In So Kweon

List of Publications by Year
in descending order

		218592	38368
183 papers	12,889 citations	26 h-index	95 g-index
185 all docs	185 docs citations	185 times ranked	7197 citing authors

#	Article	IF	Citations
1	CBAM: Convolutional Block Attention Module. Lecture Notes in Computer Science, 2018, , 3-19.	1.0	7,331
2	Adaptive support-weight approach for correspondence search. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2006, 28, 650-656.	9.7	1,004
3	Multispectral pedestrian detection: Benchmark dataset and baseline. , 2015, , .		525
4	VPGNet: Vanishing Point Guided Network for Lane and Road Marking Detection and Recognition. , 2017, , .		266
5	Unsupervised Intra-Domain Adaptation for Semantic Segmentation Through Self-Supervision. , 2020, , .		216
6	Learning a Deep Convolutional Network for Light-Field Image Super-Resolution. , 2015, , .		210
7	KAIST Multi-Spectral Day/Night Data Set for Autonomous and Assisted Driving. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 934-948.	4.7	198
8	Self-Supervised Video Representation Learning with Space-Time Cubic Puzzles. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 8545-8552.	3.6	191
9	Light-Field Image Super-Resolution Using Convolutional Neural Network. IEEE Signal Processing Letters, 2017, 24, 848-852.	2.1	131
10	Non-local Spatial Propagation Network for Depth Completion. Lecture Notes in Computer Science, 2020, , 120-136.	1.0	127
11	High-Quality Depth Map Upsampling and Completion for RGB-D Cameras. IEEE Transactions on Image Processing, 2014, 23, 5559-5572.	6.0	94
12	Discriminative Feature Learning for Unsupervised Video Summarization. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 8537-8544.	3.6	83
13	A Unified Approach of Multi-scale Deep and Hand-Crafted Features for Defocus Estimation. , 2017, , .		76
14	High Quality Shape from a Single RGB-D Image under Uncalibrated Natural Illumination. , 2013, , .		73
15	A Real-Time Augmented Reality System to See-Through Cars. IEEE Transactions on Visualization and Computer Graphics, 2016, 22, 2395-2404.	2.9	66
16	A Simple and Light-Weight Attention Module for Convolutional Neural Networks. International Journal of Computer Vision, 2020, 128, 783-798.	10.9	65
17	Ambiguous Surface Defect Image Classification of AMOLED Displays in Smartphones. IEEE Transactions on Industrial Informatics, 2016, 12, 597-607.	7.2	64
18	StairNet: Top-Down Semantic Aggregation for Accurate One Shot Detection. , 2018, , .		58

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19	Robust Reference-Based Super-Resolution With Similarity-Aware Deformable Convolution. , 2020, , .		56
20	Time-of-Flight Sensor Calibration for a Color and Depth Camera Pair. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 1501-1513.	9.7	54
21	Fast Separation of Reflection Components using a Specularity-Invariant Image Representation. , 2006, , .		52
22	Capturing Village-level Heritages with a Hand-held Camera-Laser Fusion Sensor. International Journal of Computer Vision, 2011, 94, 36-53.	10.9	52
23	All-Around Depth from Small Motion with a Spherical Panoramic Camera. Lecture Notes in Computer Science, 2016, , 156-172.	1.0	50
24	Dense Relational Captioning: Triple-Stream Networks for Relationship-Based Captioning. , 2019, , .		50
25	Real-time head pose estimation using multi-task deep neural network. Robotics and Autonomous Systems, 2018, 103, 1-12.	3.0	49
26	Detecting Human-Object Interactions with Action Co-occurrence Priors. Lecture Notes in Computer Science, 2020, , 718-736.	1.0	45
27	Radiometric Calibration by Rank Minimization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 144-156.	9.7	41
28	Robust feature point matching by preserving local geometric consistency. Computer Vision and Image Understanding, 2009, 113, 726-742.	3.0	40
29	A Branch-and-Bound Approach to Correspondence and Grouping Problems. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2013, 35, 1565-1576.	9.7	40
30	An Autonomous Driving System for Unknown Environments Using a Unified Map. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 1999-2013.	4.7	40
31	Extrinsic Calibration of 2-D Lidars Using Two Orthogonal Planes. IEEE Transactions on Robotics, 2016, 32, 83-98.	7.3	38
32	Auto-adjusting camera exposure for outdoor robotics using gradient information. , 2014, , .		37
33	Deltille Grids for Geometric Camera Calibration. , 2017, , .		36
34	Variational Prototyping-Encoder: One-Shot Learning With Prototypical Images. , 2019, , .		35
35	Learning Open-World Object Proposals Without Learning to Classify. IEEE Robotics and Automation Letters, 2022, 7, 5453-5460.	3.3	35
36	Multiview Photometric Stereo Using Planar Mesh Parameterization. , 2013, , .		34

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37	Line meets as-projective-as-possible image stitching with moving DLT. , 2015, , .		34
38	Automated checkerboard detection and indexing using circular boundaries. Pattern Recognition Letters, 2016, 71, 66-72.	2.6	34
39	Exploiting Shading Cues in Kinect IR Images for Geometry Refinement. , 2014, , .		33
40	RANUS: RGB and NIR Urban Scene Dataset for Deep Scene Parsing. IEEE Robotics and Automation Letters, 2018, 3, 1808-1815.	3.3	31
41	Image Captioning with Very Scarce Supervised Data: Adversarial Semi-Supervised Learning Approach. , 2019, , .		31
42	Fast multiple objects detection and tracking fusing color camera and 3D LIDAR for intelligent vehicles. , 2016, , .		29
43	COP: a new corner detector. Pattern Recognition Letters, 2002, 23, 1349-1360.	2.6	28
44	Efficient adaptive non-maximal suppression algorithms for homogeneous spatial keypoint distribution. Pattern Recognition Letters, 2018, 106, 53-60.	2.6	28
45	Volumetric Propagation Network: Stereo-LiDAR Fusion for Long-Range Depth Estimation. IEEE Robotics and Automation Letters, 2021, 6, 4672-4679.	3.3	28
46	Depth Completion with Deep Geometry and Context Guidance. , 2019, , .		26
47	VolumeFusion: Deep Depth Fusion for 3D Scene Reconstruction. , 2021, , .		26
48	Object recognition using a generalized robust invariant feature and Gestalt's law of proximity and similarity. Pattern Recognition, 2008, 41, 726-741.	5.1	25
49	Distinctive Similarity Measure for stereo matching under point ambiguity. Computer Vision and Image Understanding, 2008, 112, 173-183.	3.0	24
50	Stereo Matching with Color and Monochrome Cameras in Low-Light Conditions. , 2016, , .		24
51	Robust and Globally Optimal Manhattan Frame Estimation in Near Real Time. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 682-696.	9.7	24
52	MS-UDA: Multi-Spectral Unsupervised Domain Adaptation for Thermal Image Semantic Segmentation. IEEE Robotics and Automation Letters, 2021, 6, 6497-6504.	3.3	24
53	Gradient-Based Camera Exposure Control for Outdoor Mobile Platforms. IEEE Transactions on Circuits and Systems for Video Technology, 2019, 29, 1569-1583.	5.6	22
54	Noise Robust Depth from Focus Using a Ring Difference Filter. , 2017, , .		20

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55	Category-Level Metric Scale Object Shape and Pose Estimation. IEEE Robotics and Automation Letters, 2021, 6, 8575-8582.	3.3	20
56	A biprism-stereo camera system. , 0, , .		19
57	One-day outdoor photometric stereo via skylight estimation. , 2015, , .		19
58	Globally Optimal Manhattan Frame Estimation in Real-Time. , 2016, , .		19
59	Refining Geometry from Depth Sensors using IR Shading Images. International Journal of Computer Vision, 2017, 122, 1-16.	10.9	19
60	Disjoint Multi-task Learning Between Heterogeneous Human-Centric Tasks. , 2018, , .		19
61	Dense Relational Image Captioning via Multi-Task Triple-Stream Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 7348-7362.	9.7	19
62	Multi-Image Deblurring Using Complementary Sets of Fluttering Patterns. IEEE Transactions on Image Processing, 2017, 26, 2311-2326.	6.0	18
63	Gated bidirectional feature pyramid network for accurate one-shot detection. Machine Vision and Applications, 2019, 30, 543-555.	1.7	18
64	Camera calibration based on arbitrary parallelograms. Computer Vision and Image Understanding, 2009, 113, 1-10.	3.0	17
65	On-Line Initialization and Extrinsic Calibration of an Inertial Navigation System With a Relative Preintegration Method on Manifold. IEEE Transactions on Automation Science and Engineering, 2018, 15, 1272-1285.	3.4	17
66	Camera Exposure Control for Robust Robot Vision with Noise-Aware Image Quality Assessment. , 2019, , .		17
67	Crosswalk and traffic light detection via integral framework. , 2013, , .		16
68	High dynamic range imaging by a rank-1 constraint. , 2013, , .		16
69	Reflection removal using disparity and gradient-sparsity via smoothing algorithm. , 2015, , .		16
70	MCDAL: Maximum Classifier Discrepancy for Active Learning. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 8753-8763.	7.2	16
71	Scalable representation for 3D object recognition using feature sharing and view clustering. Pattern Recognition, 2008, 41, 754-773.	5.1	15
72	Accurate Camera Calibration Robust to Defocus Using a Smartphone. , 2015, , .		15

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73	Globally Optimal Inlier Set Maximization for Atlanta Frame Estimation. , 2018, , .		15
74	Probabilistic moving least squares with spatial constraints for nonlinear color transfer between images. Computer Vision and Image Understanding, 2019, 180, 1-12.	3.0	15
75	3-D object recognition using a new invariant relationship by single-view. Pattern Recognition, 2000, 33, 741-754.	5.1	14
76	Thermal-infrared based drivable region detection. , 2016, , .		14
77	Robust and direct estimation of 3-D motion and scene depth from stereo image sequences. Pattern Recognition, 2001, 34, 1713-1728.	5.1	13
78	Fast object recognition using dynamic programming from combination of salient line groups. Pattern Recognition, 2003, 36, 79-90.	5.1	13
79	Cost-aware depth map estimation for Lytro camera. , 2014, , .		13
80	Fluttering Pattern Generation Using Modified Legendre Sequence for Coded Exposure Imaging. , 2013, , .		12
81	Globally Optimal Inlier Set Maximization for Atlanta World Understanding. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2656-2669.	9.7	12
82	Extrinsic calibration of non-overlapping camera-laser system using structured environment. , 2014, , .		11
83	Rao-Blackwellized particle filtering with Gaussian mixture models for robust visual tracking. Computer Vision and Image Understanding, 2014, 125, 128-137.	3.0	11
84	Simultaneous Estimation of Near IR BRDF and Fine-Scale Surface Geometry. , 2016, , .		11
85	Extrinsic calibration of a camera and a 2D laser without overlap. Robotics and Autonomous Systems, 2016, 78, 17-28.	3.0	11
86	Category–Specific Salient View Selection via Deep Convolutional Neural Networks. Computer Graphics Forum, 2017, 36, 313-328.	1.8	11
87	Generating Fluttering Patterns with Low Autocorrelation for Coded Exposure Imaging. International Journal of Computer Vision, 2017, 123, 269-286.	10.9	11
88	Fast Perception, Planning, and Execution for a Robotic Butler: Wheeled Humanoid M-Hubo. , 2019, , .		11
89	Sensor Fusion of Cameras and a Laser for City-Scale 3D Reconstruction. Sensors, 2014, 14, 20882-20909.	2.1	10
90	Structure-From-Motion in 3D Space Using 2D Lidars. Sensors, 2017, 17, 242.	2.1	10

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91	ACP++: Action Co-Occurrence Priors for Human-Object Interaction Detection. IEEE Transactions on Image Processing, 2021, 30, 9150-9163.	6.0	10
92	Dealing with Missing Modalities in the Visual Question Answer-Difference Prediction Task through Knowledge Distillation. , 2021, , .		10
93	MC-Calib: A generic and robust calibration toolbox for multi-camera systems. Computer Vision and Image Understanding, 2022, 217, 103353.	3.0	10
94	2D-3D camera fusion for visual odometry in outdoor environments. , 2014, , .		9
95	Bayesian filtering for keyframe-based visual SLAM. International Journal of Robotics Research, 2015, 34, 517-531.	5.8	9
96	Multi-View Object Extraction With Fractional Boundaries. IEEE Transactions on Image Processing, 2016, 25, 3639-3654.	6.0	9
97	3D Display Calibration by Visual Pattern Analysis. IEEE Transactions on Image Processing, 2017, 26, 2090-2102.	6.0	9
98	Learning Residual Flow as Dynamic Motion from Stereo Videos. , 2019, , .		9
99	DISC: A Large-scale Virtual Dataset for Simulating Disaster Scenarios. , 2019, , .		9
100	Euclidean structure from confocal conics: Theory and application to camera calibration. Computer Vision and Image Understanding, 2010, 114, 803-812.	3.0	8
101	Local deformation calibration for autostereoscopic 3D display. Optics Express, 2017, 25, 10801.	1.7	8
102	Automatic model-based 3D object recognition by combining feature matching with tracking. Machine Vision and Applications, 2005, 16, 267-272.	1.7	7
103	Recognition-based indoor topological navigation using robust invariant features. , 2005, , .		7
104	3D target recognition using cooperative feature map binding under Markov Chain Monte Carlo. Pattern Recognition Letters, 2006, 27, 811-821.	2.6	7
105	Robust model-based scene interpretation by multilayered context information. Computer Vision and Image Understanding, 2007, 105, 167-187.	3.0	7
106	Geometry Guided Three-Dimensional Propagation for Depth From Small Motion. IEEE Signal Processing Letters, 2017, 24, 1857-1861.	2.1	7
107	Online Misalignment Estimation of Strapdown Navigation for Land Vehicle under Dynamic Condition. International Journal of Automotive Technology, 2021, 22, 1723-1733.	0.7	7
108	Appearance-Cloning: Photo-Consistent Scene Recovery from Multi-View Images. International Journal of Computer Vision, 2006, 66, 163-192.	10.9	6

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109	Autonomous homing based on laser-camera fusion system. , 2012, , .		6
110	A Closed-Form Solution to Rotation Estimation for Structure from Small Motion. IEEE Signal Processing Letters, 2018, 25, 393-397.	2.1	6
111	Change detection using a statistical model in an optimally selected color space. Computer Vision and Image Understanding, 2008, 112, 231-242.	3.0	5
112	Vision-based navigation with efficient scene recognition. Intelligent Service Robotics, 2011, 4, 191-202.	1.6	5
113	6-DOF Direct Homography Tracking with Extended Kalman Filter. Lecture Notes in Computer Science, 2016, , 447-460.	1.0	5
114	Lane Detection Aided Online Dead Reckoning for GNSS Denied Environments. Sensors, 2021, 21, 6805.	2.1	5
115	An edge-based algorithm for discontinuity adaptive color image smoothing. Pattern Recognition, 2001, 34, 333-342.	5.1	4
116	Stereo Matching with Symmetric Cost Functions. , 0, , .		4
117	Robust vision-based autonomous navigation against environment changes. , 2008, , .		4
118	Simultaneous place and object recognition using collaborative context information. Image and Vision Computing, 2009, 27, 824-833.	2.7	4
119	Real-time motion detection based on Discrete Cosine Transform. , 2012, , .		4
120	Complementary Sets of Shutter Sequences for Motion Deblurring. , 2015, , .		4
121	P-73: Lenticular Lens Parameter Estimation Using Single Image for Crosstalk Reduction of Three-Dimensional Multi-View Display. Digest of Technical Papers SID International Symposium, 2015, 46, 1417-1420.	0.1	4
122	Depth from accidental motion using geometry prior. , 2015, , .		4
123	Deep representation of industrial components using simulated images. , 2017, , .		4
124	Infinite Homography Estimation Using Two Arbitrary Planar Rectangles. Lecture Notes in Computer Science, 2006, , 1-10.	1.0	4
125	Scalable Representation and Learning for 3D Object Recognition Using Shared Feature-Based View Clustering. Lecture Notes in Computer Science, 2006, , 561-570.	1.0	4
126	Self-Supervised Depth and Ego-Motion Estimation for Monocular Thermal Video Using Multi-Spectral Consistency Loss. IEEE Robotics and Automation Letters, 2022, 7, 1103-1110.	3.3	4

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127	Maximizing Self-Supervision From Thermal Image for Effective Self-Supervised Learning of Depth and Ego-Motion. IEEE Robotics and Automation Letters, 2022, 7, 7771-7778.	3.3	4
128	Robust direct motion estimation considering discontinuity. Pattern Recognition Letters, 2000, 21, 999-1011.	2.6	3
129	Color indexing using chromatic invariant. Pattern Recognition, 2001, 34, 1189-1197.	5.1	3
130	Metric reconstruction of planes utilizing off-the-plane features. Computer Vision and Image Understanding, 2011, 115, 1-7.	3.0	3
131	Haze removal on superpixel domain. , 2013, , .		3
132	Hybrid vision-based SLAM coupled with moving object tracking. , 2014, , .		3
133	Vehicular Multi-Camera Sensor System for Automated Visual Inspection of Electric Power Distribution Equipment. , 2019, , .		3
134	Linear RGB-D SLAM for Structured Environments. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	9.7	3
135	A Large-Scale Virtual Dataset and Egocentric Localization for Disaster Responses. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2023, 45, 6766-6782.	9.7	3
136	Multi-Scale, Multi-Object and Real-Time Face Detection and Head Pose Estimation Using Deep Neural Networks. The Journal of Korea Robotics Society, 2017, 12, 313-321.	0.2	3
137	Stereo Object Matching Network. , 2021, , .		3
138	Segment2Regress: Monocular 3D Vehicle Localization in Two Stages. , 0, , .		3
139	SideGuide:A Large-scale Sidewalk Dataset for Guiding Impaired People. , 2020, , .		3
140	Vision-based autonomous navigation based on motion estimation. , 2008, , .		2
141	Multi lidar system for fast obstacle detection. , 2012, , .		2
142	Fusing Multiple Independent Estimates via Spectral Clustering for Robust Visual Tracking. IEEE Signal Processing Letters, 2012, 19, 527-530.	2.1	2
143	A Perceptual Visual Feature Extraction Method Achieved by Imitating V1 and V4 of the Human Visual System. Cognitive Computation, 2013, 5, 610-628.	3.6	2
144	Combinatorial approach for lane detection using image and LIDAR reflectance. , 2015, , .		2

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145	Sentence learning on deep convolutional networks for image Caption Generation. , 2016, , .		2
146	One-Day Outdoor Photometric Stereo Using Skylight Estimation. International Journal of Computer Vision, 2019, 127, 1126-1142.	10.9	2
147	Category-specific upright orientation estimation for 3D model classification and retrieval. Image and Vision Computing, 2020, 96, 103900.	2.7	2
148	Semi-metric Space: A New Approach to Treat Orthogonality and Parallelism. Lecture Notes in Computer Science, 2006, , 529-538.	1.0	2
149	Robust Real-time Tracking of Facial Features with Application to Emotion Recognition. The Journal of Korea Robotics Society, 2013, 8, 266-272.	0.2	2
150	Real-Time Multi-Car Localization and See-Through System. International Journal of Computer Vision, 2022, 130, 384-404.	10.9	2
151	Adaptive Cost Volume Fusion Network for Multi-Modal Depth Estimation in Changing Environments. IEEE Robotics and Automation Letters, 2022, 7, 5095-5102.	3.3	2
152	Probabilistic matching of line segments for their homography. , 2008, , .		1
153	Robust visual lock-on and simultaneous localization for an unmanned aerial vehicle. , 2010, , .		1
154	Efficient Data-Driven MCMC sampling for vision-based 6D SLAM. , 2012, , .		1
155	Moving object detection under moving camera by rank minimization. , 2012, , .		1
156	Relative attributes with deep Convolutional Neural Network. , 2015, , .		1
157	High-Fidelity Depth Upsampling Using the Self-Learning Framework. Sensors, 2019, 19, 81.	2.1	1
158	Salient View Selection for Visual Recognition of Industrial Components. IEEE Robotics and Automation Letters, 2020, 5, 2506-2513.	3.3	1
159	Robust and Efficient Estimation of Relative Pose for Cameras on Selfie Sticks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	9.7	1
160	Accelerated Kmeans Clustering Using Binary Random Projection. Lecture Notes in Computer Science, 2015, , 257-272.	1.0	1
161	Generating Fluttering Patterns with Low Autocorrelation for Coded Exposure Imaging. , 2017, 123, 269.		1
162	Fast object recognition using salient line groups. , 0, , .		0

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163	Calibration and 3D structure recovery under varying cameras using known angles. , 0, , .		0
164	Visual recognition of planar panels with line features. , 0, , .		0
165	How human visual systems recognize objects - a novel computational model. , 2004, , .		0
166	An effective 3D target recognition model imitating robust methods of the human visual system. Pattern Analysis and Applications, 2005, 8, 211-226.	3.1	0
167	Reducing ambiguity in feature point matching by preserving local geometric consistency. , 2008, , .		0
168	Product search framework with categorization and identification. , 2008, , .		0
169	Preface Message from the Guest Editors-In-Chief. IPSJ Transactions on Computer Vision and Applications, 2009, 1, 82-82.	4.4	0
170	Message from the Guest Editors-In-Chief. IPSJ Transactions on Computer Vision and Applications, 2009, 1, 127-127.	4.4	0
171	Large object detection in cluttered background using boosted Markov Chain Monte Carlo. , 2010, , .		0
172	Intra-class key feature weighting method for vocabulary tree based image retrieval. , 2012, , .		0
173	Bayesian filtering for localization using decoupled visual measurements. , 2013, , .		0
174	Robust Computer Vision Techniques for High-Quality 3D Modeling. , 2013, , .		0
175	A fusion approach for robust visual object tracking in crowd scenes. , 2014, , .		0
176	A simple and real-time moving object detection invariant to cast shadow. , 2014, , .		0
177	Human body part classification from optical flow. , 2016, , .		0
178	Fast and robust binary descriptor using intensity rank binning. Electronics Letters, 2017, 53, 79-81.	0.5	0
179	Model-Based Scene Interpretation by Multilayered Context Information. , 2012, , 2310-2312.		0
180	Group-based Multi Agent System Configuration for Robot Navigation.. Journal of the Robotics Society of Japan, 1995, 13, 375-382.	0.0	0

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181	2D-3D Pose Estimation using Multi-view Object Co-segmentation. The Journal of Korea Robotics Society, 2017, 12, 33-41.	0.2	0
182	Capturing city-level scenes with a synchronized camera-laser fusion sensor. , 2011, , .		0
183	Dense Pixel-Level Interpretation of Dynamic Scenes With Video Panoptic Segmentation. IEEE Transactions on Image Processing, 2022, 31, 5383-5395.	6.0	0