

Changming Sun

List of Publications by Year in descending order

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156
papers

3,589
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230014

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51
g-index

159
all docs

159
docs citations

159
times ranked

3968
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient corner detection based on corner enhancement filters. , 2022, 122, 103364.		15
2	Complex shearlets and rotary phase congruence tensor for corner detection. Pattern Recognition, 2022, 128, 108606.	5.1	2
3	ASRSNet: Automatic Salient Region Selection Network for Few-Shot Fine-Grained Image Classification. Lecture Notes in Computer Science, 2022, , 627-638.	1.0	1
4	EOCSA: Predicting prognosis of Epithelial ovarian cancer with whole slide histopathological images. Expert Systems With Applications, 2022, 206, 117643.	4.4	8
5	Improving Monocular Visual Odometry Using Learned Depth. IEEE Transactions on Robotics, 2022, 38, 3173-3186.	7.3	5
6	Recent advances on image edge detection: A comprehensive review. Neurocomputing, 2022, 503, 259-271.	3.5	55
7	Cascade knowledge diffusion network for skin lesion diagnosis and segmentation. Applied Soft Computing Journal, 2021, 99, 106881.	4.1	57
8	Robust Tensor Decomposition for Image Representation Based on Generalized Correntropy. IEEE Transactions on Image Processing, 2021, 30, 150-162.	6.0	6
9	Corner Detection Using Second-Order Generalized Gaussian Directional Derivative Representations. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1213-1224.	9.7	27
10	Context-Enhanced Representation Learning for Single Image Deraining. International Journal of Computer Vision, 2021, 129, 1650-1674.	10.9	19
11	Free-form tumor synthesis in computed tomography images via richer generative adversarial network. Knowledge-Based Systems, 2021, 218, 106753.	4.0	27
12	Robust Blood Cell Image Segmentation Method Based on Neural Ordinary Differential Equations. Computational and Mathematical Methods in Medicine, 2021, 2021, 1-11.	0.7	6
13	Domain adaptation based self-correction model for COVID-19 infection segmentation in CT images. Expert Systems With Applications, 2021, 176, 114848.	4.4	34
14	Attentive Feature Refinement Network for Single Rainy Image Restoration. IEEE Transactions on Image Processing, 2021, 30, 3734-3747.	6.0	14
15	A Novel Decision Mechanism for Image Edge Detection. Lecture Notes in Computer Science, 2021, , 274-287.	1.0	2
16	Disentangled Representation Learning and Enhancement Network for Single Image De-Raining. , 2021, , .		1
17	Deep learning based stereo cost aggregation on a small dataset. , 2021, , .		0
18	Multi-Weighted Co-Occurrence Descriptor Encoding for Vein Recognition. IEEE Transactions on Information Forensics and Security, 2020, 15, 375-390.	4.5	22

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19	Learning a Compact Vein Discrimination Model With GANerated Samples. IEEE Transactions on Information Forensics and Security, 2020, 15, 635-650.	4.5	9
20	Corner Detection Using Multi-directional Structure Tensor with Multiple Scales. International Journal of Computer Vision, 2020, 128, 438-459.	10.9	37
21	Fusing convolutional neural network features with hand-crafted features for osteoporosis diagnoses. Neurocomputing, 2020, 385, 300-309.	3.5	26
22	A robust matching pursuit algorithm using information theoretic learning. Pattern Recognition, 2020, 107, 107415.	5.1	4
23	Deep learning based HEp-2 image classification: A comprehensive review. Medical Image Analysis, 2020, 65, 101764.	7.0	26
24	Cascaded Attention Guidance Network for Single Rainy Image Restoration. IEEE Transactions on Image Processing, 2020, 29, 9190-9203.	6.0	10
25	Fast Corner Detection Using Approximate Form of Second-Order Gaussian Directional Derivative. IEEE Access, 2020, 8, 194092-194104.	2.6	4
26	RA-UNet: A Hybrid Deep Attention-Aware Network to Extract Liver and Tumor in CT Scans. Frontiers in Bioengineering and Biotechnology, 2020, 8, 605132.	2.0	187
27	Multi-Scale Anisotropic Gaussian Kernels for Image Edge Detection. IEEE Access, 2020, 8, 1803-1812.	2.6	11
28	Corner detection based on shearlet transform and multi-directional structure tensor. Pattern Recognition, 2020, 103, 107299.	5.1	20
29	Robust Cell Image Segmentation via Improved Markov Random Field Based on a Chinese Restaurant Process Model. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2020, 24, 963-971.	0.5	2
30	Instance-Aware Embedding for Point Cloud Instance Segmentation. Lecture Notes in Computer Science, 2020, , 255-270.	1.0	12
31	ReDro: Efficiently Learning Large-Sized SPD Visual Representation. Lecture Notes in Computer Science, 2020, , 1-17.	1.0	7
32	Mutual Guidance-Based Saliency Propagation for Infrared Pedestrian Images. IEEE Access, 2019, 7, 113355-113371.	2.6	4
33	Chord Bunch Walks for Recognizing Naturally Self-Overlapped and Compound Leaves. IEEE Transactions on Image Processing, 2019, 28, 5963-5976.	6.0	18
34	Supervised Brain Tumor Segmentation Based on Gradient and Context-Sensitive Features. Frontiers in Neuroscience, 2019, 13, 144.	1.4	29
35	Discrete Curvature Representations for Noise Robust Image Corner Detection. IEEE Transactions on Image Processing, 2019, 28, 4444-4459.	6.0	33
36	Robust Retinal Image Enhancement via Dual-Tree Complex Wavelet Transform and Morphology-Based Method. IEEE Access, 2019, 7, 47303-47316.	2.6	32

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37	Knowledge Adaptation for Efficient Semantic Segmentation. , 2019, , .		127
38	A Novel Color-Texture Descriptor Based on Local Histograms for Image Segmentation. IEEE Access, 2019, 7, 160683-160695.	2.6	10
39	Kernel Mean P Power Error Loss for Robust Two-Dimensional Singular Value Decomposition. , 2019, , .		1
40	Robust Sparse Learning Based on Kernel Non-Second Order Minimization. , 2019, , .		1
41	Design of a Clinical Decision Support System for Predicting Erectile Dysfunction in Men Using NHIRD Dataset. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 2127-2137.	3.9	18
42	Cell Segmentation Based on FOPSO Combined With Shape Information Improved Intuitionistic FCM. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 449-459.	3.9	15
43	ERL-Net: Entangled Representation Learning for Single Image De-Raining. , 2019, , .		45
44	Foreground Object Image Masking via EPI and Edge Detection for Photogrammetry with Static Background. Lecture Notes in Computer Science, 2019, , 345-357.	1.0	0
45	Multi-Modal Ship Target Image Smoothing Based on Adaptive Mean Shift. IEEE Access, 2018, 6, 12573-12586.	2.6	9
46	Refinement of LiDAR point clouds using a super voxel based approach. ISPRS Journal of Photogrammetry and Remote Sensing, 2018, 143, 213-221.	4.9	25
47	Matching Pursuit Based on Kernel Non-Second Order Minimization. , 2018, , .		0
48	An End-to-End TextSpotter with Explicit Alignment and Attention. , 2018, , .		146
49	Fish Counting and Measurement. , 2018, , 1500-1516.		0
50	Fog Density Estimation and Image Defogging Based on Surrogate Modeling for Optical Depth. IEEE Transactions on Image Processing, 2017, 26, 3397-3409.	6.0	29
51	Image dehazing using adaptive bi-channel priors on superpixels. Computer Vision and Image Understanding, 2017, 165, 17-32.	3.0	50
52	Efficient Message Passing Methods With Fully Connected Models for Early Vision. IEEE Transactions on Image Processing, 2017, 26, 5994-6005.	6.0	0
53	Can Walking and Measuring Along Chord Bunches Better Describe Leaf Shapes?. , 2017, , .		17
54	Robust Multi-Frame Adaptive Optics Image Restoration Algorithm Using Maximum Likelihood Estimation with Poisson Statistics. Sensors, 2017, 17, 785.	2.1	8

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55	Detection of tubule boundaries based on circular shortest path and polarâ€ transformation of arbitrary shapes. <i>Journal of Microscopy</i> , 2016, 264, 127-142.	0.8	24
56	A Local Scale Selection Scheme for Multiscale Area Integral Invariants. , 2016, , .		0
57	Automated Image Analysis on Insect Soups. , 2016, , .		6
58	A robust method for high-precision quantification of the complex three-dimensional vasculatures acquired by X-ray microtomography. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1216-1226.	1.0	9
59	Automated vein detection for drill core analysis by fusion of hyperspectral and visible image data. , 2016, , .		3
60	Semi-automated infrared simulation on real urban scenes based on multi-view images. <i>Optics Express</i> , 2016, 24, 11345.	1.7	10
61	Robust tensor factorization using maximum correntropy criterion. , 2016, , .		2
62	Stereo matching based on multi-direction polynomial model. <i>Signal Processing: Image Communication</i> , 2016, 44, 44-56.	1.8	4
63	Orientation-guided geodesic weighting for PatchMatch-based stereo matching. <i>Information Sciences</i> , 2016, 334-335, 293-306.	4.0	1
64	Infrared ship target segmentation through integration of multiple feature maps. <i>Image and Vision Computing</i> , 2016, 48-49, 14-25.	2.7	17
65	Edge-Aware Filtering with Local Polynomial Approximation and Rectangle-Based Weighting. <i>IEEE Transactions on Cybernetics</i> , 2016, 46, 2693-2705.	6.2	5
66	Guided image completion by confidence propagation. <i>Pattern Recognition</i> , 2016, 50, 210-222.	5.1	5
67	STEREO VISION TECHNOLOGIES FOR CHINAâ€™S LUNAR ROVER EXPLORATION MISSION. <i>International Journal of Robotics and Automation</i> , 2016, 31, .	0.1	3
68	Automatic Fish Recognition and Counting in Video Footage of Fishery Operations. , 2015, , .		6
69	Intelligent tuna recognition for fisheries monitoring. , 2015, , .		1
70	Clustered nuclei splitting via curvature information and grayâ€ scale distance transform. <i>Journal of Microscopy</i> , 2015, 259, 36-52.	0.8	6
71	A Modified Distance Regularized Level Set Model for Liver Segmentation from CT Images. <i>Signal and Image Processing: an International Journal</i> , 2015, 6, 01-11.	0.2	3
72	Crowdsourcing the creation of image segmentation algorithms for connectomics. <i>Frontiers in Neuroanatomy</i> , 2015, 9, 142.	0.9	248

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73	Descent image based landing area terrain reconstruction technology for lunar landing mission. Imaging Science Journal, 2015, 63, 440-446.	0.2	3
74	Finding splitting lines for touching cell nuclei with a shortest path algorithm. Computers in Biology and Medicine, 2015, 63, 277-286.	3.9	8
75	Feature matching in stereo images encouraging uniform spatial distribution. Pattern Recognition, 2015, 48, 2530-2542.	5.1	24
76	Towards Automated Quantitative Vasculature Understanding via Ultra High-Resolution Imagery. Advances in Experimental Medicine and Biology, 2015, 823, 177-189.	0.8	2
77	Cloud Based Toolbox for Image Analysis, Processing and Reconstruction Tasks. Advances in Experimental Medicine and Biology, 2015, 823, 191-205.	0.8	13
78	Global Threshold and Region-Based Active Contour Model for Accurate Image Segmentation. Signal and Image Processing: an International Journal, 2014, 5, 01-11.	0.2	8
79	A Modular Learning Approach for Fish Counting and Measurement Using Stereo Baited Remote Underwater Video. , 2014, , .		7
80	Multipoint Filtering with Local Polynomial Approximation and Range Guidance. , 2014, , .		23
81	Iterative infrared ship target segmentation based on multiple features. Pattern Recognition, 2014, 47, 2839-2852.	5.1	55
82	Stereo matching using cost volume watershed and region merging. Signal Processing: Image Communication, 2014, 29, 1232-1244.	1.8	7
83	Evaluation and Comparison of Current Fetal Ultrasound Image Segmentation Methods for Biometric Measurements: A Grand Challenge. IEEE Transactions on Medical Imaging, 2014, 33, 797-813.	5.4	137
84	A novel method for dendritic spines detection based on directional morphological filter and shortest path. Computerized Medical Imaging and Graphics, 2014, 38, 793-802.	3.5	9
85	A new method for linear feature and junction enhancement in 2D images based on morphological operation, oriented anisotropic Gaussian function and Hessian information. Pattern Recognition, 2014, 47, 3193-3208.	5.1	35
86	Soft Cost Aggregation with Multi-resolution Fusion. Lecture Notes in Computer Science, 2014, , 17-32.	1.0	15
87	A Novel Global Threshold-Based Active Contour Model. , 2014, , .		1
88	Segmentation of clustered nuclei based on concave curve expansion. Journal of Microscopy, 2013, 251, 57-67.	0.8	23
89	Automatic nuclear bud detection using ellipse fitting, moving sticks or topâ€hat transformation. Journal of Microscopy, 2013, 252, 122-134.	0.8	6
90	Cross Image Inference Scheme for Stereo Matching. Lecture Notes in Computer Science, 2013, , 217-230.	1.0	1

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91	Tubule detection in testis images using boundary weighting and circular shortest path. , 2013, 2013, 3319-22.		1
92	Trinocular stereo image rectification in closed-form only using fundamental matrices. , 2013, , .		1
93	Applications of heterogeneous computing in computational and simulation science. International Journal of Computational Science and Engineering, 2013, 8, 240.	0.4	4
94	Shortest path based splitting line finding for touching cells. AIP Conference Proceedings, 2013, , .	0.3	2
95	Preface: 2013 International Symposium on Computational Models for Life Sciences. , 2013, , .		0
96	Dendritic spines detection based on directional morphological filter and shortest path. , 2012, 2012, 5343-6.		0
97	Tree structural watershed for stereo matching. , 2012, , .		1
98	Automating the quantification of membrane proteins under confocal microscopy. , 2012, , .		2
99	Segmentation of clustered nuclei based on curvature weighting. , 2012, , .		12
100	Linear feature enhancement based on morphological operation and Gabor function. , 2012, , .		2
101	Feature Correspondence with Even Distribution. , 2012, , .		2
102	Closed-form stereo image rectification. , 2012, , .		5
103	Embedded Voxel Colouring with Adaptive Threshold Selection Using Globally Minimal Surfaces. International Journal of Computer Vision, 2012, 99, 215-231.	10.9	7
104	Junction detection for linear structures based on Hessian, correlation and shape information. Pattern Recognition, 2012, 45, 3695-3706.	5.1	43
105	Applications of Heterogeneous Computing in Computational and Simulation Science. , 2011, , .		3
106	High-Throughput Detection of Linear Features: Selected Applications in Biological Imaging. Biological and Medical Physics Series, 2011, , 167-191.	0.3	1
107	Clustered Nuclei Splitting Using Curvature Information. , 2011, , .		1
108	Identifying Weak Linear Features with the "Coalescing Shortest Path Image Transform": Microscopy and Microanalysis, 2011, 17, 911-914.	0.2	1

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109	Junction Detection for Linear Structures. , 2011, , .		1
110	DroplIT, an improved image analysis method for droplet identification in high-throughput crystallization trials. Journal of Applied Crystallography, 2010, 43, 1548-1552.	1.9	10
111	Automated Detection of Nucleoplasmic Bridges for DNA Damage Scoring in Binucleated Cells. , 2010, , .		0
112	Mosaicing of microscope images in the presence of large areas with insufficient information content. , 2010, , .		0
113	Detection of Nuclear Buds Based on Ellipse Fitting. , 2010, , .		3
114	HCA-Vision: Automated Neurite Outgrowth Analysis. Journal of Biomolecular Screening, 2010, 15, 1165-1170.	2.6	46
115	Linear Feature Detection on GPUs. , 2010, , .		6
116	Automated Feature Weighting in Fuzzy Declustering-based Vector Quantization. , 2010, , .		2
117	Stereoscopic flatbed scanner. Journal of Electronic Imaging, 2009, 18, 013002.	0.5	0
118	Fast linear feature detection using multiple directional non- ∞ maximum suppression. Journal of Microscopy, 2009, 234, 147-157.	0.8	63
119	Membrane boundary extraction using circular multiple paths. Pattern Recognition, 2009, 42, 523-530.	5.1	14
120	Splitting touching cells based on concave points and ellipse fitting. Pattern Recognition, 2009, 42, 2434-2446.	5.1	229
121	Segmentation and tracking individual Pseudomonas aeruginosa bacteria in dense populations of motile cells. , 2009, , .		12
122	Iterated dynamic programming and quadtree subregioning for fast stereo matching. Image and Vision Computing, 2008, 26, 1371-1383.	2.7	12
123	Boundary extraction of linear features using dual paths through gradient profiles. Pattern Recognition Letters, 2008, 29, 1753-1757.	2.6	8
124	Touching Cells Splitting by Using Concave Points and Ellipse Fitting. , 2008, , .		11
125	Membrane Boundary Extraction Using a Circular Shortest Path Technique. AIP Conference Proceedings, 2007, , .	0.3	2
126	Priority-Based Path Growing for Linear Feature Detection. , 2007, , .		2

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127	Automated analysis of neurite branching in cultured cortical neurons using HCA Vision. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2007, 71A, 889-895.	1.1	62
128	Thickness measurement and crease detection of wheat grains using stereo vision. Pattern Recognition Letters, 2007, 28, 1501-1508.	2.6	17
129	Mosaicing of microscope images with global geometric and radiometric corrections. Journal of Microscopy, 2006, 224, 158-165.	0.8	41
130	Measuring the distance of vegetation from powerlines using stereo vision. ISPRS Journal of Photogrammetry and Remote Sensing, 2006, 60, 269-283.	4.9	58
131	Moving average algorithms for diamond, hexagon, and general polygonal shaped window operations. Pattern Recognition Letters, 2006, 27, 556-566.	2.6	8
132	Fast Linear Feature Detection Using Multiple Directional Non-Maximum Suppression. , 2006, , .		7
133	Multiple paths extraction in images using a constrained expanded trellis. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2005, 27, 1923-1933.	9.7	25
134	An energy minimisation approach to stereo-temporal dense reconstruction. , 2004, , .		28
135	Fast Panoramic Stereo Matching Using Cylindrical Maximum Surfaces. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 760-765.	5.5	19
136	Circular shortest path in images. Pattern Recognition, 2003, 36, 709-719.	5.1	72
137	Circular shortest paths by branch and bound. Pattern Recognition, 2003, 36, 2513-2520.	5.1	39
138	Uncalibrated three-view image rectification. Image and Vision Computing, 2003, 21, 259-269.	2.7	22
139	Fast optical flow using 3D shortest path techniques. Image and Vision Computing, 2002, 20, 981-991.	2.7	45
140	Fast Stereo Matching Using Rectangular Subregioning and 3D Maximum-Surface Techniques. International Journal of Computer Vision, 2002, 47, 99-117.	10.9	177
141	De-interlacing of video images using a shortest path technique. IEEE Transactions on Consumer Electronics, 2001, 47, 225-230.	3.0	17
142	Fast Algorithm for Local Statistics Calculation for N -Dimensional Images. Real Time Imaging, 2001, 7, 519-527.	1.6	12
143	Automatic segmentation of fiducial marks using attribute-based mathematical morphology. Journal of Electronic Imaging, 2001, 10, 560.	0.5	1
144	2-Point linear algorithm for camera translation vector estimation with known rotation. Robotica, 2000, 18, 557-561.	1.3	3

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145	Fast Reflectonal Symmetry Detection Using Orientation Histograms. Real Time Imaging, 1999, 5, 63-74.	1.6	51
146	Knowledge-based method for segmentation and analysis of lung boundaries in chest X-ray images. Computerized Medical Imaging and Graphics, 1998, 22, 463-477.	3.5	85
147	Fast recovery of rotational symmetry parameters using gradient orientation. Optical Engineering, 1997, 36, 1073.	0.5	7
148	3D symmetry detection using the extended Gaussian image. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1997, 19, 164-168.	9.7	178
149	Symmetry detection using gradient information. Pattern Recognition Letters, 1995, 16, 987-996.	2.6	50
150	Robust Estimation for Motion Parameters. , 1994, , .		0
151	Relationship between hovering depth and viewing position. , 1992, 1666, 483.		0
152	Use of vision in dispensing control and inspection of adhesives. Robotica, 1991, 9, 371-377.	1.3	2
153	Skew and slant correction for document images using gradient direction. , 0, , .		33
154	Algorithm performance contest. , 0, , .		15
155	Rectangular subregioning and 3-D maximum-surface techniques for fast stereo matching. , 0, , .		2
156	Fish Counting and Measurement. Advances in Environmental Engineering and Green Technologies Book Series, 0, , 41-57.	0.3	1