporative Fraction as an Indicator of Moisture Condition and Water Stress Status in Semi-Arid Rangeland Ecosystems. <i>Remote Sensing</i> , 2014, 6, 6300-6323.	4.0	31
56	An operational workflow to assess rice nutritional status based on satellite imagery and smartphone apps. <i>Computers and Electronics in Agriculture</i> , 2018, 154, 80-92.	7.7	31
57	A flexible multi-source spatial data fusion system for environmental status assessment at continental scale. <i>International Journal of Geographical Information Science</i> , 2008, 22, 781-799.	4.8	29
58	Rapid Assessment of Crop Status: An Application of MODIS and SAR Data to Rice Areas in Leyte, Philippines Affected by Typhoon Haiyan. <i>Remote Sensing</i> , 2015, 7, 6535-6557.	4.0	28
59	Mapping Leaf Area Index With a Smartphone and Gaussian Processes. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2015, 12, 2501-2505.	3.1	27
60	Estimating inter-annual variability in winter wheat sowing dates from satellite time series in Camargue, France. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2017, 57, 190-201.	2.8	27
61	Discriminant analysis for lodging severity classification in wheat using RADARSAT-2 and Sentinel-1 data. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2020, 164, 138-151.	11.1	25
62	A multitemporal analysis of tsunami impact on coastal vegetation using remote sensing: a case study on Koh Phra Thong Island, Thailand. <i>Natural Hazards</i> , 2012, 64, 667-689.	3.4	23
63	Analysis of rice sample size variability due to development stage, nitrogen fertilization, sowing technique and variety using the visual jackknife. <i>Field Crops Research</i> , 2006, 97, 135-141.	5.1	22
64	A global canopy water content product from AVHRR/Metop. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2020, 162, 77-93.	11.1	22
65	A fuzzy anomaly indicator for environmental monitoring at continental scale. <i>Ecological Indicators</i> , 2009, 9, 92-106.	6.3	21
66	Testing estimation of water surface in Italian rice district from MODIS satellite data. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2016, 52, 284-295.	2.8	21
67	Assessment of Water Management Changes in the Italian Rice Paddies from 2000 to 2016 Using Satellite Data: A Contribution to Agro-Ecological Studies. <i>Remote Sensing</i> , 2018, 10, 416.	4.0	20
68	Analysing spatial-temporal changes in rice cultivation practices in the Senegal River Valley using MODIS time-series and the PhenoRice algorithm. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2019, 75, 15-28.	2.8	20
69	COMPARING OPTICAL AND DIRECT METHODS FOR LEAF AREA INDEX DETERMINATION IN A MAIZE CROP. <i>Journal of Agricultural Engineering</i> , 2010, 41, 33.	1.5	19
70	Influence of Soil Properties on Maize and Wheat Nitrogen Status Assessment from Sentinel-2 Data. <i>Remote Sensing</i> , 2020, 12, 2175.	4.0	19
71	Evaluation of Hybrid Models to Estimate Chlorophyll and Nitrogen Content of Maize Crops in the Framework of the Future CHIME Mission. <i>Remote Sensing</i> , 2022, 14, 1792.	4.0	17
72	Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2010, 136, 225-231.	1.0	16

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73	In-season early mapping of rice area and flooding dynamics from optical and SAR satellite data. European Journal of Remote Sensing, 2019, 52, 206-220.	3.5	16
74	Tracing the fate of PCBs in forest ecosystems. Journal of Environmental Monitoring, 2007, 9, 542.	2.1	15
75	Estimating Crop Nutritional Status Using Smart Apps to Support Nitrogen Fertilization. A Case Study on Paddy Rice. Sensors, 2019, 19, 981.	3.8	15
76	Mapping of wheat lodging susceptibility with synthetic aperture radar data. Remote Sensing of Environment, 2021, 259, 112427.	11.0	15
77	District specific, in silico evaluation of rice ideotypes improved for resistance/tolerance traits to biotic and abiotic stressors under climate change scenarios. Climatic Change, 2015, 132, 661-675.	3.6	14
78	Conceptual Architecture and Service-Oriented Implementation of a Regional Geoportal for Rice Monitoring. ISPRS International Journal of Geo-Information, 2017, 6, 191.	2.9	12
79	Non-Parametric Statistical Approaches for Leaf Area Index Estimation from Sentinel-2 Data: A Multi-Crop Assessment. Remote Sensing, 2021, 13, 2841.	4.0	12
80	Supporting operational site-specific fertilization in rice cropping systems with infield smartphone measurements and Sentinel-2 observations. Precision Agriculture, 2021, 22, 1284-1303.	6.0	11
81	A hybrid multi-step approach for urban area mapping in the Province of Milan, Italy. European Journal of Remote Sensing, 2012, 45, 333-347.	3.5	10
82	Prediction of Displacements in Unstable Areas Using a Neural Model. Natural Hazards, 2004, 32, 135-154.	3.4	9
83	Testing automatic procedures to map rice area and detect phenological crop information exploiting time series analysis of remote sensed MODIS data. Proceedings of SPIE, 2012, , .	0.8	9
84	Knowledge and Data-Driven Mapping of Environmental Status Indicators from Remote Sensing and VGI. Remote Sensing, 2020, 12, 495.	4.0	9
85	A Burned Area Mapping Algorithm for Sentinel-2 Data Based on Approximate Reasoning and Region Growing. Remote Sensing, 2021, 13, 2214.	4.0	9
86	Spectroradiometric Field Surveys in Remote Sensing Practice: A Workflow Proposal, from Planning to Analysis. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 37-51.	9.6	8
87	A Fully Automatic, Interpretable and Adaptive Machine Learning Approach to Map Burned Area from Remote Sensing. ISPRS International Journal of Geo-Information, 2021, 10, 546.	2.9	8
88	RICA: A rice crop calendar for Asia based on MODIS multi year data. International Journal of Applied Earth Observation and Geoinformation, 2021, 103, 102471.	2.8	8
89	Handling heterogeneous bipolar information for modelling environmental syndromes of global change. Environmental Modelling and Software, 2012, 36, 131-147.	4.5	7
90	Testing Multi-Sensors Time Series of Lai Estimates to Monitor Rice Phenology: Preliminary Results. , 2018, , .		7

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91	Integrating Domain Knowledge in Data-Driven Earth Observation With Process Convolutions. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-15.	6.3	6
92	Sentinel 2 Time Series Analysis with 3D Feature Pyramid Network and Time Domain Class Activation Intervals for Crop Mapping. ISPRS International Journal of Geo-Information, 2021, 10, 483.	2.9	5
93	A Weekly Indicator of Surface Moisture Status from Satellite Data for Operational Monitoring of Crop Conditions. Sensors, 2017, 17, 1338.	3.8	4
94	Estimation of Plant Nitrogen Concentration in paddy rice from field canopy spectra. European Journal of Remote Sensing, 2009, , 45-57.	0.2	4
95	Updated trends of water management practice in the Italian rice paddies from remotely sensed imagery. European Journal of Remote Sensing, 2022, 55, 1-9.	3.5	4
96	A neural adaptive model for hyperspectral data classification under minimal training conditions. , 2004, , .		3
97	Spectral mapping capabilities of sedimentary rocks using hyperspectral data in Sicily, Italy. , 2011, , .		3
98	Forest leaf area index in an Alpine valley from medium resolution satellite imagery and <italic>in situ</italic> data. Journal of Applied Remote Sensing, 2012, 6, 063528.	1.3	3
99	Analysis of vegetation dynamics in middle east area during 2002&#x2013;2013 in relation to the 2007&#x2013;2009 drought episode. , 2014, , .		3
100	Latent force models for earth observation time series prediction. , 2016, , .		3
101	Physics-Aware Gaussian Processes for Earth Observation. Lecture Notes in Computer Science, 2017, , 205-217.	1.3	3
102	UAV Remote Sensing for High-Throughput Phenotyping and for Yield Prediction of Miscanthus by Machine Learning Techniques. Remote Sensing, 2022, 14, 2927.	4.0	3
103	Use of semi-empirical and radiative transfer models to estimate biophysical parameters in a sparse canopy forest. , 2003, 4879, 133.		2
104	Monitoring paddy rice crops through remote sensing: productivity estimation by light use efficiency model. , 2004, 5568, 46.		2
105	Analysis of vegetation pasture climate response on Sahel region through 10 years of remotely sensed data. Proceedings of SPIE, 2010, , .	0.8	2
106	Evaluation of remotely sensed DMP product using multi-year field measurements of biomass in West Africa. , 2011, , .		2
107	Integration of optical and SAR remotely sensed data for monitoring wildfires in Mediterranean forests. , 2012, , .		2
108	Combining Moderate-Resolution Time-Series RS Data from SAR and Optical Sources for Rice Crop Characterisation: Examples from Bangladesh. , 2014, , .		2

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109	Remote sensing of burned area: A fuzzy-based framework for joint processing of optical and microwave data. , 2015, , .		2
110	Assimilating seasonality information derived from satellite data time series in crop modelling for rice yield estimation. , 2015, , .		2
111	A Neural Adaptive Algorithm for Feature Selection and Classification of High Dimensionality Data. Lecture Notes in Computer Science, 2005, , 753-760.	1.3	2
112	Mid-resolution multi-temporal mapping of urban areas through a hybrid approach A case study for Milan province, Italy. , 2009, , .		1
113	Accuracy of fuzzy burned area mapping as a function of the aerosol parameterization of atmospheric correction. Proceedings of SPIE, 2013, , .	0.8	1
114	Joint Gaussian processes for inverse modeling. , 2017, , .		1
115	Machine Learning Methods for Spatial and Temporal Parameter Estimation. Advances in Computer Vision and Pattern Recognition, 2020, , 5-35.	1.3	1
116	<title>Potential application of ERS-1 SAR data for estimating the Ticino braided river discharge</title>. , 1998, 3496, 78.		0
117	Spectral/spatial data fusion and neural networks for vegetation understory information extraction from hyperspectral airborne images. , 2004, , .		0
118	Contribution of earth observation data to Congo River basin hydrology understanding. , 2010, , .		0
119	Image data and metadata workflows automation in geospatial data infrastructure deployed for agricultural sector. , 2015, , .		0
120	Evaporative fraction from time series of MODIS data to monitor crop status in Northern Italy. , 2015, , .		0
121	Statistical biophysical parameter retrieval and emulation with Gaussian processes. Data Handling in Science and Technology, 2020, 32, 333-368.	3.1	0
122	A multi-year geographic database of fire affected areas derived from satellite images in the National Parks of Italy. European Journal of Remote Sensing, 2009, , 61-78.	0.2	0
123	Modeling Environmental Syndromes with Distinct Decision Attitudes. Communications in Computer and Information Science, 2012, , 121-129.	0.5	0