Martino Pesaresi

List of Publications by Year
in descending order

97 papers	5,683 citations	109321 35 h-index	114465 63 g-index
100 all docs	100 docs citations	100 times ranked	4502 citing authors

#	Article	IF	Citations
1	A crowdsourced global data set for validating built-up surface layers. Scientific Data, 2022, 9, 13.	5.3	13
2	Land use efficiency of functional urban areas: Global pattern and evolution of development trajectories. Habitat International, 2022, 123, 102543.	5.8	30
3	Applying the Degree of Urbanisation to the globe: A new harmonised definition reveals a different picture of global urbanisation. Journal of Urban Economics, 2021, 125, 103312.	4.4	99
4	Convolutional neural networks for global human settlements mapping from Sentinel-2 satellite imagery. Neural Computing and Applications, 2021, 33, 6697-6720.	5.6	72
5	Generalized Vertical Components of built-up areas from global Digital Elevation Models by multi-scale linear regression modelling. PLoS ONE, 2021, 16, e0244478.	2.5	15
6	Downscaling SSP-consistent global spatial urban land projections from 1/8-degree to 1-km resolution 2000â€“2100. Scientific Data, 2021, 8, 281.	5.3	15
7	Enhanced data and methods for improving open and free global population grids: putting â€˜leaving no one behindâ€™ into practice. International Journal of Digital Earth, 2020, 13, 61-77.	3.9	42
8	The Generalised Settlement Area: mapping the Earth surface in the vicinity of built-up areas. International Journal of Digital Earth, 2020, 13, 45-60.	3.9	17
9	Mosaicking Copernicus Sentinel-1 Data at Global Scale. IEEE Transactions on Big Data, 2020, 6, 547-557.	6.1	7
10	Leveraging ALOS-2 PALSAR-2 for Mapping Built-Up Areas and Assessing Their Vertical Component. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 6473-6483.	4.9	2
11	Application of the Symbolic Machine Learning to Copernicus VHR Imagery: The European Settlement Map. IEEE Geoscience and Remote Sensing Letters, 2020, 17, 1153-1157.	3.1	9
12	Big Earth Data science: an information framework for a sustainable planet. International Journal of Digital Earth, 2020, 13, 743-767.	3.9	76
13	A global cloud free pixel- based image composite from Sentinel-2 data. Data in Brief, 2020, 31, 105737.	1.0	34
14	Automated global delineation of human settlements from 40 years of Landsat satellite data archives. Big Earth Data, 2019, 3, 140-169.	4.4	106
15	Multi-Scale Estimation of Land Use Efficiency (SDG 11.3.1) across 25 Years Using Global Open and Free Data. Sustainability, 2019, 11, 5674.	3.2	57
16	An Improved Global Analysis of Population Distribution in Proximity to Active Volcanoes, 1975â€“2015. ISPRS International Journal of Geo-Information, 2019, 8, 341.	2.9	41
17	Principles and Applications of the Global Human Settlement Layer as Baseline for the Land Use Efficiency Indicatorâ€”SDG 11.3.1. ISPRS International Journal of Geo-Information, 2019, 8, 96.	2.9	92
18	The spatial allocation of population: a review of large-scale gridded population data products and their fitness for use. Earth System Science Data, 2019, 11, 1385-1409.	9.9	189

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19	WUDAPT: An Urban Weather, Climate, and Environmental Modeling Infrastructure for the Anthropocene. Bulletin of the American Meteorological Society, 2018, 99, 1907-1924.	3.3	254
20	Estimation of Land Use Efficiency from the Global Human Settlement Layer (GHSL). , 2018, , 39-52.		4
21	Enhanced automatic detection of human settlements using Sentinel-1 interferometric coherence. International Journal of Remote Sensing, 2018, 39, 842-853.	2.9	25
22	Remote Sensing Derived Built-Up Area and Population Density to Quantify Global Exposure to Five Natural Hazards over Time. Remote Sensing, 2018, 10, 1378.	4.0	34
23	Comparison of builtâ€up area maps produced within the global human settlement framework. Transactions in GIS, 2018, 22, 1406-1436.	2.3	18
24	Built-up area and population density: Two Essential Societal Variables to address climate hazard impact. Environmental Science and Policy, 2018, 90, 73-82.	4.9	48
25	Unveiling 25 Years of Planetary Urbanization with Remote Sensing: Perspectives from the Global Human Settlement Layer. Remote Sensing, 2018, 10, 768.	4.0	119
26	Big earth data analytics on Sentinel-1 and Landsat imagery in support to global human settlements mapping. Big Earth Data, 2017, 1, 118-144.	4.4	96
27	Assessing Spatiotemporal Agreement between Multi-Temporal Built-up Land Layers and Integrated Cadastral and Building Data. International Conference on GIScience Short Paper Proceedings, 2016, 1, .	0.0	2
28	An Efficient Parallel Algorithm for Multi-Scale Analysis of Connected Components in Gigapixel Images. ISPRS International Journal of Geo-Information, 2016, 5, 22.	2.9	7
29	A New Method for Earth Observation Data Analytics Based on Symbolic Machine Learning. Remote Sensing, 2016, 8, 399.	4.0	49
30	Assessment of the Added-Value of Sentinel-2 for Detecting Built-up Areas. Remote Sensing, 2016, 8, 299.	4.0	145
31	Urbanization and forest degradation in east Africa - a case study around Dar es Salaam, Tanzania. , 2016, , .		6
32	The global human settlement layer from landsat imagery. , 2016, , .		40
33	A New European Settlement Map From Optical Remotely Sensed Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 1978-1992.	4.9	45
34	Remote sensing derived continental high resolution built-up and population geoinformation for crisis management. , 2015, , .		4
35	Image Enhancement and Feature Extraction Based on Low-Resolution Satellite Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 1986-1995.	4.9	23
36	Combining GHSL and GPW to improve global population mapping. , 2015, , .		19

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37	Remote sensing derived datasets supporting disaster alert systems on multiscales via web services. , 2015, , .		1
38	A new map of the European settlements by automatic classification of 2.5m resolution SPOT data. , 2014, , .		6
39	Texture based built-up area extraction from Zi Yuan and spot imagery. , 2014, , .		1
40	Monitoring bidecadal development of urban agglomeration with remote sensing images in the Jing-Jin-Tang area, China. Journal of Applied Remote Sensing, 2014, 8, 084592.	1.3	8
41	Multiscale quality assessment of Global Human Settlement Layer scenes against reference data using statistical learning. Pattern Recognition Letters, 2013, 34, 1636-1647.	4.2	68
42	Urbanization Detection by a Region Based Mixed Information Change Analysis Between Built-Up Indicators. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2013, 6, 2410-2420.	4.9	12
43	A Global Human Settlement Layer From Optical HR/VHR RS Data: Concept and First Results. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2013, 6, 2102-2131.	4.9	338
44	On the assessment of automatically processing HR/VHR imagery using low-resolution global reference data. , 2013, , .		3
45	Automatic recognition of built-up areas in China using CBERS-2B HR data. , 2013, , .		0
46	On the feasibility to map the settlements of Brazil with the CBERS-2B satellite. , 2013, , .		3
47	Digital Earth 2020: towards the vision for the next decade. International Journal of Digital Earth, 2012, 5, 4-21.	3.9	238
48	A new built-up presence index based on density of corners. , 2012, , .		8
49	Differential Area Profiles: Decomposition Properties and Efficient Computation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 1533-1548.	13.9	42
50	A new compact representation of morphological profiles: report on first massive VHR image processing at the JRC. , 2012, , .		15
51	Rapid Damage Assessment of Buildings with VHR Optical Airborne Images in Yushu Earthquake. , 2012, , .		5
52	Urban expansion detection with SPOT5 panchromatic images using textural features and PCA. , 2012, , .		2
53	Classification of CBERS-02B high resolution image using morphological features for urban areas. , 2012, , .		0
54	Next-generation Digital Earth. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 11088-11094.	7.1	264

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55	Characterizing and Counting Roofless Buildings in Very High Resolution Optical Images. IEEE Geoscience and Remote Sensing Letters, 2012, 9, 114-118.	3.1	12
56	Statistical analysis of anisotropic rotation-invariant textural measurements of human settlements from multitemporal SAR data. , 2011, , .		6
57	Quantitative estimation of settlement density and limits based on textural measurements. , 2011, , .		8
58	Urbanization analysis by mutual information based change detection between SPOT 5 panchromatic images. , 2011, , .		3
59	Change Detection Based on Information Measure. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 4503-4515.	6.3	56
60	Multi scale Harris corner detector based on Differential Morphological Decomposition. Pattern Recognition Letters, 2011, 32, 1714-1719.	4.2	35
61	Improved Textural Built-Up Presence Index for Automatic Recognition of Human Settlements in Arid Regions With Scattered Vegetation. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2011, 4, 16-26.	4.9	60
62	Enumeration of Dwellings in Darfur Camps From GeoEye-1 Satellite Images Using Mathematical Morphology. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2011, 4, 8-15.	4.9	38
63	Toward Global Automatic Built-Up Area Recognition Using Optical VHR Imagery. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2011, 4, 923-934.	4.9	65
64	Validation of EO-derived information for crisis management: a Digital Earth perspective in the VALgEO expert community. International Journal of Digital Earth, 2011, 4, 1-7.	3.9	2
65	Concurrent Computation of Differential Morphological Profiles on Giga-Pixel Images. Lecture Notes in Computer Science, 2011, , 331-342.	1.3	5
66	An interactive image mining tool handling gigapixel images. , 2011, , .		7
67	Quantifying the building stock from optical high-resolution satellite imagery for assessing disaster risk. Geocarto International, 2010, 25, 281-293.	3.5	21
68	Automatic information retrieval from meter and sub-meter resolution satellite image data in support to crisis management. , 2010, , .		5
69	Differential Morphological Decomposition Segmentation: A Multi-Scale Object Based Image Description. , 2010, , .		5
70	Performance measures for object detection evaluation. Pattern Recognition Letters, 2010, 31, 1128-1137.	4.2	39
71	Post-Event Damage Assessment Using Morphological Methodology on 0.5m Resolution Satellite Data. European Journal of Remote Sensing, 2010, , 37-47.	0.2	4
72	Morphological image filtering for improvement of textural built-up index performances in case of presence of scattered vegetation in semi-desertic areas. , 2009, , .		2

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73	Identifying damage caused by the 2008 Wenchuan earthquake from VHR remote sensing data. International Journal of Digital Earth, 2009, 2, 309-326.	3.9	78
74	An improved automatic detection method for earthquake-collapsed buildings from ADS40 image. Science Bulletin, 2009, 54, 3303-3307.	1.7	20
75	Systematic Study of the Urban Postconflict Change Classification Performance Using Spectral and Structural Features in a Support Vector Machine. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2008, 1, 120-128.	4.9	42
76	A Robust Built-Up Area Presence Index by Anisotropic Rotation-Invariant Textural Measure. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2008, 1, 180-192.	4.9	256
77	Anisotropic Rotation Invariant Built-Up Presence Index: Applications to SAR Data. , 2008, , .		12
78	Development of an objectâ€oriented classification model using very high resolution satellite imagery for monitoring diamond mining activity. International Journal of Remote Sensing, 2008, 29, 499-512.	2.9	14
79	Textural analysis of coca plantations using remotely sensed data with resolution of 1 metre. International Journal of Remote Sensing, 2008, 29, 6985-7002.	2.9	6
80	Estimating the velocity and direction of moving targets using a single optical VHR satellite sensor image. International Journal of Remote Sensing, 2008, 29, 1221-1228.	2.9	18
81	The GMOSS experience. , 2008, , .		0
82	Post-conflict reconstruction assessment using image morphological profile and fuzzy multicriteria approach on 1-m- resolution satellite data; Application test on the Koidu village in Sierra Leone, Africa. , 2007, , .		4
83	Monitoring settlement dynamics by anisotropic textural analysis of panchromatic VHR data. , 2007, , .		14
84	Rapid damage assessment of builtâ€up structures using VHR satellite data in tsunamiâ€affected areas. International Journal of Remote Sensing, 2007, 28, 3013-3036.	2.9	71
85	The recognition of road network from highâ€resolution satellite remotely sensed data using image morphological characteristics. International Journal of Remote Sensing, 2005, 26, 5493-5508.	2.9	71
86	Classification and feature extraction for remote sensing images from urban areas based on morphological transformations. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 1940-1949.	6.3	642
87	Image Segmentation Based on the Derivative of the Morphological Profile. , 2002, , 179-188.		7
88	Advances in mathematical morphology applied to geoscience and remote sensing. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2042-2055.	6.3	267
89	A new approach for the morphological segmentation of high-resolution satellite imagery. IEEE Transactions on Geoscience and Remote Sensing, 2001, 39, 309-320.	6.3	715
90	Texture Analysis for Urban Pattern Recognition Using Fine-resolution Panchromatic Satellite Imagery. Geographical and Environmental Modelling, 2000, 4, 43-63.	0.7	83

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91	Textural classification of very high-resolution satellite imagery: Empirical estimation of the interaction between window size and detection accuracy in urban environment. , 0, , .		12
92	The use of morphological profiles in classification of data from urban areas. , 0, , .		12
93	First extensive and cost-effective quality check of Crisis Maps: presentation of assessment parameters and results. International Journal of Digital Earth, 0, , 1-17.	3.9	2
94	Recognizing Settlement Structure using Mathematical Morphology and Image Texture. , 0, , 55-68.		20
95	Towards an automated monitoring of human settlements in South Africa using high resolution SPOT satellite imagery. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-7/W3, 1389-1394.	0.2	9
96	Global Human Settlement Analysis for Disaster Risk Reduction. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XL-7/W3, 837-843.	0.2	27
97	TOWARDS CONSISTENT MAPPING OF URBAN STRUCTURES â€“ GLOBAL HUMAN SETTLEMENT LAYER AND LOCAL CLIMATE ZONES. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLI-B8, 1371-1378.	0.2	17