

Gui-Song Xia

List of Publications by Year in descending order

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141
papers

13,356
citations

76196

40
h-index

31759

101
g-index

141
all docs

141
docs citations

141
times ranked

7899
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep Learning in Remote Sensing: A Comprehensive Review and List of Resources. IEEE Geoscience and Remote Sensing Magazine, 2017, 5, 8-36.	4.9	1,976
2	DOTA: A Large-Scale Dataset for Object Detection in Aerial Images. , 2018, , .		1,294
3	AID: A Benchmark Data Set for Performance Evaluation of Aerial Scene Classification. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 3965-3981.	2.7	1,291
4	Transferring Deep Convolutional Neural Networks for the Scene Classification of High-Resolution Remote Sensing Imagery. Remote Sensing, 2015, 7, 14680-14707.	1.8	949
5	Learning RoI Transformer for Oriented Object Detection in Aerial Images. , 2019, , .		615
6	Remote Sensing Image Scene Classification Meets Deep Learning: Challenges, Methods, Benchmarks, and Opportunities. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 3735-3756.	2.3	497
7	Land-cover classification with high-resolution remote sensing images using transferable deep models. Remote Sensing of Environment, 2020, 237, 111322.	4.6	465
8	Gliding Vertex on the Horizontal Bounding Box for Multi-Oriented Object Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1452-1459.	9.7	415
9	Rotation-Sensitive Regression for Oriented Scene Text Detection. , 2018, , .		348
10	Bag-of-Visual-Words Scene Classifier With Local and Global Features for High Spatial Resolution Remote Sensing Imagery. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 747-751.	1.4	289
11	ReDet: A Rotation-equivariant Detector for Aerial Object Detection. , 2021, , .		289
12	Dirichlet-Derived Multiple Topic Scene Classification Model for High Spatial Resolution Remote Sensing Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 2108-2123.	2.7	242
13	A survey on vision-based UAV navigation. Geo-Spatial Information Science, 2018, 21, 21-32.	2.4	239
14	Align Deep Features for Oriented Object Detection. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-11.	2.7	196
15	Multi-feature combined cloud and cloud shadow detection in GaoFen-1 wide field of view imagery. Remote Sensing of Environment, 2017, 191, 342-358.	4.6	191
16	Mini-UAV-Borne Hyperspectral Remote Sensing: From Observation and Processing to Applications. IEEE Geoscience and Remote Sensing Magazine, 2018, 6, 46-62.	4.9	189
17	X-ModalNet: A semi-supervised deep cross-modal network for classification of remote sensing data. ISPRS Journal of Photogrammetry and Remote Sensing, 2020, 167, 12-23.	4.9	163
18	Object Detection in Aerial Images: A Large-Scale Benchmark and Challenges. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 7778-7796.	9.7	148

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19	UAVid: A semantic segmentation dataset for UAV imagery. ISPRS Journal of Photogrammetry and Remote Sensing, 2020, 165, 108-119.	4.9	146
20	Unsupervised Feature Learning Via Spectral Clustering of Multidimensional Patches for Remotely Sensed Scene Classification. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 2015-2030.	2.3	145
21	Learning Center Probability Map for Detecting Objects in Aerial Images. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 4307-4323.	2.7	132
22	Learning High-level Features for Satellite Image Classification With Limited Labeled Samples. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4472-4482.	2.7	118
23	Mini-Unmanned Aerial Vehicle-Based Remote Sensing: Techniques, applications, and prospects. IEEE Geoscience and Remote Sensing Magazine, 2019, 7, 29-63.	4.9	114
24	Accurate Junction Detection and Characterization in Natural Images. International Journal of Computer Vision, 2014, 106, 31-56.	10.9	101
25	Object Tracking in Satellite Videos by Improved Correlation Filters With Motion Estimations. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 1074-1086.	2.7	93
26	Shape-based Invariant Texture Indexing. International Journal of Computer Vision, 2010, 88, 382-403.	10.9	92
27	A Multiple-Instance Densely-Connected ConvNet for Aerial Scene Classification. IEEE Transactions on Image Processing, 2020, 29, 4911-4926.	6.0	91
28	An Urban Water Extraction Method Combining Deep Learning and Google Earth Engine. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 769-782.	2.3	89
29	Image stitching by line-guided local warping with global similarity constraint. Pattern Recognition, 2018, 83, 481-497.	5.1	85
30	Learning Attraction Field Representation for Robust Line Segment Detection. , 2019, , .		76
31	Parsing very high resolution urban scene images by learning deep ConvNets with edge-aware loss. ISPRS Journal of Photogrammetry and Remote Sensing, 2020, 170, 15-28.	4.9	74
32	On Creating Benchmark Dataset for Aerial Image Interpretation: Reviews, Guidances, and Million-AID. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 4205-4230.	2.3	71
33	Tiny Object Detection in Aerial Images. , 2021, , .		68
34	Exploiting Deep Features for Remote Sensing Image Retrieval: A Systematic Investigation. IEEE Transactions on Big Data, 2020, 6, 507-521.	4.4	62
35	A geometry-attentional network for ALS point cloud classification. ISPRS Journal of Photogrammetry and Remote Sensing, 2020, 164, 26-40.	4.9	62
36	Detecting Power Lines in UAV Images with Convolutional Features and Structured Constraints. Remote Sensing, 2019, 11, 1342.	1.8	61

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37	A Color-Texture-Structure Descriptor for High-Resolution Satellite Image Classification. Remote Sensing, 2016, 8, 259.	1.8	57
38	Image Caption Generation with Part of Speech Guidance. Pattern Recognition Letters, 2019, 119, 229-237.	2.6	51
39	Advances in spaceborne hyperspectral remote sensing in China. Geo-Spatial Information Science, 2021, 24, 95-120.	2.4	49
40	Deep learning-based crop mapping in the cloudy season using one-shot hyperspectral satellite imagery. Computers and Electronics in Agriculture, 2021, 186, 106188.	3.7	47
41	Locally Nonlinear Affine Verification for Multisensor Image Matching. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16.	2.7	46
42	An Empirical Study of Remote Sensing Pretraining. IEEE Transactions on Geoscience and Remote Sensing, 2023, 61, 1-20.	2.7	46
43	Detecting tiny objects in aerial images: A normalized Wasserstein distance and a new benchmark. ISPRS Journal of Photogrammetry and Remote Sensing, 2022, 190, 79-93.	4.9	44
44	Extreme value theory-based calibration for the fusion of multiple features in high-resolution satellite scene classification. International Journal of Remote Sensing, 2013, 34, 8588-8602.	1.3	43
45	Accurate Annotation of Remote Sensing Images via Active Spectral Clustering with Little Expert Knowledge. Remote Sensing, 2015, 7, 15014-15045.	1.8	43
46	Local Semantic Enhanced ConvNet for Aerial Scene Recognition. IEEE Transactions on Image Processing, 2021, 30, 6498-6511.	6.0	43
47	Meaningful Object Segmentation From SAR Images via a Multiscale Nonlocal Active Contour Model. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 1860-1873.	2.7	41
48	Satellite-ground integrated destriping network: A new perspective for EO-1 Hyperion and Chinese hyperspectral satellite datasets. Remote Sensing of Environment, 2020, 237, 111416.	4.6	39
49	Asymmetric Siamese Networks for Semantic Change Detection in Aerial Images. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-18.	2.7	39
50	Mid-level features and spatio-temporal context for activity recognition. Pattern Recognition, 2012, 45, 4182-4191.	5.1	38
51	Unmixing Convolutional Features for Crisp Edge Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 6602-6609.	9.7	37
52	Region-Based Change Detection for Polarimetric SAR Images Using Wishart Mixture Models. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 6746-6756.	2.7	36
53	Dynamic texture recognition by aggregating spatial and temporal features via ensemble SVMs. Neurocomputing, 2016, 173, 1310-1321.	3.5	35
54	Synthesizing and Mixing Stationary Gaussian Texture Models. SIAM Journal on Imaging Sciences, 2014, 7, 476-508.	1.3	34

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55	Automatic Ship Detection in SAR Images Using Multi-Scale Heterogeneities and an A Contrario Decision. Remote Sensing, 2015, 7, 7695-7711.	1.8	34
56	Optimal Temporal Window Selection for Winter Wheat and Rapeseed Mapping with Sentinel-2 Images: A Case Study of Zhongxiang in China. Remote Sensing, 2020, 12, 226.	1.8	33
57	A Computational Model for Object-Based Visual Saliency: Spreading Attention Along Gestalt Cues. IEEE Transactions on Multimedia, 2016, 18, 273-286.	5.2	31
58	Visual object tracking by correlation filters and online learning. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 140, 77-89.	4.9	30
59	An Anchor-Free Siamese Target Tracking Network for Hyperspectral Video. , 2021, , .		28
60	Rotation adaptive correlation filter for moving object tracking in satellite videos. Neurocomputing, 2021, 438, 94-106.	3.5	28
61	SAR-Based Terrain Classification Using Weakly Supervised Hierarchical Markov Aspect Models. IEEE Transactions on Image Processing, 2012, 21, 4232-4243.	6.0	27
62	Anisotropic-Scale Junction Detection and Matching for Indoor Images. IEEE Transactions on Image Processing, 2018, 27, 78-91.	6.0	27
63	Hyperspectral Anomaly Detection via Locally Enhanced Low-Rank Prior. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 6995-7009.	2.7	26
64	Siamese networks with distractor-reduction method for long-term visual object tracking. Pattern Recognition, 2021, 112, 107698.	5.1	26
65	NaSC-TG2: Natural Scene Classification With Tiangong-2 Remotely Sensed Imagery. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 3228-3242.	2.3	25
66	An Adaptive and Iterative Method of Urban Area Extraction From SAR Images. IEEE Geoscience and Remote Sensing Letters, 2006, 3, 504-507.	1.4	24
67	A Comparative Study of Sampling Analysis in the Scene Classification of Optical High-Spatial Resolution Remote Sensing Imagery. Remote Sensing, 2015, 7, 14988-15013.	1.8	23
68	Fast Binary Coding for the Scene Classification of High-Resolution Remote Sensing Imagery. Remote Sensing, 2016, 8, 555.	1.8	23
69	Analysis of large-scale UAV images using a multi-scale hierarchical representation. Geo-Spatial Information Science, 2018, 21, 33-44.	2.4	23
70	Unsupervised Classification of Polarimetric SAR Images via Riemannian Sparse Coding. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 5381-5390.	2.7	22
71	Multi-object tracking with inter-feedback between detection and tracking. Neurocomputing, 2016, 171, 768-780.	3.5	21
72	Pipeline leakage detection for district heating systems using multisource data in mid- and high-latitude regions. ISPRS Journal of Photogrammetry and Remote Sensing, 2019, 151, 207-222.	4.9	21

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73	Mining Deep Semantic Representations for Scene Classification of High-Resolution Remote Sensing Imagery. IEEE Transactions on Big Data, 2020, 6, 522-536.	4.4	21
74	CSDS: End-to-End Aerial Scenes Classification With Depthwise Separable Convolution and an Attention Mechanism. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 10484-10499.	2.3	21
75	PlaneTR: Structure-Guided Transformers for 3D Plane Recovery. , 2021, , .		21
76	A Rapid and Automatic MRF-Based Clustering Method for SAR Images. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 596-600.	1.4	20
77	Mental Retrieval of Remote Sensing Images via Adversarial Sketch-Image Feature Learning. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 7801-7814.	2.7	20
78	SPNet: Spectral Patching End-to-End Classification Network for UAV-Borne Hyperspectral Imagery With High Spatial and Spectral Resolutions. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-17.	2.7	19
79	A comparative study of sampling analysis in scene classification of high-resolution remote sensing imagery. , 2015, , .		18
80	A benchmark for scene classification of high spatial resolution remote sensing imagery. , 2015, , .		17
81	Globally consistent correspondence of multiple feature sets using proximal Gauss-Seidel relaxation. Pattern Recognition, 2016, 51, 255-267.	5.1	17
82	Retrieving Aerial Scene Images with Learned Deep Image-Sketch Features. Journal of Computer Science and Technology, 2017, 32, 726-737.	0.9	17
83	Large-Scale Land Cover Classification in Gaofen-2 Satellite Imagery. , 2018, , .		17
84	Saliency-Based Endmember Detection for Hyperspectral Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 3667-3680.	2.7	17
85	Blind Hyperspectral Unmixing Considering the Adjacency Effect. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 6633-6649.	2.7	17
86	Learning Regional Attraction for Line Segment Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1998-2013.	9.7	17
87	Texture Analysis with Shape Co-occurrence Patterns. , 2014, , .		14
88	Locally warping-based image stitching by imposing line constraints. , 2016, , .		14
89	AID++: An Updated Version of AID on Scene Classification. , 2018, , .		14
90	Active learning for training sample selection in remote sensing image classification using spatial information. Remote Sensing Letters, 2017, 8, 1210-1219.	0.6	14

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91	Spatial-Spectral-Emissivity Land-Cover Classification Fusing Visible and Thermal Infrared Hyperspectral Imagery. Remote Sensing, 2017, 9, 910.	1.8	13
92	A Functional Representation for Graph Matching. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 42, 1-1.	9.7	13
93	Exemplar-Based Recursive Instance Segmentation With Application to Plant Image Analysis. IEEE Transactions on Image Processing, 2020, 29, 389-404.	6.0	13
94	Texture Characterization Using Shape Co-Occurrence Patterns. IEEE Transactions on Image Processing, 2017, 26, 5005-5018.	6.0	12
95	Implicit Euler ODE Networks for Single-Image Dehazing. , 2020, , .		12
96	A Self-Supervised Denoising Network for Satellite-Airborne-Ground Hyperspectral Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16.	2.7	12
97	Delving into deep representations for remote sensing image retrieval. , 2016, , .		11
98	Information processing for unmanned aerial vehicles (UAVs) in surveying, mapping, and navigation. Geo-Spatial Information Science, 2018, 21, 1-1.	2.4	11
99	GeoSay: A geometric saliency for extracting buildings in remote sensing images. Computer Vision and Image Understanding, 2019, 186, 37-47.	3.0	11
100	Video object detection with a convolutional regression tracker. ISPRS Journal of Photogrammetry and Remote Sensing, 2021, 176, 139-150.	4.9	11
101	SAR images classification method based on Dempster-Shafer theory and kernel estimate. Journal of Systems Engineering and Electronics, 2007, 18, 210-216.	1.1	10
102	Recent Advances and Opportunities in Scene Classification of Aerial Images with Deep Models. , 2018, , .		10
103	Robust visible-infrared image matching by exploiting dominant edge orientations. Pattern Recognition Letters, 2019, 127, 3-10.	2.6	10
104	Ultrafast Endoscopic Ultrasonography With Circular Array. IEEE Transactions on Medical Imaging, 2020, 39, 2110-2120.	5.4	10
105	DOCC: Deep one-class crop classification via positive and unlabeled learning for multi-modal satellite imagery. International Journal of Applied Earth Observation and Geoinformation, 2021, 105, 102598.	1.4	10
106	MINI-UAV borne hyperspectral remote sensing: A review. , 2017, , .		9
107	Conditional Generative ConvNets for Exemplar-Based Texture Synthesis. IEEE Transactions on Image Processing, 2021, 30, 2461-2475.	6.0	9
108	A perception-inspired building index for automatic built-up area detection in high-resolution satellite images. , 2013, , .		8

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109	Multi-Level Fusion of the Multi-Receptive Fields Contextual Networks and Disparity Network for Pairwise Semantic Stereo. , 2019, , .		8
110	Accurate Bridge Detection in Aerial Images With an Auxiliary Waterbody Extraction Task. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 9651-9666.	2.3	8
111	Stationary dynamic texture synthesis using convolutional neural networks. , 2016, , .		7
112	Cropnet: Deep Spatial-Temporal-Spectral Feature Learning Network for Crop Classification from Time-Series Multi-Spectral Images. , 2020, , .		7
113	Compact representations of stationary dynamic textures. , 2012, , .		6
114	Nonnegative discriminative manifold learning for hyperspectral data dimension reduction. , 2013, , .		6
115	Sketch-based aerial image retrieval. , 2017, , .		6
116	Cropland Product Fusion Method Based on the Overall Consistency Difference: A Case Study of China. Remote Sensing, 2019, 11, 1065.	1.8	6
117	SPNet: A Spectral Patching Network for End-To-End Hyperspectral Image Classification. , 2019, , .		6
118	Autonomous Endmember Detection via an Abundance Anomaly Guided Saliency Prior for Hyperspectral Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 2336-2351.	2.7	6
119	Adaptively Transforming Graph Matching. Lecture Notes in Computer Science, 2018, , 646-662.	1.0	6
120	ON THE MIXED SCATTERING MECHANISM ANALYSIS OF MODEL-BASED DECOMPOSITION FOR POLARIMETRIC SAR DATA. Progress in Electromagnetics Research B, 2013, 52, 327-345.	0.7	5
121	Small object detection in forward-looking infrared images with sea clutter using context-driven Bayesian saliency model. Infrared Physics and Technology, 2015, 73, 175-183.	1.3	5
122	Learning the Synthesizability of Dynamic Texture Samples. IEEE Transactions on Image Processing, 2019, 28, 2502-2517.	6.0	5
123	IMAGE STITCHING WITH PERSPECTIVE-PRESERVING WARPING. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, III-3, 287-294.	0.0	5
124	An Elliptic Centerness for Object Instance Segmentation in Aerial Images. Journal of Remote Sensing, 2022, 2022, .	3.2	5
125	Deep sparse representations for land-use scene classification in remote sensing images. , 2016, , .		4
126	Thermal anomaly detection based on saliency computation for district heating system. , 2016, , .		4

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127	Image Stitching Using Smoothly Planar Homography. Lecture Notes in Computer Science, 2018, , 524-536.	1.0	4
128	An SRTM-Aided Epipolar Resampling Method for Multi-Source High-Resolution Satellite Stereo Observation. Remote Sensing, 2019, 11, 678.	1.8	4
129	Mental Retrieval of Large-Scale Satellite Images Via Learned Sketch-Image Deep Features. , 2019, , .		3
130	Saliency-based endmember detection for hyperspectral imagery. , 2017, , .		2
131	Special Issue on Big Data From Space. IEEE Transactions on Big Data, 2020, 6, 427-429.	4.4	2
132	Toward Dataset Construction for Remote Sensing Image Interpretation. , 2021, , .		2
133	Temporal Relations Matter: A Two-Pathway Network for Aerial Video Recognition. , 2021, , .		2
134	Anomaly Detection in Aerial Videos Via Future Frame Prediction Networks. , 2021, , .		2
135	FuTH-Net: Fusing Temporal Relations and Holistic Features for Aerial Video Classification. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-13.	2.7	2
136	Finding edges of buildings via a junction process in high-resolution remotely sensed images. , 2015, , .		1
137	Mining the spatial distribution of visual words for scene classification. , 2016, , .		1
138	Multi-level max-margin analysis for semantic classification of satellite images. Wuhan University Journal of Natural Sciences, 2015, 20, 47-54.	0.2	0
139	Delving into the Synthesizability of Dynamic Texture Samples. , 2018, , .		0
140	S3CRF: Sparse Spatial-Spectral Conditional Random Field Target Detection Framework for Airborne Hyperspectral Data. IEEE Access, 2020, 8, 46917-46930.	2.6	0
141	Deep One-Class Crop Extraction Framework for Multi-Modal Remote Sensing Imagery. , 2021, , .		0