Mauro Dalla Mura

List of Publications by Year
in descending order

164 papers	6,991 citations	101496 36 h-index	60583 81 g-index
171 all docs	171 docs citations	171 times ranked	4204 citing authors

#	Article	IF	Citations
1	A deep learning approach based on morphological profiles for Hyperspectral Image unmixing. , 2022, , .		3
2	Capacity and Limits of Multimodal Remote Sensing: Theoretical Aspects and Automatic Information Theory-Based Image Selection. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 5598-5618.	2.7	4
3	An Introduction to Deep Morphological Networks. IEEE Access, 2021, 9, 114308-114324.	2.6	14
4	Sentinel-2 Sharpening Using a Single Unsupervised Convolutional Neural Network With MTF-Based Degradation Model. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 6882-6896.	2.3	11
5	A Benchmarking Protocol for Pansharpening: Dataset, Preprocessing, and Quality Assessment. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 6102-6118.	2.3	67
6	A New Benchmark Based on Recent Advances in Multispectral Pansharpening: Revisiting Pansharpening With Classical and Emerging Pansharpening Methods. IEEE Geoscience and Remote Sensing Magazine, 2021, 9, 53-81.	4.9	175
7	Tensor-Based Learning Framework for Automatic Multichannel Volcano-Seismic Classification. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 4517-4529.	2.3	3
8	Sub-Pixel Mapping Model Based on Total Variation Regularization and Learned Spatial Dictionary. Remote Sensing, 2021, 13, 190.	1.8	5
9	Applications in remote sensing—natural landscapes. Data Handling in Science and Technology, 2020, 32, 371-410.	3.1	1
10	Individual Tree Segmentation Based on Mean Shift and Crown Shape Model for Temperate Forest. IEEE Geoscience and Remote Sensing Letters, 2020, , 1-5.	1.4	4
11	Sub-pixel Mapping Method based on Total Variation Minimization and Spectral Dictionary. , 2020, , .		0
12	Hyperspectral and Lidar: Complementary Tools to Identify Benthic Features and Assess the Ecological Status of Sabellaria alveolata Reefs. Frontiers in Marine Science, 2020, 7, .	1.2	7
13	Learning Endmember Dynamics in Multitemporal Hyperspectral Data Using A State-Space Model Formulation. , 2020, , .		5
14	Tree of Shapes Cut for Material Segmentation Guided by a Design. , 2020, , .		0
15	Applications in remote sensing—anthropogenic activities. Data Handling in Science and Technology, 2020, 32, 411-452.	3.1	1
16	Automatic Multichannel Volcano-Seismic Classification Using Machine Learning and EMD. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 1322-1331.	2.3	16
17	Hyperspectral Image Classification Based on Mathematical Morphology and Tensor Decomposition. Mathematical Morphology - Theory and Applications, 2020, 4, 1-30.	0.6	7
18	Characterisation of a Snapshot Fourier Transform Imaging Spectrometer Based on an Array of Fabry-Perot Interferometers. , 2020, , .		1

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19	Estimation of Leaf Angle Distribution Based on Statistical Properties of Leaf Shading Distribution. , 2020, , .		1
20	Sub-Pixel Mapping Method Based on K-SVD Dictionary Learning and Total Variation Minimization. , 2020, , .		0
21	Pansharpening Based on Deconvolution for Multiband Filter Estimation. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 540-553.	2.7	47
22	Superresolution Land Cover Mapping Based on Pixel-, Subpixel-, and Superpixel-Scale Spatial Dependence With Pansharpening Technique. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 4082-4098.	2.3	13
23	Contact Based Hierarchical Segmentation for Granular Materials. Lecture Notes in Computer Science, 2019, , 428-440.	1.0	0
24	Constructing a Braid of Partitions from Hierarchies of Partitions. Lecture Notes in Computer Science, 2019, , 111-123.	1.0	0
25	Dynamic Multicontext Segmentation of Remote Sensing Images Based on Convolutional Networks. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 7503-7520.	2.7	102
26	Braids of partitions for the hierarchical representation and segmentation of multimodal images. Pattern Recognition, 2019, 95, 162-172.	5.1	11
27	Sentinel-2 Sharpening Using a Reduced-Rank Method. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 6408-6420.	2.7	36
28	Estimation of Diffuse Component of Global Radiation Based on Leaf-Scale Crop Images. , 2019, , .		0
29	Isotropic Total Variation Minimization for Sub-Pixel Mapping. , 2019, , .		0
30	Spatial Characterization Of Marine Vegetation Using Semisupervised Hyperspectral Unmixing. , 2019, , .		2
31	Hyperspectral Image Classification Using Tensor CP Decomposition. , 2019, , .		10
32	Soft-Then-Hard Super-Resolution Mapping Based on Pansharpening Technique for Remote Sensing Image. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 334-344.	2.3	17
33	Snow Cover Estimation From Image Time Series Based on Spectral Unmixing. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 337-341.	1.4	1
34	GPU Framework for Change Detection in Multitemporal Hyperspectral Images. International Journal of Parallel Programming, 2019, 47, 272-292.	1.1	39
35	Fusion of hyperspectral imaging and LiDAR for forest monitoring. Data Handling in Science and Technology, 2019, 32, 281-303.	3.1	13
36	Classification of Hyperspectral Images as Tensors Using Nonnegative CP Decomposition. Lecture Notes in Computer Science, 2019, , 189-201.	1.0	5

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37	Gas characterization based on a snapshot interferometric imaging spectrometer. , 2019, , .		3
38	Machine Learning for Volcano-Seismic Signals: Challenges and Perspectives. IEEE Signal Processing Magazine, 2018, 35, 20-30.	4.6	103
39	Low-Rank Decomposition and Total Variation Regularization of Hyperspectral Video Sequences. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 1680-1694.	2.7	36
40	Use of Deep Features for the Automatic Classification of Fish Sounds. , 2018, , .		5
41	Spatial Resolution Enhancement of Optical Images Based on Tensor Decomposition. , 2018, , .		0
42	A Low-Rank Method for Sentinel-2 Sharpening Using Cyclic Descent. , 2018, , .		5
43	Automatic Classification of Volcano Seismic Signatures. Journal of Geophysical Research: Solid Earth, 2018, 123, 10,645.	1.4	43
44	Image Fusion and Reconstruction of Compressed Data: A Joint Approach. , 2018, , .		2
45	Automatic fish sounds classification. Journal of the Acoustical Society of America, 2018, 143, 2834-2846.	0.5	31
46	A Variational Pansharpening Approach Based on Reproducible Kernel Hilbert Space and Heaviside Function. IEEE Transactions on Image Processing, 2018, 27, 4330-4344.	6.0	71
47	An Assessment of Existing Methodologies to Retrieve Snow Cover Fraction from MODIS Data. Remote Sensing, 2018, 10, 619.	1.8	58
48	Some Issues in Computing the CP Decomposition of NonNegative Tensors. Lecture Notes in Computer Science, 2018, , 57-66.	1.0	4
49	Pansharpening of images acquired with color filter arrays. , 2018, , .		1
50	Automatic Attribute Profiles. IEEE Transactions on Image Processing, 2017, 26, 1859-1872.	6.0	35
51	Object Tracking by Hierarchical Decomposition of Hyperspectral Video Sequences: Application to Chemical Gas Plume Tracking. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 4567-4585.	2.7	31
52	A comparison between real and complex Schott spherical symmetry test for PolSAR data analysis. , 2017, , .		0
53	Simultaneous extraction of roads and buildings in remote sensing imagery with convolutional neural networks. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 130, 139-149.	4.9	304
54	Taking Optimal Advantage of Fine Spatial Resolution: Promoting partial image reconstruction for the morphological analysis of very-high-resolution images. IEEE Geoscience and Remote Sensing Magazine, 2017, 5, 8-28.	4.9	38

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55	Band Assignment Approaches for Hyperspectral Sharpening. IEEE Geoscience and Remote Sensing Letters, 2017, 14, 739-743.	1.4	18
56	Context-Adaptive Pansharpening Based on Image Segmentation. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 753-766.	2.7	119
57	Using Multiple Subpixel Shifted Images With Spatial–Spectral Information in Soft-Then-Hard Subpixel Mapping. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 2950-2959.	2.3	21
58	A comparative noise robustness study of tree representations for attribute profile construction. , 2017, , .		3
59	Collaborative total variation for hyperspectral pansharpening. , 2017, , .		3
60	Using time series to improve endmembers estimation on multispectral images for snow monitoring. , 2017, , .		2
61	Information extraction by blind source separation from polarimetric SAR data. , 2017, , .		0
62	Machine learning for automatic classification of volcano-seismic signatures. , 2017, , .		4
63	A variational pansharpening approach based on reproducible kernel Hilbert space and heaviside function. , 2017, , .		6
64	Hyperspectral image inpainting based on collaborative total variation. , 2017, , .		9
65	Tree-based supervised feature extraction method based on self-dual attribute profiles. , 2017, , .		0
66	Multimorphological Superpixel Model for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 6950-6963.	2.7	36
67	Evaluation of the New Information in the ${H}/alpha$ Feature Space Provided by ICA in PolSAR Data Analysis. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 6893-6909.	2.7	6
68	Attribute Profiles from Partitioning Trees. Lecture Notes in Computer Science, 2017, , 381-392.	1.0	10
69	From local to global unmixing of hyperspectral images to reveal spectral variability. , 2016, , .		3
70	Unmixing-based gas plume tracking in LWIR hyperspectral video sequences. , 2016, , .		6
71	Snow cover estimation based on spectral unmixing. , 2016, , .		1
72	GAS plume detection in hyperspectral video sequence using low rank representation. , 2016, , .		4

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73	Hyperspectral Local Intrinsic Dimensionality. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4063-4078.	2.7	10
74	Fusion of Multispectral and Panchromatic Images Based on Morphological Operators. IEEE Transactions on Image Processing, 2016, 25, 2882-2895.	6.0	151
75	Special issue on multimodal data fusion for multidimensional signal processing. Multidimensional Systems and Signal Processing, 2016, 27, 801-805.	1.7	4
76	Region-based classification of remote sensing images with the morphological tree of shapes. , 2016, , .		3
77	Thermal sharpening of VIIRS data. , 2016, , .		5
78	LiDAR information extraction by attribute filters with partial reconstruction. , 2016, , .		3
79	Hyperspectral pansharpening using convex optimization and collaborative total variation regularization. , 2016, , .		1
80	Multispectral and hyperspectral data fusion based on SAM minimization band assignment approach. , 2016, , .		2
81	Learning to semantically segment high-resolution remote sensing images. , 2016, , .		20
82	Remote Sensing Image Classification Using Attribute Filters Defined Over the Tree of Shapes. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3899-3911.	2.7	25
83	Spherical Symmetry of Complex Stochastic Models in Multivariate High-Resolution PolSAR Images. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4250-4261.	2.7	7
84	Evaluation of ICA-Based ICTD for PolSAR Data Analysis Using a Sliding Window Approach: Convergence Rate, Gaussian Sources, and Spatial Correlation. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4262-4271.	2.7	9
85	Multiple Morphological Component Analysis Based Decomposition for Remote Sensing Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3083-3102.	2.7	56
86	ANALYZING REMOTE SENSING IMAGES WITH HIERARCHIAL MORPHOLOGICAL REPRESENTATIONS. , 2016, , 313-330.		0
87	Combining Morphological Attribute Profiles via an Ensemble Method for Hyperspectral Image Classification. IEEE Geoscience and Remote Sensing Letters, 2016, , 1-5.	1.4	24
88	Vector Attribute Profiles for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3208-3220.	2.7	30
89	Fusion of Spectral and Spatial Information for Classification of Hyperspectral Remote-Sensed Imagery by Local Graph. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 583-594.	2.3	27
90	Morphological Attribute Profiles With Partial Reconstruction. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 1738-1756.	2.7	28

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91	Multi-resolution analysis techniques and nonlinear PCA for hybrid pansharpening applications. Multidimensional Systems and Signal Processing, 2016, 27, 807-830.	1.7	25
92	Global and local Gram-Schmidt methods for hyperspectral pansharpening. , 2015, , .		11
93	Evaluation of ICA based ICTD for PolSAR data analysis in tropical forest scenario. , 2015, , .		1
94	An analysis of collaborative representation schemes for the classification of hyperspectral images. , 2015, , .		0
95	Semi-automatic classification of cementitious materials using scanning electron microscope images. Proceedings of SPIE, 2015, , .	0.8	0
96	Remote sensing image classification based on multiple morphological component analysis. , 2015, , .		1
97	Multi-band semiblind deconvolution for pansharpening applications. , 2015, , .		2
98	Semiautomatic classification of cementitious materials using scanning electron microscope images. Journal of Electronic Imaging, 2015, 24, 061109.	0.5	11
99	Automatic morphological attribute profiles. , 2015, , .		1
100	A Critical Comparison Among Pansharpening Algorithms. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 2565-2586.	2.7	943
101	Processing high resolution images of urban areas with self-dual attribute filters. , 2015, , .		1
102	Extended Self-Dual Attribute Profiles for the Classification of Hyperspectral Images. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 1690-1694.	1.4	33
103	Seismic vulnerability assessment of urban environments in moderate-to-low seismic hazard regions using association rule learning and support vector machine methods. Natural Hazards, 2015, 76, 1111-1141.	1.6	67
104	Analysis of Multitemporal Classification Techniques for Forecasting Image Time Series. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 953-957.	1.4	17
105	Challenges and Opportunities of Multimodality and Data Fusion in Remote Sensing. Proceedings of the IEEE, 2015, 103, 1585-1601.	16.4	165
106	Foreword to the Special Issue on Information Extraction From High-Spatial-Resolution Optical Remotely Sensed Imagery. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 1872-1875.	2.3	0
107	Random Subspace Ensembles for Hyperspectral Image Classification With Extended Morphological Attribute Profiles. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4768-4786.	2.7	130
108	A Survey on Spectral–Spatial Classification Techniques Based on Attribute Profiles. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 2335-2353.	2.7	312

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109	A Pansharpening Method Based on the Sparse Representation of Injected Details. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 180-184.	1.4	145
110	Pansharpening Based on Semiblind Deconvolution. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 1997-2010.	2.7	108
111	A new extended linear mixing model to address spectral variability. , 2014, , .		44
112	Multiple Morphological Profiles From Multicomponent-Base Images for Hyperspectral Image Classification. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 4653-4669.	2.3	53
113	A critical comparison of pansharpening algorithms. , 2014, , .		25
114	A method for improving the consistency property of pansharpening algorithms. , 2014, , .		3
115	Selective and robust d-dimensional path operators. , 2014, , .		0
116	Introduction of the IEEE French Section Geoscience and Remote Sensing Society Chapter [Chapters]. IEEE Geoscience and Remote Sensing Magazine, 2014, 2, 59-61.	4.9	0
117	Context-adaptive Pansharpening based on binary partition tree segmentation. , 2014, , .		3
118	Robust path opening versus path opening for the detection of hedgerows in rural landscapes. , 2014, , .		1
119	MultiResolution Analysis and Component Substitution techniques for hyperspectral Pansharpening. , 2014, , .		44
120	A comparison of self-dual attribute profiles based on different filter rules for classification. , 2014, , .		10
121	Improved subpixel monitoring of seasonal snow cover: A case study in the Alps. , 2014, , .		3
122	Spectralâ€"Spatial Classification of Multispectral Images Using Kernel Feature Space Representation. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 288-292.	1.4	65
123	Automatic Feature Learning for Spatio-Spectral Image Classification With Sparse SVM. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6062-6074.	2.7	71
124	Remotely Sensed Image Classification Using Sparse Representations of Morphological Attribute Profiles. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 5122-5136.	2.7	157
125	Contrast and Error-Based Fusion Schemes for Multispectral Image Pansharpening. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 930-934.	1.4	291
126	Hyperspectral Image Segmentation Using a New Spectral Unmixing-Based Binary Partition Tree Representation. IEEE Transactions on Image Processing, 2014, 23, 3574-3589.	6.0	79

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127	Gas plume detection and tracking in hyperspectral video sequences using Binary Partition Trees. , 2014, , .		8
128	Binary partition tree-based local spectral unmixing. , 2014, , .		5
129	A Novel Technique for Optimal Feature Selection in Attribute Profiles Based on Genetic Algorithms. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 3514-3528.	2.7	105
130	Hyperspectral image segmentation using a new spectral mixture-based binary partition tree representation. , 2013, , .		8
131	Automatic Generation of Standard Deviation Attribute Profiles for Spectral–Spatial Classification of Remote Sensing Data. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 293-297.	1.4	106
132	Change Detection in VHR Images Based on Morphological Attribute Profiles. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 636-640.	1.4	92
133	A comparison study between windowing and binary partition trees for hyperspectral image information mining. , 2013, , .		0
134	Create the relevant spatial filterbank in the hyperspectral jungle. , 2013, , .		0
135	Classification of hyperspectral images based on weighted DMPS. , 2012, , .		3
136	Hierarchical watershed segmentation based on gradient image simplification. , 2012, , .		0
137	High-performance computing in image registration. , 2012, , .		1
138	Detection of hedges based on attribute filters. , 2012, , .		0
139	Integration of photogrammetric DSM and advanced image analysis for the classification of urban areas. , 2012, , .		1
140	Real-world DEM harmonisation through photo re-projection. , 2012, , .		0
141	Feature preserving method for creating visual appearance models and virtual views from collective images. , 2012, , .		0
142	Augmented reality: Fusing the real and synthetic worlds. , 2012, , .		1
143	Classification of Remote Sensing Optical and LiDAR Data Using Extended Attribute Profiles. IEEE Journal on Selected Topics in Signal Processing, 2012, 6, 856-865.	7.3	139
144	A novel supervised feature selection technique based on genetic algorithms. , 2012, , .		6

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145	Classification of hyperspectral data using extended attribute profiles based on supervised and unsupervised feature extraction techniques. International Journal of Image and Data Fusion, 2012, 3, 269-298.	0.8	54
146	Retrieval of the Height of Buildings From WorldView-2 Multi-Angular Imagery Using Attribute Filters and Geometric Invariant Moments. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 71-79.	2.3	37
147	The Evolution of the Morphological Profile: from Panchromatic to Hyperspectral Images. , 2011, , 123-146.		16
148	Classification using Extended Morphological Attribute Profiles based on different feature extraction techniques. , 2011, , .		8
149	Classification of Hyperspectral Images by Using Extended Morphological Attribute Profiles and Independent Component Analysis. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 542-546.	1.4	340
150	A general approach to the spatial simplification of remote sensing images based on morphological connected filters. , 2011, , .		1
151	Fusion of hyperspectral and lidar data using morphological attribute profiles. , 2011, , .		3
152	Hierarchical Analysis of Remote Sensing Data: Morphological Attribute Profiles and Binary Partition Trees. Lecture Notes in Computer Science, 2011, , 306-319.	1.0	11
153	Self-dual Attribute Profiles for the Analysis of Remote Sensing Images. Lecture Notes in Computer Science, 2011, , 320-330.	1.0	27
154	Morphological Attribute Profiles for the Analysis of Very High Resolution Images. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 3747-3762.	2.7	626
155	Extended profiles with morphological attribute filters for the analysis of hyperspectral data. International Journal of Remote Sensing, 2010, 31, 5975-5991.	1.3	339
156	Study on the capabilities of morphological attribute profiles in change detection on VHR images. , 2010, , .		4
157	Alternating sequential filters with morphological attribute operators for the analysis of remote sensing images. , 2010, , .		3
158	Classification of hyperspectral images with Extended Attribute Profiles and feature extraction techniques. , 2010, , .		20
159	Classification of hyperspectral images by using morphological attribute filters and Independent Component Analysis. , 2010, , .		1
160	Morphological attribute filters for the analysis of very high resolution remote sensing images. , 2009, , .		11
161	Modeling structural information for building extraction with morphological attribute filters. Proceedings of SPIE, 2009, , .	0.8	13
162	An Unsupervised Technique Based on Morphological Filters for Change Detection in Very High Resolution Images. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 433-437.	1.4	106

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163	Integration of spectral information and photogrammetric DSM for urban areas classification. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, II-3/W3, 67-72.	0.0	1
164	FUSION OF LIDAR AND HYPERSPECTRAL DATA FOR SEMANTIC SEGMENTATION OF FOREST TREE SPECIES. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLIII-B3-2020, 487-494.	0.2	1