Zhiguo Cao

List of Publications by Citations

140 papers	2,572 citations	28 h-index	46 g-index
171 ext. papers	3,553 ext. citations	5.4 avg, IF	5.61 L-index

#	Paper	IF	Citations
140	An interpretable mortality prediction model for COVID-19 patients. *Nature Machine Intelligence*, **2020**, 2, 283-288	22.5	398
139	Multi-spectral remote image registration based on SIFT. *Electronics Letters*, **2008**, 44, 107	1.1	132
138	A fast and robust local descriptor for 3D point cloud registration. *Information Sciences*, **2016**, 346-347, 163-179	7.7	100
137	TasselNet: counting maize tassels in the wild via local counts regression network. *Plant Methods*, **2017**, 13, 79	5.8	95
136	Automatic image-based detection technology for two critical growth stages of maize: Emergence and three-leaf stage. *Agricultural and Forest Meteorology*, **2013**, 174-175, 65-84	5.8	65
135	TOLDI: An effective and robust approach for 3D local shape description. *Pattern Recognition*, **2017**, 65, 175-187	7.7	64
134	Monocular Relative Depth Perception with Web Stereo Data Supervision **2018**,		63
133	An Embarrassingly Simple Approach to Visual Domain Adaptation. *IEEE Transactions on Image Processing*, **2018**, 27, 3403-3417	8.7	57
132	DeepCloud: Ground-Based Cloud Image Categorization Using Deep Convolutional Features. *IEEE Transactions on Geoscience and Remote Sensing*, **2017**, 55, 5729-5740	8.1	52
131	Cloud Classification of Ground-Based Images Using Texture–Structure Features. *Journal of Atmospheric and Oceanic Technology*, **2014**, 31, 79-92	2	51
130	Integration of the saliency-based seed extraction and random walks for image segmentation. *Neurocomputing*, **2014**, 129, 378-391	5.4	50
129	From Open Set to Closed Set: Counting Objects by Spatial Divide-and-Conquer **2019**,		48
128	In-field automatic observation of wheat heading stage using computer vision. *Biosystems Engineering*, **2016**, 143, 28-41	4.8	46
127	Action recognition for depth video using multi-view dynamic images. *Information Sciences*, **2019**, 480, 287-304	7.7	44
126	Vegetation segmentation robust to illumination variations based on clustering and morphology modelling. *Biosystems Engineering*, **2014**, 125, 80-97	4.8	42
125	In-field cotton detection via region-based semantic image segmentation. *Computers and Electronics in Agriculture*, **2016**, 127, 475-486	6.5	39
124	When Unsupervised Domain Adaptation Meets Tensor Representations **2017**,		39

123	A real-time embedded architecture for SIFT. *Journal of Systems Architecture*, **2013**, 59, 16-29	5.5	38
122	An Embedded System-on-Chip Architecture for Real-time Visual Detection and Matching. *IEEE Transactions on Circuits and Systems for Video Technology*, **2014**, 24, 525-538	6.4	37
121	A multisize superpixel approach for salient object detection based on multivariate normal distribution estimation. *IEEE Transactions on Image Processing*, **2014**, 23, 5094-107	8.7	37
120	TasselNetv2: in-field counting of wheat spikes with context-augmented local regression networks. *Plant Methods*, **2019**, 15, 150	5.8	36
119	A2J: Anchor-to-Joint Regression Network for 3D Articulated Pose Estimation From a Single Depth Image **2019**,		34
118	Fine-grained maize tassel trait characterization with multi-view representations. *Computers and Electronics in Agriculture*, **2015**, 118, 143-158	6.5	33
117	Structure-Guided Ranking Loss for Single Image Depth Prediction **2020**,		33
116	Region-based colour modelling for joint crop and maize tassel segmentation. *Biosystems Engineering*, **2016**, 147, 139-150	4.8	33
115	NM-Net: Mining Reliable Neighbors for Robust Feature Correspondences **2019**,		32
114	Toward the Repeatability and Robustness of the Local Reference Frame for 3D Shape Matching: An Evaluation. *IEEE Transactions on Image Processing*, **2018**, 27, 3766-3781	8.7	31
113	Rice heading stage automatic observation by multi-classifier cascade based rice spike detection method. *Agricultural and Forest Meteorology*, **2018**, 259, 260-270	5.8	30
112	Crop feature extraction from images with probabilistic superpixel Markov random field. *Computers and Electronics in Agriculture*, **2015**, 114, 247-260	6.5	27
111	Joint Image Registration and Fusion for Panchromatic and Multispectral Images. *IEEE Geoscience and Remote Sensing Letters*, **2015**, 12, 467-471	4.1	25
110	mCLOUD: A Multiview Visual Feature Extraction Mechanism for Ground-Based Cloud Image Categorization. *Journal of Atmospheric and Oceanic Technology*, **2016**, 33, 789-801	2	25
109	Entropic image thresholding based on GLGM histogram. *Pattern Recognition Letters*, **2014**, 40, 47-55	4.7	25
108	NTIRE 2019 Challenge on Real Image Denoising: Methods and Results **2019**,		24
107	Rotational contour signatures for both real-valued and binary feature representations of 3D local shape. *Computer Vision and Image Understanding*, **2017**, 160, 133-147	4.3	23
106	An improved MRF-based change detection approach for multitemporal remote sensing imagery. *Signal Processing*, **2013**, 93, 163-175	4.4	23

105	P2B: Point-to-Box Network for 3D Object Tracking in Point Clouds **2020**,		23
104	The effect of spatial information characterization on 3D local feature descriptors: A quantitative evaluation. *Pattern Recognition*, **2017**, 66, 375-391	7.7	22
103	Multi-attribute statistics histograms for accurate and robust pairwise registration of range images. *Neurocomputing*, **2017**, 251, 54-67	5.4	21
102	Type-2 fuzzy thresholding using GLSC histogram of human visual nonlinearity characteristics. *Optics Express*, **2011**, 19, 10656-72	3.3	19
101	3DV: 3D Dynamic Voxel for Action Recognition in Depth Video **2020**,		19
100	Adobe Boxes: Locating Object Proposals Using Object Adobes. *IEEE Transactions on Image Processing*, **2016**, 25, 4116-28	8.7	17
99	Supervised Fine-Grained Cloud Detection and Recognition in Whole-Sky Images. *IEEE Transactions on Geoscience and Remote Sensing*, **2019**, 57, 7972-7985	8.1	16
98	. *IEEE Transactions on Circuits and Systems for Video Technology*, **2019**, 29, 714-729	6.4	16
97	Real-Time Detection of Fall From Bed Using a Single Depth Camera. *IEEE Transactions on Automation Science and Engineering*, **2019**, 16, 1018-1032	4.9	16
96	Interactive color image segmentation via iterative evidential labeling. *Information Fusion*, **2014**, 20, 292-304	10.7	16
95	Weighing Counts: Sequential Crowd Counting by Reinforcement Learning. *Lecture Notes in Computer Science*, **2020**, 164-181	0.9	16
94	Toward Good Practices for Fine-Grained Maize Cultivar Identification With Filter-Specific Convolutional Activations. *IEEE Transactions on Automation Science and Engineering*, **2018**, 15, 430-442	4.9	15
93	. *IEEE Transactions on Circuits and Systems for Video Technology*, **2020**, 30, 3513-3527	6.4	15
92	Change detection of multispectral remote-sensing images using stationary wavelet transforms and integrated active contours. *International Journal of Remote Sensing*, **2013**, 34, 8817-8837	3.1	14
91	Adaptive Rectification Filter for Detecting Small IR Targets. *IEEE Aerospace and Electronic Systems Magazine*, **2007**, 22, 20-26	2.4	14
90	Towards fine-grained maize tassel flowering status recognition: Dataset, theory and practice. *Applied Soft Computing Journal*, **2017**, 56, 34-45	7.5	13
89	RoSeq: Robust Sequence Labeling. *IEEE Transactions on Neural Networks and Learning Systems*, **2020**, 31, 2304-2314	10.3	13
88	DeepCotton: in-field cotton segmentation using deep fully convolutional network. *Journal of Electronic Imaging*, **2017**, 26, 1	0.7	13

87	Ranking 3D feature correspondences via consistency voting. *Pattern Recognition Letters*, **2019**, 117, 1-8	4.7	13
86	Learning With Annotation of Various Degrees. *IEEE Transactions on Neural Networks and Learning Systems*, **2019**, 30, 2794-2804	10.3	12
85	TasselNetV2+: A Fast Implementation for High-Throughput Plant Counting From High-Resolution RGB Imagery. *Frontiers in Plant Science*, **2020**, 11, 541960	6.2	12
84	Two-dimensional subspace alignment for convolutional activations adaptation. *Pattern Recognition*, **2017**, 71, 320-336	7.7	11
83	AIM 2020 Challenge on Rendering Realistic Bokeh. *Lecture Notes in Computer Science*, **2020**, 213-228	0.9	11
82	Measuring Generalisation to Unseen Viewpoints, Articulations, Shapes and Objects for 3D Hand Pose Estimation Under Hand-Object Interaction. *Lecture Notes in Computer Science*, **2020**, 85-101	0.9	11
81	Decoupled Two-Stage Crowd Counting and Beyond. *IEEE Transactions on Image Processing*, **2021**, 30, 2862-2875	8.7	11
80	Performance Evaluation of 3D Correspondence Grouping Algorithms **2017**,		10
79	Local phase quantization plus: A principled method for embedding local phase quantization into Fisher vector for blurred image recognition. *Information Sciences*, **2017**, 420, 77-95	7.7	10
78	Development and Validation of a Prognostic Risk Score System for COVID-19 Inpatients: A Multi-Center Retrospective Study in China. *Engineering*, **2020**,	9.7	10
77	Fast and Accurate Single-Image Depth Estimation on Mobile Devices, Mobile AI 2021 Challenge: Report **2021**,		10
76	Monocular Depth Estimation With Augmented Ordinal Depth Relationships. *IEEE Transactions on Circuits and Systems for Video Technology*, **2020**, 30, 2674-2682	6.4	10
75	Deep Attention-Based Classification Network for Robust Depth Prediction. *Lecture Notes in Computer Science*, **2019**, 663-678	0.9	9
74	Ground-based cloud image categorization using deep convolutional visual features **2015**,		8
73	Performance Evaluation of Crop Segmentation Algorithms. *IEEE Access*, **2020**, 8, 36210-36225	3.5	7
72	An image-based approach for automatic detecting tasseling stage of maize using spatio-temporal saliency **2013**,		7
71	Sparse-to-Dense Depth Completion Revisited: Sampling Strategy and Graph Construction. *Lecture Notes in Computer Science*, **2020**, 682-699	0.9	7
70	Maize tassels detection: a benchmark of the state of the art. *Plant Methods*, **2020**, 16, 108	5.8	7

69	A New Dew and Frost Detection Sensor Based on Computer Vision. *Journal of Atmospheric and Oceanic Technology*, **2014**, 31, 2692-2712	2	6
68	Image Feature Correspondence Selection: a Comparative Study and a New Contribution. *IEEE Transactions on Image Processing*, **2020**,	8.7	6
67	Unsupervised domain adaptation for in-field cotton boll status identification. *Computers and Electronics in Agriculture*, **2020**, 178, 105745	6.5	6
66	LRF-Net: Learning Local Reference Frames for 3D Local Shape Description and Matching. *Sensors*, **2020**, 20,	3.8	6
65	Knowledge Distillation for Fast and Accurate Monocular Depth Estimation on Mobile Devices **2021**,		6
64	Counting Fish in Sonar Images **2018**,		6
63	Towards Real-Time Eyeblink Detection in the Wild: Dataset, Theory and Practices. *IEEE Transactions on Information Forensics and Security*, **2020**, 15, 2194-2208	8	5
62	Robust key point descriptor for multi-spectral image matching. *Journal of Systems Engineering and Electronics*, **2014**, 25, 681-687	1.3	5
61	Entropic thresholding based on gray-level spatial correlation histogram **2008**,		5
60	High-Throughput Rice Density Estimation from Transplantation to Tillering Stages Using Deep Networks. *Plant Phenomics*, **2020**, 2020, 1375957	7	5
59	Survey on depth and RGB image-based 3D hand shape and pose estimation. *Virtual Reality & Intelligent Hardware*, **2021**, 3, 207-234	2.8	5
58	Rotational contour signatures for robust local surface description **2016**,		5
57	Learning to fuse local geometric features for 3D rigid data matching. *Information Fusion*, **2020**, 61, 24-35	16.7	4
56	. *IEEE Transactions on Aerospace and Electronic Systems*, **2014**, 50, 1197-1221	3.7	4
55	VisDrone-CC2021: The Vision Meets Drone Crowd Counting Challenge Results **2021**,		4
54	Interior Attention-Aware Network for Infrared Small Target Detection. *IEEE Transactions on Geoscience and Remote Sensing*, **2022**, 1-1	8.1	4
53	ECML: An Ensemble Cascade Metric-Learning Mechanism Toward Face Verification. *IEEE Transactions on Cybernetics*, **2020**, PP,	10.2	3
52	A variational change detection method for multitemporal SAR images. *Remote Sensing Letters*, **2014**, 5, 342-351	2.3	3

51	. *IEEE Transactions on Aerospace and Electronic Systems*, **2015**, 51, 1793-1810	3.7	3
50	DSA image registration based on multiscale Gabor filters and mutual information		3
49	A New Piecewise Approach for Nonuniformity Correction in IRFPA. *Journal of Infrared, Millimeter and Terahertz Waves*, **2004**, 25, 959-972		3
48	Development and validation of a prognostic risk score system for COVID-19 inpatients: A multi-center retrospective study in China		3
47	. *IEEE Transactions on Circuits and Systems for Video Technology*, **2021**, 1-1	6.4	3
46	Mean-Variance Loss for Monocular Depth Estimation **2019**,		2
45	Exploiting Attribute Dependency for Attribute Assignment in Crowded Scenes. *IEEE Signal Processing Letters*, **2016**, 23, 1325-1329	3.2	2
44	A FPGA-based architecture for real-time image matching **2013**,		2
43	Multi-scale region-based saliency detection using W2 distance on N-dimensional normal distributions **2013**,		2
42	Selective features for RGB-D saliency **2015**,		2
41	An automatic detection method to the field wheat based on image processing **2013**,		2
40	3D target tracking in infrared imagery by SIFT-based distance histograms **2011**,		2
39	Contrast-modulated Nonlinear Diffusion for X-ray Angiogram Images. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2005**, 2005, 1736-8		2
38	Bokeh Rendering from Defocus Estimation. *Lecture Notes in Computer Science*, **2020**, 245-261	0.9	2
37	Composing Photos Like a Photographer **2021**,		2
36	Hand pose estimation in depth image using CNN and random forest **2018**,		2
35	Abrupt-motion-aware lightweight visual tracking for unmanned aerial vehicles. *Visual Computer*, **2021**, 37, 371-383	2.3	2
34	Ranking-Based Salient Object Detection and Depth Prediction for Shallow Depth-of-Field. *Sensors*, **2021**, 21,	3.8	2

33	Scalable Multi-Consistency Feature Matching with Non-Cooperative Games **2018**,		2
32	MAT: Multianchor Visual Tracking With Selective Search Region. *IEEE Transactions on Cybernetics*, **2021**, PP,	10.2	2
31	Refine BING using effective cascade ranking. *Applied Soft Computing Journal*, **2017**, 52, 487-500	7.5	1
30	Binoboost: Boosting Self-Supervised Monocular Depth Prediction with Binocular Guidance **2019**,		1
29	Structured output tracking guided by keypoint matching **2016**,		1
28	Joint crop and tassel segmentation in the wild **2015**,		1
27	Hybrid RGB-D object recognition using Convolutional Neural Network and Fisher Vector **2015**,		1
26	Blurred face recognition by fusing blur-invariant texture and structure features **2015**,		1
25	Object detection based on Multi-viewpoint histogram **2015**,		1
24	Specularity-invariant crop extraction with probabilistic super-pixel Markov random field **2013**,		1
23	A method of frost observation based on intensity changing regularity simulation and texture analysis **2011**,		1
22	Classification method for aerial LiDAR data based on Markov random field. *Electronics Letters*, **2011**, 47, 934	1.1	1
21	An Algorithm for Object Function Optimization in Mutual Information-Based Image Registration **2008**,		1
20	Person Re-Identification With Hierarchical Discriminative Spatial Aggregation. *IEEE Transactions on Information Forensics and Security*, **2022**, 17, 516-530	8	1
19	Dynamic Color Transform Networks for Wheat Head Detection.. *Plant Phenomics*, **2022**, 2022, 9818452	7	1
18	Class-Attribute Inconsistency Learning for Novelty Detection. *Pattern Recognition*, **2022**, 126, 108582	7.7	1
17	Action recognition in depth video from RGB perspective: A knowledge transfer manner **2018**,		1
16	Real-Time Stereo Matching System. *Lecture Notes in Computer Science*, **2018**, 377-386	0.9	1

15	Multispectral Semantic Land Cover Segmentation From Aerial Imagery With Deep Encoder-Decoder Network. *IEEE Geoscience and Remote Sensing Letters*, **2020**, 1-5	4.1	1
14	3D reconstruction from non-uniform point clouds via local hierarchical clustering **2017**,		1
13	Li Yan et al. reply. *Nature Machine Intelligence*, **2021**, 3, 28-32	22.5	1
12	LPQ++: A discriminative blur-insensitive textural descriptor with spatial-channel interaction. *Information Sciences*, **2021**, 548, 191-211	7.7	1
11	Reply to: Clinical interpretation of an interpretable prognostic model for patients with COVID-19. *Nature Machine Intelligence*, **2021**, 3, 17-17	22.5	1
10	RANSACs for 3D Rigid Registration: A Comparative Evaluation. *IEEE/CAA Journal of Automatica Sinica*, **2022**, 1-18	7	1
9	TransView: Inside, Outside, and Across the Cropping View Boundaries **2021**,		1
8	NSSNet: Scale-Aware Object Counting With Non-Scale Suppression. *IEEE Transactions on Intelligent Transportation Systems*, **2020**, 1-12	6.1	0
7	Phenotyping multiple maize ear traits from a single image: Kernels per ear, rows per ear, and kernels per row. *Computers and Electronics in Agriculture*, **2022**, 193, 106681	6.5	0
6	Limited Receptive Field Network for Real-Time Driving Scene Semantic Segmentation. *Lecture Notes in Computer Science*, **2019**, 350-362	0.9	0
5	Video Object Detection and Segmentation Based on Proposal Boxes. *Communications in Computer and Information Science*, **2016**, 304-317	0.3	0
4	3D Correspondence Grouping with Compatibility Features. *Lecture Notes in Computer Science*, **2021**, 66-78	0.9	
3	3-D Reconstruction of Blood Vessels Skeleton Based on Neural Network. *Lecture Notes in Computer Science*, **2006**, 110-117	0.9	
2	Online Update Siamese Network for Unmanned Surface Vehicle Tracking. *Lecture Notes in Computer Science*, **2018**, 159-169	0.9	
1	Machine learning discovery of distinguishing laboratory features for severity classification of COVID-19 patients. *IET Cyber-Systems and Robotics*, **2021**, 3, 31-43	1.6	