

Miguel Velez-Reyes

List of Publications by Year in descending order

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166
papers

1,504
citations

687220

13
h-index

501076

28
g-index

168
all docs

168
docs citations

168
times ranked

1105
citing authors

#	ARTICLE	IF	CITATIONS
1	Subset selection for improved parameter estimation in on-line identification of a synchronous generator. IEEE Transactions on Power Systems, 1999, 14, 218-225.	4.6	153
2	Unsupervised Linear Feature-Extraction Methods and Their Effects in the Classification of High-Dimensional Data. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 469-483.	2.7	122
3	Nonlinear control of a heating, ventilating, and air conditioning system with thermal load estimation. IEEE Transactions on Control Systems Technology, 1999, 7, 56-63.	3.2	104
4	Recursive speed and parameter estimation for induction machines. , 0, , .		96
5	One-dimensional heat transfer analysis in open-cell 10-ppi metal foam. International Journal of Heat and Mass Transfer, 2005, 48, 5112-5120.	2.5	84
6	Unmixing Analysis of a Time Series of Hyperion Images Over the Guánica Dry Forest in Puerto Rico. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2013, 6, 329-338.	2.3	52
7	Comparative Study of Semi-Implicit Schemes for Nonlinear Diffusion in Hyperspectral Imagery. IEEE Transactions on Image Processing, 2007, 16, 1303-1314.	6.0	49
8	Interest Points for Hyperspectral Image Data. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 748-760.	2.7	45
9	Multiscale Representation and Segmentation of Hyperspectral Imagery Using Geometric Partial Differential Equations and Algebraic Multigrid Methods. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 2418-2434.	2.7	40
10	Multi-stage speed and parameter estimation for induction machines. , 0, , .		38
11	Change detection in hyperspectral imagery using temporal principal components. , 2006, 6233, 368.		33
12	Transactive energy market in distribution systems: A case study of energy trading between transactive nodes. , 2016, , .		30
13	Unsupervised feature extraction and band subset selection techniques based on relative entropy criteria for hyperspectral data analysis. , 2003, , .		29
14	Subset selection in identification, and application to speed and parameter estimation for induction machines. , 0, , .		26
15	Subset selection analysis for the reduction of hyperspectral imagery. , 1998, , .		23
16	A Vector SIFT Detector for Interest Point Detection in Hyperspectral Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 4521-4533.	2.7	23
17	Thermal component models for electro thermal analysis of multichip power modules. , 0, , .		22
18	Decomposed Algorithms for Speed and Parameter Estimation in Induction Machines. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1992, 25, 77-82.	0.4	21

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19	FT-IR Standoff Detection of Thermally Excited Emissions of Trinitrotoluene (TNT) Deposited on Aluminum Substrates. <i>Applied Spectroscopy</i> , 2013, 67, 181-186.	1.2	21
20	Integrating Spatial Information in Unsupervised Unmixing of Hyperspectral Imagery Using Multiscale Representation. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2014, 7, 1985-1993.	2.3	20
21	Decoupled control of temperature and relative humidity using a variable-air-volume HVAC system and non-interacting control. , 0, , .		19
22	Developing robust algorithms for speed and parameter estimation in induction machines. , 0, , .		17
23	Simulating a Multi-Agent based Self-Reconfigurable Electric Power Distribution System. , 2006, , .		15
24	Self-Reconfigurable Electric Power Distribution System using Multi-Agent Systems. , 2007, , .		15
25	Remote Sensing of Tundra Ecosystems Using High Spectral Resolution Reflectance: Opportunities and Challenges. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2022, 127, .	1.3	14
26	Solving abundance estimation in hyperspectral unmixing as a least distance problem. , 0, , .		13
27	A full algorithm to compute the constrained positive matrix factorization and its application in unsupervised unmixing of hyperspectral imagery. , 2008, , .		13
28	Iterative algorithms for unmixing of hyperspectral imagery. , 2003, , .		12
29	An algorithm for fully constrained abundance estimation in hyperspectral unmixing. , 2005, , .		12
30	A MATLAB toolbox for hyperspectral image analysis. , 0, , .		11
31	Comparison of matrix factorization algorithms for band selection in hyperspectral imagery. , 2000, , .		10
32	Hierarchical control of Hybrid Power Systems. , 2008, , .		10
33	Output selection for tuning of field oriented controllers: steady state analysis. , 0, , .		9
34	Improved Spatial-Spectral Superpixel Hyperspectral Unmixing. <i>Remote Sensing</i> , 2019, 11, 2374.	1.8	9
35	<title>Two-stage band selection algorithm for hyperspectral imagery</title>. , 2002, , .		8
36	A Spectrally Weighted Structure Tensor for Hyperspectral Imagery. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2016, 9, 4442-4449.	2.3	8

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37	Transactive control mechanism for efficient management of EVs charging in transactive energy environment. , 2016, , .		8
38	Semi-Automated Semantic Segmentation of Arctic Shorelines Using Very High-Resolution Airborne Imagery, Spectral Indices and Weakly Supervised Machine Learning Approaches. Remote Sensing, 2021, 13, 4572.	1.8	8
39	Design of a nonlinear HVAC control system with thermal load estimation. , 0, , .		7
40	Undergraduate research and new laboratory practices in power engineering. , 0, , .		7
41	Speeding up the MATLAB^{™} Hyperspectral Image Analysis Toolbox using GPUs and the Jacket Toolbox. , 2009, , .		7
42	A vector SIFT operator for interest point detection in hyperspectral imagery. , 2010, , .		7
43	Open path FTIR detection of threat chemicals in air and on surfaces. Proceedings of SPIE, 2011, , .	0.8	7
44	Integrating spatial information in unmixing using the nonnegative matrix factorization. Proceedings of SPIE, 2014, , .	0.8	7
45	Data Fusion Based Hybrid Deep Neural Network Method for Solar PV Power Forecasting. , 2019, , .		7
46	Gray-box modeling of electric drive systems using neural networks. , 0, , .		6
47	Curriculum improvements in power engineering. , 0, , .		6
48	The power of undergraduate research. IEEE Power and Energy Magazine, 2003, 1, 29-36.	1.6	6
49	Intelligent power routers: a distributed coordination approach for electric energy processing networks. International Journal of Critical Infrastructures, 2007, 3, 20.	0.1	6
50	A reconfiguration algorithm for a DC Zonal Electric Distribution System based on graph theory methods. , 2009, , .		6
51	Comparing quadtree region partitioning metrics for hyperspectral unmixing. , 2013, , .		6
52	An adaptive feedback linearizing controller for a shunt DC motor. , 2002, , .		5
53	Unsupervised Unmixing of Hyperspectral Imagery. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	5
54	Scale-space in hyperspectral image analysis. , 2006, , .		5

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55	A structure tensor for hyperspectral images. , 2011, , .		5
56	A computer-based system for validation of thermal models for multichip power modules. , 0, , .		4
57	Subsurface detection of coral reefs in shallow waters using hyperspectral data. , 2003, , .		4
58	Sensitivity Analysis of a Hyperspectral Inversion Model for Remote Sensing of Shallow Coastal Ecosystems. , 2008, , .		4
59	Comparison of basis-vector selection methods for structural modeling of hyperspectral imagery. Proceedings of SPIE, 2009, , .	0.8	4
60	Underwater unmixing and water optical properties retrieval using HyCIAT. Proceedings of SPIE, 2009, , .	0.8	4
61	High-resolution and LIDAR imaging support to the Haiti earthquake relief effort. Proceedings of SPIE, 2010, , .	0.8	4
62	Multi-temporal unmixing analysis of Hyperion images over the Guanica Dry Forest. , 2011, , .		4
63	Open-Path FTIR Detection of Explosives on Metallic Surfaces. , 0, , .		4
64	Low-dimensional enhanced superpixel representation with homogeneity testing for unmixing of hyperspectral imagery. , 2018, , .		4
65	Sensitivity and conditioning issues in speed sensorless control of induction motors. , 0, , .		3
66	<title>Wavelength selection for imaging hemoglobin in skin</title>. , 2000, 4129, 243.		3
67	Comparison of parameter conditioning in output error and equation error approaches in speed and parameter estimation in induction machines. , 0, , .		3
68	<title>Band selection for lossless image compression</title>. , 2001, , .		3
69	A probabilistic sensitivity analysis of water-leaving radiance to water constituents in coastal shallow waters. , 2003, , .		3
70	Clutter modeling for subsurface detection in hyperspectral imagery using Markov random fields. , 2004, 5159, 52.		3
71	Lumped-parameter thermal modeling of an IPEM using thermal component models. , 0, , .		3
72	An algorithm for unsupervised unmixing of hyperspectral imagery using positive matrix factorization. , 2005, , .		3

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73	Development of a field test environment for the validation of coastal remote sensing algorithms: Enrique Reef, Puerto Rico. , 2006, 6360, 79.		3
74	Subsurface unmixing with application to underwater classification. , 2007, , .		3
75	Fast multiscale regularization and segmentation of hyperspectral imagery via anisotropic diffusion and algebraic multigrid solvers. , 2007, , .		3
76	Abundance estimation algorithms using NVIDIA CUDA technology. , 2008, , .		3
77	SUPPORT VECTOR CLASSIFICATION OF LAND COVER AND BENTHIC HABITAT FROM HYPERSPECTRAL IMAGES. International Journal of High Speed Electronics and Systems, 2008, 18, 337-348.	0.3	3
78	Enhancement of hyperspectral imagery using spectrally weighted tensor anisotropic nonlinear diffusion for classification. , 2013, , .		3
79	Subsurface unmixing for benthic habitat mapping using hyperspectral imagery and lidar-derived bathymetry. , 2014, , .		3
80	Understanding spatial-spectral domain interactions in hyperspectral unmixing using exploratory data analysis. , 2016, , .		3
81	Effects of Region Size on Superpixel-Based Unmixing. , 2019, , .		3
82	<title>Partially supervised detection using band subset selection in hyperspectral data</title>. , 1999, , .		2
83	Conditioning analysis of parameter estimation in a synchronous generator. , 0, , .		2
84	A comparison of noise reduction methods for image enhancement in classification of hyperspectral imagery. , 2005, , .		2
85	A multi-agent approach for a self-reconfigurable electric power distribution system. , 2006, 6229, 130.		2
86	An algorithm to retrieve coastal water optical properties, bathymetry, and bottom albedo from hyperspectral imagery. , 2006, 6204, 128.		2
87	The impact of initialization procedures on unsupervised unmixing of hyperspectral imagery using the constrained positive matrix factorization. , 2007, , .		2
88	Fusion of hyperspectral imagery and bathymetry information for inversion of bioptical models. Proceedings of SPIE, 2009, , .	0.8	2
89	A comparison of unmixing algorithms for hyperspectral imagery. , 2009, , .		2
90	Using k-MST, k-EC, and k-VC neighbor graphs construction methods with spatial coherent distance for manifold learning in hyperspectral image processing. Proceedings of SPIE, 2010, , .	0.8	2

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91	Evaluation of different structural models for target detection in hyperspectral imagery. Proceedings of SPIE, 2010, , .	0.8	2
92	Enhancement of flow-like structures in hyperspectral imagery using tensor nonlinear anisotropic diffusion. , 2011, , .		2
93	Incorporating local information in unsupervised hyperspectral unmixing. , 2012, , .		2
94	Energy storage dispatch using adaptive control scheme considering wind-PV in smart distribution network. , 2015, , .		2
95	Coherence enhancement diffusion for hyperspectral imagery using a spectrally weighted structure tensor. , 2016, , .		2
96	Dimensionality reduction using superpixel segmentation for hyperspectral unmixing using the cNMF. Proceedings of SPIE, 2017, , .	0.8	2
97	Superpixel-Based Hyperspectral Unmixing with Regional Segmentation. , 2018, , .		2
98	Simplified simulation of unresolved objects in hyperspectral remote sensing for space situational awareness. , 2020, , .		2
99	Algorithms for nonlinear retrieval problems in atmospheric remote sensing using regularization methods. , 1998, 3495, 110.		1
100	Sensitivity analysis of injection-based position estimation in PM synchronous motors. , 0, , .		1
101	Distance learning programs at the Center for Power Electronics Systems. , 0, , .		1
102	Determining the dimensionality of hyperspectral imagery for unsupervised band selection. , 2003, , .		1
103	Dynamic Reduced Electrothermal Model for Integrated Power Electronics Modules (IPEM). Journal of Electronic Packaging, Transactions of the ASME, 2004, 126, 477-490.	1.2	1
104	A comparison of statistical and multiresolution texture features for improving hyperspectral image classification. , 2005, 5982, 165.		1
105	A boosting algorithm for texture classification and object detection. , 2005, 5817, 25.		1
106	Dealing with Ill Conditioning in Recursive Parameter Estimation for a Synchronous Generator. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	1
107	Unsupervised unmixing of hyperspectral imagery using the constrained positive matrix factorization. , 2006, , .		1
108	A comparison of algorithms to compute the positive matrix factorization and their application to unsupervised unmixing. , 2006, 6233, 786.		1

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109	Recursive Identification of Electric Drives using Gray-Box Models. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	1
110	Restoration of hyperspectral imagery. , 2006, 6233, 104.		1
111	Gray-Box Modeling of Electric Drives using Recursive Identification and Radial Basis Functions. Industrial Electronics Society (IECON), Annual Conference of IEEE, 2006, , .	0.0	1
112	New developments and application of the UPRM MATLAB hyperspectral image analysis toolbox. , 2007, , .		1
113	An update on SeaBED: a TesBED for validating subsurface aquatic hyperspectral remote sensing algorithms. Proceedings of SPIE, 2008, , .	0.8	1
114	Interest point detection for hyperspectral imagery. , 2009, , .		1
115	Understanding the impact of spatial resolution in unmixing of hyperspectral images. Proceedings of SPIE, 2010, , .	0.8	1
116	Identifiability of geometric models for linear unmixing at different spatial resolutions in hyperspectral unmixing. , 2010, , .		1
117	Evaluation of the GPU architecture for the implementation of target detection algorithms for hyperspectral imagery. , 2011, , .		1
118	Publisher's Note: Evaluation of the graphics processing unit architecture for the implementation of target detection algorithms for hyperspectral imagery. Journal of Applied Remote Sensing, 2012, 6, 060102.	0.6	1
119	Evaluation of the graphics processing unit architecture for the implementation of target detection algorithms for hyperspectral imagery. Journal of Applied Remote Sensing, 2012, 6, 061506.	0.6	1
120	Using undiagnosed data to enhance computerized breast cancer analysis with a three stage data labeling method. , 2014, , .		1
121	Front Matter: Volume 9088. , 2014, , .		1
122	Skin detection in hyperspectral images. , 2015, , .		1
123	Hyperspectral endmember class extraction using clustering and validity indexes. , 2016, , .		1
124	A Comparison of Column Subset Selection Methods for Unsupervised Band Subset Selection in Hyperspectral Imagery. , 2018, , .		1
125	Using Band Subset Selection For Dimensionality Reduction In Superpixel Segmentation Of Hyperspectral Imagery. , 2020, , .		1
126	Front Matter: Volume 9840. , 2016, , .		1

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127	Using a column subset selection method for endmember extraction in hyperspectral unmixing. , 2018, , .		1
128	Evaluating column subset selection methods for endmember extraction in hyperspectral unmixing. , 2020, , .		1
129	The Inclusive Engineering Consortium Stakeholders' Workshop. , 0, , .		1
130	Parameter estimation using decomposed algorithms with fast convergence rates. Computers and Industrial Engineering, 1997, 33, 67-70.	3.4	0
131	Atmospheric retrievals using regularization methods. , 1998, , .		0
132	<title>Unsupervised data fusion for hyperspectral imaging</title>. , 2002, 4541, 180.		0
133	Image reconstruction and subsurface detection by the application of Tikhonov regularization to inverse problems in hyperspectral images. , 2003, , .		0
134	<title>Unsupervised feature extraction techniques for hyperspectral data and its effects on unsupervised classification</title>. , 2003, 4885, 335.		0
135	Effects of resolution enhancement and atmospheric correction preprocessing in classification of hyperspectral imagery. , 2004, 5425, 384.		0
136	An update on the MATLAB hyperspectral image analysis toolbox. , 2005, , .		0
137	Benthic habitat mapping using hyperspectral remote sensing. , 2006, 6360, 87.		0
138	Front Matter: Volume 6937. , 2007, , .		0
139	Hyperspectral image unmixing over benthic habitats. , 2007, , .		0
140	Front Matter: Volume 7105. Proceedings of SPIE, 2008, , .	0.8	0
141	Unsupervised spectral-spatial classification of hyperspectral imagery using real and complex features and generalized histograms. , 2008, , .		0
142	Effects of image restoration in classification and visual analysis of LANDSAT imagery over Puerto Rico. , 2009, , .		0
143	Front Matter: Volume 7473. , 2009, , .		0
144	Front Matter: Volume 7825. , 2010, , .		0

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145	Denoising of hyperspectral images by best multilinear rank approximation of a tensor. Proceedings of SPIE, 2010, , .	0.8	0
146	Ship detection in MODIS imagery. Proceedings of SPIE, 2011, , .	0.8	0
147	Front Matter: Volume 8175. , 2011, , .		0
148	Unmixing analysis based on multiscale segmentation. , 2012, , .		0
149	Developing a portable GPU library for hyperspectral image processing. , 2012, , .		0
150	Unsupervised unmixing analysis based on multiscale representation. , 2012, , .		0
151	An approach for unmixing of hyperspectral imagery based on scale-space representation. , 2013, , .		0
152	Multivariate diffusion tensor and induced segmentation. , 2013, , .		0
153	Determining optimum pixel size for classification. , 2014, , .		0
154	Person detection in hyperspectral images via skin segmentation using an active learning approach. , 2015, , .		0
155	Subsurface linear unmixing on a controlled underwater enviroment. , 2016, , .		0
156	Segmentation-based cNMF for hyperspectral unmixing. , 2017, , .		0
157	Regional vs. Global Superpixel-Based Unmixing of Hyperspectral Imagery. , 2018, , .		0
158	<title>Comparison of principal-component-based band selection methods for hyperspectral imagery</title>. , 2002, , .		0
159	Dynamic Reduced Electrothermal Model for Integrated Power Electronics Modules (IPEM): Part I â€” Thermal Analysis. , 2003, , .		0
160	A Solutionware for Hyperspectral Image Processing and Analysis. Chapman & Hall/CRC Computer and Information Science Series, 2007, , 309-333.	0.4	0
161	SUPPORT VECTOR CLASSIFICATION OF LAND COVER AND BENTHIC HABITAT FROM HYPERSPECTRAL IMAGES. Selected Topics in Electornics and Systems, 2009, , 109-120.	0.2	0
162	Front Matter: Volume 10198. , 2017, , .		0

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163	Analysis of close-range hyperspectral images of vegetation communities in a high Arctic tundra ecosystem. , 2019, , .		0
164	Evaluating the effect of band subset selection in SLIC superpixel segmentation. , 2020, , .		0
165	Work in Progress: H-AGEP - A Model to Improve the Preparation and Transition for Hispanic STEM Doctoral Students into Community College Faculty Positions. , 0, , .		0
166	A Super Department Model for Multi-University Collaboration. , 0, , .		0