Javier Plaza

List of Publications by Year
in descending order

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152	8,409	76196	56606
papers	citations	40	83
		h-index	g-index

153	153	153	5439
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Advanced Spectral Classifiers for Hyperspectral Images: A review. IEEE Geoscience and Remote Sensing Magazine, 2017, 5, 8-32.	4.9	893
2	Deep learning classifiers for hyperspectral imaging: A review. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 158, 279-317.	4.9	580
3	Advances in Hyperspectral Image and Signal Processing: A Comprehensive Overview of the State of the Art. IEEE Geoscience and Remote Sensing Magazine, 2017, 5, 37-78.	4.9	533
4	A Quantitative and Comparative Analysis of Endmember Extraction Algorithms From Hyperspectral Data. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 650-663.	2.7	528
5	Spatial/spectral endmember extraction by multidimensional morphological operations. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2025-2041.	2.7	426
6	A new deep convolutional neural network for fast hyperspectral image classification. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 145, 120-147.	4.9	418
7	Dimensionality reduction and classification of hyperspectral image data using sequences of extended morphological transformations. IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 466-479.	2.7	354
8	Deep Pyramidal Residual Networks for Spectralâ€“Spatial Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 740-754.	2.7	347
9	Capsule Networks for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 2145-2160.	2.7	261
10	Remote Sensing Scene Classification Using Multilayer Stacked Covariance Pooling. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 6899-6910.	2.7	232
11	Active Learning With Convolutional Neural Networks for Hyperspectral Image Classification Using a New Bayesian Approach. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 6440-6461.	2.7	210
12	Visual Attention-Driven Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 8065-8080.	2.7	185
13	Commodity cluster-based parallel processing of hyperspectral imagery. Journal of Parallel and Distributed Computing, 2006, 66, 345-358.	2.7	182
14	Feature Extraction With Multiscale Covariance Maps for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 755-769.	2.7	182
15	A New Spatialâ€“Spectral Feature Extraction Method for Hyperspectral Images Using Local Covariance Matrix Representation. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 3534-3546.	2.7	153
16	Skip-Connected Covariance Network for Remote Sensing Scene Classification. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 1461-1474.	7.2	146
17	A New Deep Generative Network for Unsupervised Remote Sensing Single-Image Super-Resolution. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 6792-6810.	2.7	129
18	A new approach to mixed pixel classification of hyperspectral imagery based on extended morphological profiles. Pattern Recognition, 2004, 37, 1097-1116.	5.1	114

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19	Parallel Hyperspectral Image and Signal Processing [Applications Corner]. IEEE Signal Processing Magazine, 2011, 28, 119-126.	4.6	114
20	On the use of small training sets for neural network-based characterization of mixed pixels in remotely sensed hyperspectral images. Pattern Recognition, 2009, 42, 3032-3045.	5.1	92
21	Fusion of Hyperspectral and LiDAR Data Using Sparse and Low-Rank Component Analysis. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 6354-6365.	2.7	87
22	A Single Model CNN for Hyperspectral Image Denoising. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 2516-2529.	2.7	87
23	Cloud implementation of the K-means algorithm for hyperspectral image analysis. Journal of Supercomputing, 2017, 73, 514-529.	2.4	86
24	Hyperspectral Image Classification Using Random Occlusion Data Augmentation. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 1751-1755.	1.4	86
25	Deep&Dense Convolutional Neural Network for Hyperspectral Image Classification. Remote Sensing, 2018, 10, 1454.	1.8	85
26	On Endmember Identification in Hyperspectral Images Without Pure Pixels: A Comparison of Algorithms. Journal of Mathematical Imaging and Vision, 2012, 42, 163-175.	0.8	78
27	Stacked Nonnegative Sparse Autoencoders for Robust Hyperspectral Unmixing. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 1427-1431.	1.4	76
28	Ghostnet for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 10378-10393.	2.7	73
29	Remote Sensing Image Superresolution Using Deep Residual Channel Attention. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 9277-9289.	2.7	67
30	An Efficient and Scalable Framework for Processing Remotely Sensed Big Data in Cloud Computing Environments. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 4294-4308.	2.7	61
31	Recent Developments in Endmember Extraction and Spectral Unmixing. , 2011, , 235-267.		58
32	GPU Parallel Implementation of Spatially Adaptive Hyperspectral Image Classification. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 1131-1143.	2.3	57
33	Remote Sensing Image Fusion Using Hierarchical Multimodal Probabilistic Latent Semantic Analysis. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 4982-4993.	2.3	54
34	Parallel Implementation of Endmember Extraction Algorithms From Hyperspectral Data. IEEE Geoscience and Remote Sensing Letters, 2006, 3, 334-338.	1.4	50
35	A New Minimum-Volume Enclosing Algorithm for Endmember Identification and Abundance Estimation in Hyperspectral Data. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 2744-2757.	2.7	47
36	Improving the Performance of Hyperspectral Image and Signal Processing Algorithms Using Parallel, Distributed and Specialized Hardware-Based Systems. Journal of Signal Processing Systems, 2010, 61, 293-315.	1.4	45

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37	Social Media: New Perspectives to Improve Remote Sensing for Emergency Response. Proceedings of the IEEE, 2017, 105, 1900-1912.	16.4	45
38	Remote Sensing Single-Image Superresolution Based on a Deep Compendium Model. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 1432-1436.	1.4	45
39	Multi-Channel Morphological Profiles for Classification of Hyperspectral Images Using Support Vector Machines. Sensors, 2009, 9, 196-218.	2.1	44
40	Hyperspectral Unmixing Based on Dual-Depth Sparse Probabilistic Latent Semantic Analysis. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 6344-6360.	2.7	44
41	Scalable recurrent neural network for hyperspectral image classification. Journal of Supercomputing, 2020, 76, 8866-8882.	2.4	44
42	Incorporation of spatial constraints into spectral mixture analysis of remotely sensed hyperspectral data. , 2009, , .		39
43	Impact of platform heterogeneity on the design of parallel algorithms for morphological processing of high-dimensional image data. Journal of Supercomputing, 2007, 40, 81-107.	2.4	38
44	An experimental comparison of parallel algorithms for hyperspectral analysis using heterogeneous and homogeneous networks of workstations. Parallel Computing, 2008, 34, 92-114.	1.3	36
45	Nonlinear Hyperspectral Unmixing Using Nonlinearity Order Estimation and Polytope Decomposition. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 2644-2654.	2.3	35
46	Fast dimensionality reduction and classification of hyperspectral images with extreme learning machines. Journal of Real-Time Image Processing, 2018, 15, 439-462.	2.2	35
47	Robust Matrix Discriminative Analysis for Feature Extraction From Hyperspectral Images. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 2002-2011.	2.3	32
48	A New GPU Implementation of Support Vector Machines for Fast Hyperspectral Image Classification. Remote Sensing, 2020, 12, 1257.	1.8	32
49	Spectral Mixture Analysis of Hyperspectral Scenes Using Intelligently Selected Training Samples. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 371-375.	1.4	31
50	Lowâ€“High-Power Consumption Architectures for Deep-Learning Models Applied to Hyperspectral Image Classification. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 776-780.	1.4	31
51	Multimodal Probabilistic Latent Semantic Analysis for Sentinel-1 and Sentinel-2 Image Fusion. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 1347-1351.	1.4	30
52	FLOP-Reduction Through Memory Allocations Within CNN for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 5938-5952.	2.7	29
53	Multibranch Selective Kernel Networks for Hyperspectral Image Classification. IEEE Geoscience and Remote Sensing Letters, 2021, 18, 1089-1093.	1.4	28
54	Joint linear/nonlinear spectral unmixing of hyperspectral image data. , 2007, , .		23

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55	Cloud Deep Networks for Hyperspectral Image Analysis. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 9832-9848.	2.7	23
56	Hyperspectral Anomaly Detection With Relaxed Collaborative Representation. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-17.	2.7	19
57	A real-time unsupervised background extraction-based target detection method for hyperspectral imagery. Journal of Real-Time Image Processing, 2018, 15, 597-615.	2.2	18
58	Spatial/spectral analysis of hyperspectral image data. , 0, , .		17
59	Parallel Processing of Remotely Sensed Hyperspectral Images On Heterogeneous Networks of Workstations Using HeteroMPI. International Journal of High Performance Computing Applications, 2008, 22, 386-407.	2.4	17
60	Distributed Deep Learning for Remote Sensing Data Interpretation. Proceedings of the IEEE, 2021, 109, 1320-1349.	16.4	16
61	Mapping oil spills on sea water using spectral mixture analysis of hyperspectral image data. , 2005, , .		15
62	<title>Comparative analysis of different implementations of a parallel algorithm for automatic target detection and classification of hyperspectral images</title>. , 2009, , .		15
63	Fast Spatial Preprocessing for Spectral Unmixing of Hyperspectral Data on Graphics Processing Units. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 952-961.	2.3	15
64	U-IMG2DSM: Unpaired Simulation of Digital Surface Models With Generative Adversarial Networks. IEEE Geoscience and Remote Sensing Letters, 2021, 18, 1288-1292.	1.4	15
65	H-COMP: a tool for quantitative and comparative analysis of endmember identification algorithms. , 0, , .		14
66	Parallel morphological/neural processing of hyperspectral images using heterogeneous and homogeneous platforms. Cluster Computing, 2008, 11, 17-32.	3.5	14
67	Neural Ordinary Differential Equations for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 1718-1734.	2.7	14
68	Estudio Comparativo de TÃ©cnicas de ClasificaciÃ³n de ImÃ¡genes Hiperespectrales. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2019, 16, 129.	0.6	14
69	Endmember Estimation with Maximum Distance Analysis. Remote Sensing, 2021, 13, 713.	1.8	13
70	AMEEPAR: Parallel Morphological Algorithm for Hyperspectral Image Classification on Heterogeneous Networks of Workstations. Lecture Notes in Computer Science, 2006, , 24-31.	1.0	12
71	A new method for target detection in hyperspectral imagery based on extended morphological profiles. , 0, , .		11
72	Nonlinear neural-network-based mixture model for estimating the concentration of nitrogen salts in turbid inland waters using hyperspectral imagery. , 2004, 5584, 165.		11

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73	Nonlinear mixture models for analyzing laboratory simulated-forest hyperspectral data. , 2004, , .		11
74	GPU Parallel Implementation of Dual-Depth Sparse Probabilistic Latent Semantic Analysis for Hyperspectral Unmixing. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 3156-3167.	2.3	11
75	Neighboring Region Dropout for Hyperspectral Image Classification. IEEE Geoscience and Remote Sensing Letters, 2020, 17, 1032-1036.	1.4	11
76	Endmember extraction algorithms from hyperspectral images. Annals of Geophysics, 2009, 49, .	0.5	11
77	Efficient Multi-Band Texture Analysis for Remotely Sensed Data Interpretation in Urban Areas. , 2007, , .		10
78	Parallel Implementation of Spatialâ€“Spectral Endmember Extraction on Graphic Processing Units. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 1247-1255.	2.3	10
79	Training deep neural networks: a static load balancing approach. Journal of Supercomputing, 2020, 76, 9739-9754.	2.4	10
80	Automated generation of semi-labeled training samples for nonlinear neural network-based abundance estimation in hyperspectral data. , 0, , .		9
81	Parallel Hyperspectral Image Processing on Commodity Graphics Hardware. , 0, , .		9
82	Parallel heterogeneous CBIR system for efficient hyperspectral image retrieval using spectral mixture analysis. Concurrency Computation Practice and Experience, 2010, 22, 1138-1159.	1.4	9
83	Parallel implementation of endmember extraction algorithms using NVidia graphical processing units. , 2009, , .		9
84	Efficient implementation of morphological index for building/shadow extraction from remotely sensed images. Journal of Supercomputing, 2017, 73, 482-494.	2.4	9
85	On the Use of Cluster Computing Architectures for Implementation of Hyperspectral Image Analysis Algorithms. , 0, , .		8
86	Parallel Morphological/Neural Classification of Remote Sensing Images Using Fully Heterogeneous and Homogeneous Commodity Clusters. , 2006, , .		8
87	GPU Implementation of Spatialâ€“Spectral Preprocessing for Hyperspectral Unmixing. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 1671-1675.	1.4	8
88	Multi-Task Learning with Low-Rank Matrix Factorization for Hyperspectral Nonlinear Unmixing. , 2019, , .		8
89	Parallel Morphological Classification of Hyperspectral Imagery Using Extended Opening and Closing by Reconstruction Operations. , 2008, , .		7
90	On the minimum volume simplex enclosure problem for estimating a linear mixing model. Journal of Global Optimization, 2013, 56, 957-970.	1.1	7

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91	Multicore Real-Time Implementation of a Full Hyperspectral Unmixing Chain. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 744-748.	1.4	7
92	Hyperspectral Image Classification Using Parallel Autoencoding Diabolo Networks on Multi-Core and Many-Core Architectures. Electronics (Switzerland), 2018, 7, 411.	1.8	7
93	An experimental evaluation of endmember generation algorithms. , 2005, 5995, 599501.		6
94	Parallel CBIR System for Efficient Hyperspectral Image Retrieval from Heterogeneous Networks of Workstations. , 2007, , .		6
95	Estimating Nonlinearities in p-Linear Hyperspectral Mixtures. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 6586-6595.	2.7	6
96	GPU-Friendly Neural Networks for Remote Sensing Scene Classification. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	6
97	Parallel Classification of Hyperspectral Images Using Neural Networks. Studies in Computational Intelligence, 2008, , 193-216.	0.7	6
98	Fast Orthogonal Projection for Hyperspectral Unmixing. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-13.	2.7	6
99	Analysis of the behavior of a neural network model in the identification and quantification of hyperspectral signatures applied to the determination of water quality. , 2004, 5584, 174.		5
100	On the generation of training samples for neural network-based mixed pixel classification. , 2005, , .		5
101	Improving the scalability of hyperspectral imaging applications on heterogeneous platforms using adaptive run-time data compression. Computers and Geosciences, 2010, 36, 1283-1291.	2.0	5
102	An Investigation on Self-Normalized Deep Neural Networks for Hyperspectral Image Classification. , 2018, , .		5
103	Endmember Estimation From Hyperspectral Images Using Geometric Distances. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	5
104	High-performance computing in remotely sensed hyperspectral imaging: the Pixel Purity Index algorithm as a case study. , 2006, , .		4
105	Parallel Detection of Targets in Hyperspectral Images Using Heterogeneous Networks of Workstations. , 2007, , .		4
106	Parallel implementation of linear and nonlinear spectral unmixing of remotely sensed hyperspectral images. , 2011, , .		4
107	GPU implementation of spatial preprocessing for spectral unmixing of hyperspectral data. , 2015, , .		4
108	Special issue on advances in real-time image processing for remote sensing. Journal of Real-Time Image Processing, 2018, 15, 435-438.	2.2	4

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109	Commodity cluster and hardware-based massively parallel implementations of hyperspectral imaging algorithms. , 2006, , .		3
110	<title>Massively parallel processing of remotely sensed hyperspectral images</title>. , 2009, , .		3
111	Automatic selection of informative samples for SVM-based classification of hyperspectral data using limited training sets. , 2010, , .		3
112	Near real-time endmember extraction from remotely sensed hyperspectral data using NVidia GPUs. , 2010, , .		3
113	Minimum volume simplicial enclosure for spectral unmixing of remotely sensed hyperspectral data. , 2010, , .		3
114	Integrating multiple nonlinear estimators into hyperspectral unmixing. , 2014, , .		3
115	Multicore implementation of the multi-scale adaptive deep pyramid matching model for remotely sensed image classification. , 2017, , .		3
116	Radiometric Calibration of Fengyun-3D Mersi-II Satellite: A Case Study in Lake Qinghai, China. , 2020, , .		3
117	Hyperspectral image analysis by scale-orientation morphological profiles. , 2004, 5238, 432.		2
118	Parallel Implementation of Hyperspectral Image Processing Algorithms. , 2006, , .		2
119	Endmember extraction from hyperspectral imagery using a parallel ensemble approach with consensus analysis. , 2009, , .		2
120	<title>Lossy hyperspectral image compression tuned for spectral mixture analysis applications on NVidia graphics processing units</title>. Proceedings of SPIE, 2009, , .	0.8	2
121	A fast sequential endmember extraction algorithm based on unconstrained linear spectral unmixing. , 2009, , .		2
122	Impact of Vector Ordering Strategies on Morphological Unmixing of Remotely Sensed Hyperspectral Images. , 2010, , .		2
123	Onboard payload-data dimensionality reduction. , 2017, , .		2
124	Spatial weighted sparse regression for hyperspectral image unmixing. , 2017, , .		2
125	Efficient Convolutional Neural Network for Spectral-Spatial Hyperspectral Denoising. , 2019, , .		2
126	Analysis of Remotely Sensed Images Through Social Media. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 3026-3039.	2.3	2

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127	Training Capsnets via Active Learning for Hyperspectral Image Classification. , 2020, , .		2
128	Efficient information extraction from hyperspectral imagery using networks of workstations. , 0, , .		1
129	Morphological feature extraction and spectral unmixing of hyperspectral images. , 2008, , .		1
130	Spatial-spectral endmember extraction from hyperspectral imagery using multi-band morphology and volume optimization. , 2009, , .		1
131	On the incorporation of spatial information to endmember identification algorithms without the pure pixel assumption. , 2011, , .		1
132	On the optimization of memory access to increase the performance of spatial preprocessing techniques on graphics processing units. , 2016, , .		1
133	Fast spatial-spectral preprocessing for endmember extraction and spectral unmixing using graphic processing units. , 2016, , .		1
134	Evaluation of Different Regularization Methods for the Extreme Learning Machine Applied to Hyperspectral Images. , 2018, , .		1
135	Solving Deep Neural Networks with Ordinary Differential Equations for Remotely Sensed Hyperspectral Image Classification. , 2019, , .		1
136	Parallel Segmentation of Multi-Channel Images Using Multi-Dimensional Mathematical Morphology. , 0, , 321-340.		1
137	Subspace Optimal Transport for Spatial Bias Correction of Social Media Data: A Case Study of 2013 Boulder Flood Event. , 2021, , .		1
138	Parallel Segmentation of Multi-Channel Images Using Multi-Dimentional Mathematical Morphology. , 2006, , 270-291.		1
139	Spatial Bias Correction of Social Media Data by Exploiting Remote Sensing Knowledge in Data-Deficient Regions. , 2020, , .		1
140	Distributed Computing for Efficient Hyperspectral Imaging Using Fully Heterogeneous Networks of Workstations. , 2006, , .		0
141	Improving the scalability of parallel algorithms for hyperspectral image analysis using adaptive message compression. , 2009, , .		0
142	Comparative analysis of training strategies for neural network-based spectral unmixing of laboratory-simulated forest hyperspectral scenes. , 2010, , .		0
143	Spatial-spectral preprocessing for endmember extraction on GPU's. Proceedings of SPIE, 2016, , .	0.8	0
144	An iterative enhancement of higher order nonlinear mixture model for accurate hyperspectral unmixing. , 2016, , .		0

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145	Impervious surface extraction from multispectral images using morphological attribute profiles and spectral mixture analysis. , 2017, , .		0
146	Inter-Sensor Regression Analysis for Operational Sentinel-2 and Sentinel-3 Data Products. , 2018, , .		0
147	Open Multi-Processing Acceleration for Unsupervised Land Cover Categorization Using Probabilistic Latent Semantic Analysis. , 2019, , .		0
148	On the Evaluation of Machine Learning Algorithms for Hyperspectral Image Classification on a Heterogeneous Computing Device. , 2021, , .		0
149	Parallel Implementation of Morphological Neural Networks for Hyperspectral Image Analysis. Chapman & Hall/CRC Computer and Information Science Series, 2007, , 131-150.	0.4	0
150	Parallel Wildland Fire Monitoring and Tracking Using Remotely Sensed Data. Chapman & Hall/CRC Computer and Information Science Series, 2007, , 151-182.	0.4	0
151	Nonlinear Method of Reduction of Dimensionality Based on Artificial Neural Network and Hardware Implementation. , 2015, , 69-79.		0
152	Spatial Downscaling for Global Precipitation Measurement Using a Geographically and Temporally Weighted Regression Model. , 2020, , .		0