Alina Zare

List of Publications by Year
in descending order

134 papers	**2,479** citations	304743 **22** h-index	233421 **45** g-index
143 all docs	**143** docs citations	**143** times ranked	**2121** citing authors

#	ARTICLE	IF	CITATIONS
1	Endmember Variability in Hyperspectral Analysis: Addressing Spectral Variability During Spectral Unmixing. IEEE Signal Processing Magazine, 2014, 31, 95-104.	5.6	292
2	Individual Tree-Crown Detection in RGB Imagery Using Semi-Supervised Deep Learning Neural Networks. Remote Sensing, 2019, 11, 1309.	4.0	155
3	Multi-Modal Change Detection, Application to the Detection of Flooded Areas: Outcome of the 2009â€"2010 Data Fusion Contest. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 331-342.	4.9	149
4	Sparsity Promoting Iterated Constrained Endmember Detection in Hyperspectral Imagery. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 446-450.	3.1	135
5	Spectral Variability in Hyperspectral Data Unmixing: A comprehensive review. IEEE Geoscience and Remote Sensing Magazine, 2021, 9, 223-270.	9.6	92
6	Hyperspectral Band Selection and Endmember Detection Using Sparsity Promoting Priors. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 256-260.	3.1	82
7	Cross-site learning in deep learning RGB tree crown detection. Ecological Informatics, 2020, 56, 101061.	5.2	82
8	PCE: Piecewise Convex Endmember Detection. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 2620-2632.	6.3	75
9	RhizoVision Crown: An Integrated Hardware and Software Platform for Root Crown Phenotyping. Plant Phenomics, 2020, 2020, 3074916.	5.9	74
10	Spatial and Spectral Unmixing Using the Beta Compositional Model. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1994-2003.	4.9	63
11	Bayesian Fuzzy Clustering. IEEE Transactions on Fuzzy Systems, 2015, 23, 1545-1561.	9.8	53
12	Discriminative Multiple Instance Hyperspectral Target Characterization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 2342-2354.	13.9	52
13	Multiple instance hybrid estimator for hyperspectral target characterization and sub-pixel target detection. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 146, 235-250.	11.1	46
14	Sampling Piecewise Convex Unmixing and Endmember Extraction. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 1655-1665.	6.3	44
15	Piecewise Convex Multiple-Model Endmember Detection and Spectral Unmixing. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 2853-2862.	6.3	44
16	Vegetation Mapping for Landmine Detection Using Long-Wave Hyperspectral Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 172-178.	6.3	38
17	A remote sensing derived data set of 100 million individual tree crowns for the National Ecological Observatory Network. ELife, 2021, 10, .	6.0	38
18	Functions of Multiple Instances for Learning Target Signatures. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4670-4686.	6.3	36

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19	Partial Membership Latent Dirichlet Allocation for Soft Image Segmentation. IEEE Transactions on Image Processing, 2017, 26, 5590-5602.	9.8	35
20	Geometric attentional dynamic graph convolutional neural networks for point cloud analysis. Neurocomputing, 2021, 432, 300-310.	5.9	32
21	Plants meet machines: Prospects in machine learning for plant biology. Applications in Plant Sciences, 2020, 8, e11371.	2.1	31
22	Overcoming small minirhizotron datasets using transfer learning. Computers and Electronics in Agriculture, 2020, 175, 105466.	7.7	30
23	Multiple Instance Choquet Integral Classifier Fusion and Regression for Remote Sensing Applications. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 2741-2753.	6.3	29
24	Multiple Instance Dictionary Learning for Beat-to-Beat Heart Rate Monitoring From Ballistocardiograms. IEEE Transactions on Biomedical Engineering, 2018, 65, 2634-2648.	4.2	26
25	Measures of the Shapley index for learning lower complexity fuzzy integrals. Granular Computing, 2017, 2, 303-319.	8.0	23
26	Peanut maturity classification using hyperspectral imagery. Biosystems Engineering, 2019, 188, 165-177.	4.3	23
27	Hybrid data€driven physics model€based framework for enhanced cyber€physical smart grid security. IET Smart Grid, 2020, 3, 445-453.	2.2	23
28	Deep convolutional neural network target classification for underwater synthetic aperture sonar imagery. , 2019, , .		23
29	Comparing Fuzzy, Probabilistic, and Possibilistic Partitions Using the Earth Mover's Distance. IEEE Transactions on Fuzzy Systems, 2013, 21, 766-775.	9.8	22
30	A fully learnable context-driven object-based model for mapping land cover using multi-view data from unmanned aircraft systems. Remote Sensing of Environment, 2018, 216, 328-344.	11.0	20
31	Hyperspectral Unmixing With Endmember Variability via Alternating Angle Minimization. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4983-4993.	6.3	19
32	A benchmark dataset for canopy crown detection and delineation in co-registered airborne RGB, LiDAR and hyperspectral imagery from the National Ecological Observation Network. PLoS Computational Biology, 2021, 17, e1009180.	3.2	19
33	Piece-wise convex spatial-spectral unmixing of hyperspectral imagery using possibilistic and fuzzy clustering. , 2011, , .		18
34	Using physics-based macroscopic and microscopic mixture models for hyperspectral pixel unmixing. Proceedings of SPIE, 2012, , .	0.8	18
35	Multiresolution Multimodal Sensor Fusion for Remote Sensing Data With Label Uncertainty. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 2755-2769.	6.3	18
36	Multiple Instance Choquet integral for classifier fusion. , 2016, , .		17

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37	Possibilistic fuzzy local information C-Means for sonar image segmentation. , 2017, , .		17
38	Ensemble CorrDet with adaptive statistics for bad data detection. IET Smart Grid, 2020, 3, 572-580.	2.2	17
39	Spatial-spectral unmixing using fuzzy local information. , 2011, , .		16
40	Spectral Unmixing Cluster Validity Index for Multiple Sets of Endmembers. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 1282-1295.	4.9	16
41	Foreword to the Special Issue on Hyperspectral Image and Signal Processing. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1841-1843.	4.9	16
42	Root identification in minirhizotron imagery with multiple instance learning. Machine Vision and Applications, 2020, 31, 1.	2.7	16
43	Histogram Layers for Texture Analysis. IEEE Transactions on Artificial Intelligence, 2022, 3, 541-552.	4.7	16
44	Heart beat characterization from ballistocardiogram signals using extended functions of multiple instances. , 2016, 2016, 756-760.		14
45	Spatially-smooth piece-wise convex endmember detection. , 2010, , .		13
46	A sparsity promoting bilinear unmixing model. , 2012, , .		13
47	Random projections fuzzy c-means (RPFCM) for big data clustering. , 2015, , .		13
48	Pattern Recognition Using Functions of Multiple Instances. , 2010, , .		10
49	Adaptive coherence estimator (ACE) for explosive hazard detection using wideband electromagnetic induction (WEMI). Proceedings of SPIE, 2016, , .	0.8	10
50	Binary fuzzy measures and Choquet integration for multi-source fusion. , 2017, , .		10
51	Multitarget Multiple-Instance Learning for Hyperspectral Target Detection. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-14.	6.3	10
52	Directly Measuring Material Proportions Using Hyperspectral Compressive Sensing. IEEE Geoscience and Remote Sensing Letters, 2012, 9, 323-327.	3.1	9
53	Possibilistic fuzzy local information C-means with automated feature selection for seafloor segmentation. , 2018, , .		9
54	Super resolution for root imaging. Applications in Plant Sciences, 2020, 8, e11374.	2.1	8

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55	Non-Invasive Heart Rate Estimation From Ballistocardiograms Using Bidirectional LSTM Regression. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 3396-3407.	6.3	8
56	Multiple model endmember detection based on spectral and spatial information. , 2010, , .		7
57	Sub-pixel target spectra estimation and detection using functions of multiple instances. , 2011, , .		7
58	Endmember extraction using the physics-based multi-mixture pixel model. , 2012, , .		7
59	Multi-image texton selection for sonar image seabed co-segmentation. Proceedings of SPIE, 2013, , .	0.8	7
60	Earth Movers Distance-Based Simultaneous Comparison of Hyperspectral Endmembers and Proportions. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1910-1921.	4.9	7
61	Extended Functions of Multiple Instances for target characterization. , 2014, , .		7
62	Multiple Instance Choquet Integral with Binary Fuzzy Measures for Remote Sensing Classifier Fusion with Imprecise Labels. , 2019, , .		7
63	Weakly Supervised Minirhizotron Image Segmentation with MIL-CAM. Lecture Notes in Computer Science, 2020, , 433-449.	1.3	7
64	Endmember detection using the Dirichlet process. , 2008, , .		6
65	Bootstrapping for Piece-Wise Convex Endmember Distribution Detection. , 2012, , .		6
66	A framework for computing crowd emotions using agent based modeling. , 2013, , .		6
67	Algorithms for Multispectral and Hyperspectral Image Analysis. Journal of Electrical and Computer Engineering, 2013, 2013, 1-2.	0.9	6
68	Sand Ripple Characterization Using an Extended Synthetic Aperture Sonar Model and Parallel Sampling Method. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 5547-5559.	6.3	6
69	Hyperspectral unmixing with endmember variability using Partial Membership Latent Dirichlet Allocation. , 2017, , .		6
70	Genetic programming based Choquet integral for multi-source fusion. , 2017, , .		6
71	Multiple instance hybrid estimator for learning target signatures. , 2017, , .		6
72	State Estimator and Machine Learning Analysis of Residual Differences to Detect and Identify FDI and Parameter Errors in Smart Grids. , 2021, , .		6

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73	Hyperspectral tree crown classification using the multiple instance adaptive cosine estimator. PeerJ, 2019, 7, e6405.	2.0	6
74	Cross‑layered distributed data‑driven framework for enhanced smart grid cyber‑physical security. IET Smart Grid, 2022, 5, 398-416.	2.2	6
75	Context-based endmember detection for hyperspectral imagery. , 2009, , .		5
76	L1-endmembers: a robust endmember detection and spectral unmixing algorithm. Proceedings of SPIE, 2010, , .	0.8	5
77	Predictive models to identify Holstein cows at risk of metritis and clinical cure and reproductive/productive failure following antimicrobial treatment. Preventive Veterinary Medicine, 2021, 194, 105431.	1.9	5
78	A fast target detection algorithm for underwater synthetic aperture sonar imagery. , 2018, , .		5
79	Comparison of possibilistic fuzzy local information C-means and possibilistic K-nearest neighbors for synthetic aperture sonar image segmentation. , 2019, , .		5
80	Addressing the Inevitable Imprecision: Multiple Instance Learning for Hyperspectral Image Analysis. Advances in Computer Vision and Pattern Recognition, 2020, , 141-185.	1.3	5
81	A comparison of deterministic and probabilistic approaches to endmember representation. , 2010, , .		4
82	An Investigation of Likelihoods and Priors for Bayesian Endmember Estimation. , 2011, , .		4
83	Subpixel target detection in hyperspectral imagery using piece-wise convex spatial-spectral unmixing, possibilistic and fuzzy clustering, and co-registered LiDAR. , 2013, , .		4
84	An integrated graph cuts segmentation and piece-wise convex unmixing approach for hyperspectral imaging. , 2014, , .		4
85	Random projection below the JL limit. , 2016, , .		4
86	On the use of log-gabor features for subsurface object detection using ground penetrating radar. Proceedings of SPIE, 2016, , .	0.8	4
87	Multiple Instance Dictionary Learning using Functions of Multiple Instances. , 2016, , .		4
88	Aggregation of Choquet integrals in GPR and EMI for handheld platform-based explosive hazard detection. Proceedings of SPIE, 2017, , .	0.8	4
89	New approach for measuring interconnectivity of fission gas pores in nuclear fuels from 2D micrographs. Journal of Materials Science, 2021, 56, 543-557.	3.7	4
90	A Network Parameter Database False Data Injection Correction Physics-Based Model: A Machine Learning Synthetic Measurement-Based Approach. Applied Sciences (Switzerland), 2021, 11, 8074.	2.5	4

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91	Sparsity promoting iterated constrained endmember detection with integrated band selection. , 2007, , .		3
92	Agent-based rumor spreading models for human geography applications. , 2012, , .		3
93	Multiple-instance learning-based sonar image classification. Proceedings of SPIE, 2017, , .	0.8	3
94	Developing Spectral Libraries Using Multiple Target Multiple Instance Adaptive Cosine/Coherence Estimator. , 2019, , .		3
95	Evaluation of Postharvest Senescence of Broccoli via Hyperspectral Imaging. Plant Phenomics, 2022, 2022, .	5.9	3
96	Sensor fusion for airborne landmine detection. , 2006, , .		2
97	Hyperspectral image analysis with piece-wise convex endmember estimation and spectral unmixing. , 2012, , .		2
98	Spectral unmixing using the beta compositional model. , 2013, , .		2
99	A human geospatial predictive analytics framework with application to finding medically underserved areas. , 2014, , .		2
100	Anomaly detection of subsurface objects using handheld ground-penetrating radar. Proceedings of SPIE, 2015, , .	0.8	2
101	Possibilistic context identification for SAS imagery. , 2015, , .		2
102	Partial membership latent Dirichlet allocation for image segmentation. , 2016, , .		2
103	Instance influence estimation for hyperspectral target signature characterization using extended functions of multiple instances. Proceedings of SPIE, 2016, , .	0.8	2
104	Map-guided hyperspectral image superpixel segmentation using proportion maps. , 2017, , .		2
105	Complex Scene Classification of PoLSAR Imagery Based on a Self-Paced Learning Approach. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 4818-4825.	4.9	2
106	Temporal Mapping of Hyperspectral Data. , 2019, , .		2
107	Fractal analysis of seafloor textures for target detection in synthetic aperture sonar imagery. , 2018, , .		2
108	Explainable Systematic Analysis for Synthetic Aperture Sonar Imagery. , 2021, , .		2

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109	Evaluation of image features for discriminating targets from false positives in synthetic aperture sonar imagery. , 2019, , .		2
110	Jointly Optimized Spatial Histogram UNET Architecture (JOSHUA) for Adipose Tissue Segmentation. BME Frontiers, 2022, 2022, .	4.5	2
111	SPICE: a sparsity promoting iterated constrained endmember extraction algorithm with applications to landmine detection from hyperspectral imagery. , 2007, , .		1
112	Multiclass subpixel target detection using functions of multiple instances. , 2011, , .		1
113	Environmentally-adaptive target recognition for SAS imagery. , 2017, , .		1
114	Fourier features for explosive hazard detection using a wideband electromagnetic induction sensor. , 2017, , .		1
115	LBP features for hand-held ground penetrating radar. Proceedings of SPIE, 2017, , .	0.8	1
116	Comparison of prescreening algorithms for target detection in synthetic aperture sonar imagery. , 2018, , .		1
117	The Weakly-Labeled Rand Index. , 2021, , .		1
118	Investigation of initialization strategies for the Multiple Instance Adaptive Cosine Estimator. , 2019, , .		1
119	Comparison of hand-held WEMI target detection algorithms. , 2019, , .		1
120	RandCrowns: A Quantitative Metric for Imprecisely Labeled Tree Crown Delineation. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 11229-11239.	4.9	1
121	Smart FDI Attack Design and Detection with Data Transmutation Framework for Smart Grids. , 2021, , .		1
122	Learnable Adaptive Cosine Estimator (LACE) for Image Classification. , 2022, , .		1
123	Quantifying the benefit of airborne and ground sensor fusion for target detection. Proceedings of SPIE, 2010, , .	0.8	0
124	Robust Endmember detection using L$_1$ norm factorization. , 2010, , .		0
125	Rebuilding the injured brain: use of MRS in clinical regenerative medicine. Proceedings of SPIE, 2011, , .	0.8	0
126	Simultaneous Band-weighting and Spectral Unmixing for Multiple Endmember Sets. , 2013, , .		0

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127	WHISPERS 2013: 5th Workshop on Hyperspectral Image and Signal Processing ? Evolution in Remote Sensing [Conference Reports]. IEEE Geoscience and Remote Sensing Magazine, 2013, 1, 50-53.	9.6	0
128	Multiple instance dictionary learning for subsurface object detection using handheld EMI. Proceedings of SPIE, 2015, , .	0.8	0
129	Functions of multiple instances for sub-pixel target characterization in hyperspectral imagery. , 2015, , .		0
130	Alternating angle minimization based unmixingwith endmember variability. , 2016, , .		0
131	Buried object detection using handheld WEMI with task-driven extended functions of multiple instances. Proceedings of SPIE, 2016, , .	0.8	0
132	Quantitative evaluation of superpixel clustering. , 2018, , .		0
133	Sample spacing variations on the feature performance for subsurface object detection using handheld ground penetrating radar. , 2018, , .		0
134	Divergence Regulated Encoder Network for Joint Dimensionality Reduction and Classification. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	0