Ruigang Yang

List of Publications by Year
in descending order

184 papers	8,945 citations	136740 32 h-index	102304 66 g-index
186 all docs	186 docs citations	186 times ranked	5596 citing authors

#	ARTICLE	IF	CITATIONS
1	Spatial-Depth Super Resolution for Range Images. , 2007, , .		539
2	GA-Net: Guided Aggregation Net for End-To-End Stereo Matching. , 2019, , .		398
3	Stereo Matching with Color-Weighted Correlation, Hierarchical Belief Propagation, and Occlusion Handling. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 492-504.	9.7	394
4	Saliency-Aware Video Object Segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 20-33.	9.7	376
5	The ApolloScape Dataset for Autonomous Driving. , 2018, , .		290
6	Real-Time Visibility-Based Fusion of Depth Maps. , 2007, , .		261
7	Salient Object Detection in the Deep Learning Era: An In-Depth Survey. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 3239-3259.	9.7	259
8	The ApolloScape Open Dataset for Autonomous Driving and Its Application. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2702-2719.	9.7	257
9	TrafficPredict: Trajectory Prediction for Heterogeneous Traffic-Agents. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 6120-6127.	3.6	248
10	IoU Loss for 2D/3D Object Detection. , 2019, , .		209
11	High-Quality Real-Time Stereo Using Adaptive Cost Aggregation and Dynamic Programming. , 2006, , .		207
12	Camera-based calibration techniques for seamless multiprojector displays. IEEE Transactions on Visualization and Computer Graphics, 2005, 11, 193-206.	2.9	172
13	Accurate 3D pose estimation from a single depth image. , 2011, , .		163
14	A Performance Study on Different Cost Aggregation Approaches Used in Real-Time Stereo Matching. International Journal of Computer Vision, 2007, 75, 283-296.	10.9	159
15	Depth Estimation via Affinity Learned with Convolutional Spatial Propagation Network. Lecture Notes in Computer Science, 2018, , 108-125.	1.0	159
16	Multi-projector displays using camera-based registration. , 0, , .		148
17	FaceScape: A Large-Scale High Quality 3D Face Dataset and Detailed Riggable 3D Face Prediction. , 2020, , .		145
18	Learning Depth with Convolutional Spatial Propagation Network. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2361-2379.	9.7	139

#	ARTICLE	IF	CITATIONS
19	Inferring Salient Objects from Human Fixations. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 1913-1927.	9.7	134
20	Accuracy and repeatability of joint angles measured using a single camera markerless motion capture system. Journal of Biomechanics, 2014, 47, 587-591.	0.9	131
21	Semi-Supervised Video Object Segmentation with Super-Trajectories. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 985-998.	9.7	123
22	Stereoscopic inpainting: Joint color and depth completion from stereo images. , 2008, , .		121
23	A Survey on Human Motion Analysis from Depth Data. Lecture Notes in Computer Science, 2013, , 149-187.	1.0	118
24	Reliability Fusion of Time-of-Flight Depth and Stereo Geometry for High Quality Depth Maps. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 1400-1414.	9.7	114
25	Real-Time Simultaneous Pose and Shape Estimation for Articulated Objects Using a Single Depth Camera. , 2014, , .		109
26	AADS: Augmented autonomous driving simulation using data-driven algorithms. Science Robotics, 2019, 4, .	9.9	103
27	Semantic Segmentation of Urban Scenes Using Dense Depth Maps. Lecture Notes in Computer Science, 2010, , 708-721.	1.0	99
28	Detailed Human Shape Estimation From a Single Image by Hierarchical Mesh Deformation. , 2019, , .		97
29	Spatial-Temporal Fusion for High Accuracy Depth Maps Using Dynamic MRFs. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 899-909.	9.7	92
30	Semantic decomposition and reconstruction of residential scenes from LiDAR data. ACM Transactions on Graphics, 2013, 32, 1-10.	4.9	92
31	ApolloCar3D: A Large 3D Car Instance Understanding Benchmark for Autonomous Driving. , 2019, , .		89
32	Stereo Matching with Color-Weighted Correlation, Hierachical Belief Propagation and Occlusion Handling. , 0, , .		85
33	LiDAR-Based Online 3D Video Object Detection With Graph-Based Message Passing and Spatiotemporal Transformer Attention. , 2020, , .		82
34	A Unified Object Motion and Affinity Model for Online Multi-Object Tracking. , 2020, , .		78
35	Multi-resolution real-time stereo on commodity graphics hardware. , 0, , .		72
36	Augmented LiDAR Simulator for Autonomous Driving. IEEE Robotics and Automation Letters, 2020, 5, 1931-1938.	3.3	71

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37	Fusion of time-of-flight depth and stereo for high accuracy depth maps. , 2008, , .		70
38	Global stereo matching leveraged by sparse ground control points. , 2011, , .		68
39	Fusion of Median and Bilateral Filtering for Range Image Upsampling. IEEE Transactions on Image Processing, 2013, 22, 4841-4852.	6.0	68
40	Learning Warped Guidance for Blind Face Restoration. Lecture Notes in Computer Science, 2018, , 278-296.	1.0	68
41	Quality Dynamic Human Body Modeling Using a Single Low-Cost Depth Camera. , 2014, , .		67
42	The measurement of in vivo joint angles during a squat using a single camera markerless motion capture system as compared to a marker based system. Gait and Posture, 2015, 41, 694-698.	0.6	66
43	Domain-Invariant Stereo Matching Networks. Lecture Notes in Computer Science, 2020, , 420-439.	1.0	64
44	Real-time consensus-based scene reconstruction using commodity graphics hardware. , 0, , .		62
45	Joint 3D Instance Segmentation and Object Detection for Autonomous Driving. , 2020, , .		61
46	Automatic Natural Video Matting with Depth. , 2007, , .		60
47	Modeling deformable objects from a single depth camera. , 2009, , .		53
48	Channel Attention Based Iterative Residual Learning for Depth Map Super-Resolution. , 2020, , .		52
49	Model-based head pose tracking with stereovision. , 0, , .		51
50	Semantic Parametric Reshaping of Human Body Models. , 2014, , .		47
51	A versatile stereo implementation on commodity graphics hardware. Real Time Imaging, 2005, 11, 7-18.	1.6	46
52	Toward the Light Field Display: Autostereoscopic Rendering via a Cluster of Projectors. IEEE Transactions on Visualization and Computer Graphics, 2008, 14, 84-96.	2.9	45
53	Eye Gaze Correction with Stereovision for Video-Teleconferencing. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2004, 26, 956-960.	9.7	44
54	How Far Can We Go with Local Optimization in Real-Time Stereo Matching. , 2006, , .		44

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55	Fast Image Segmentation and Smoothing Using Commodity Graphics Hardware. Journal of Graphics Tools, 2002, 7, 91-100.	0.5	43
56	Video Stereolization: Combining Motion Analysis with User Interaction. IEEE Transactions on Visualization and Computer Graphics, 2012, 18, 1079-1088.	2.9	43
57	Restoring 2D Content from Distorted Documents. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 1904-1916.	9.7	40
58	Edge-preserving photometric stereo via depth fusion. , 2012, , .		38
59	Eye Gaze Correction with Stereovision for Video-Teleconferencing. Lecture Notes in Computer Science, 2002, , 479-494.	1.0	38
60	Real-Time Simultaneous Pose and Shape Estimation for Articulated Objects Using a Single Depth Camera. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 1517-1532.	9.7	37
61	View Extrapolation of Human Body from a Single Image. , 2018, , .		35
62	DeLS-3D: Deep Localization and Segmentation with a 3D Semantic Map. , 2018, , .		35
63	Getting Robots Unfrozen and Unlost in Dense Pedestrian Crowds. IEEE Robotics and Automation Letters, 2019, 4, 1178-1185.	3.3	35
64	PixelFlex: a reconfigurable multi-projector display system. , 0, , .		32
65	Instance Segmentation of LiDAR Point Clouds. , 2020, , .		32
66	Automatic Real-Time Video Matting Using Time-of-Flight Camera and Multichannel Poisson Equations. International Journal of Computer Vision, 2012, 97, 104-121.	10.9	30
67	An experimental study of pupil constriction for liveness detection. , 2013, , .		30
68	Heter-Sim: Heterogeneous Multi-Agent Systems Simulation by Interactive Data-Driven Optimization. IEEE Transactions on Visualization and Computer Graphics, 2021, 27, 1953-1966.	2.9	30
69	Dealing with textureless regions and specular highlights - a progressive space carving scheme using a novel photo-consistency measure. , 2003, , .		29
70	Physically guided liquid surface modeling from videos. ACM Transactions on Graphics, 2009, 28, 1-11.	4.9	28
71	Real-time stereo using approximated joint bilateral filtering and dynamic programming. Journal of Real-Time Image Processing, 2014, 9, 447-461.	2.2	28
72	Light Fall-off Stereo. , 2007, , .		27

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73	Image-Gradient-Guided Real-Time Stereo on Graphics Hardware. , 0, , .		26
74	Real-time view synthesis using commodity graphics hardware. , 2002, , .		25
75	A UNIFIED APPROACH TO REAL-TIME, MULTI-RESOLUTION, MULTI-BASELINE 2D VIEW SYNTHESIS AND 3D DEPTH ESTIMATION USING COMMODITY GRAPHICS HARDWARE. International Journal of Image and Graphics, 2004, 04, 627-651.	1.2	25
76	Multi-projector display with continuous self-calibration. , 2008, , .		25
77	Real-Time Consensus-Based Scene Reconstruction Using Commodity Graphics Hardware+. Computer Graphics Forum, 2003, 22, 207-216.	1.8	22
78	A Uniform Framework for Estimating Illumination Chromaticity, Correspondence, and Specular Reflection. IEEE Transactions on Image Processing, 2011, 20, 53-63.	6.0	22
79	Gated Path Selection Network for Semantic Segmentation. IEEE Transactions on Image Processing, 2021, 30, 2436-2449.	6.0	22
80	An improved iterative back projection algorithm based on ringing artifacts suppression. Neurocomputing, 2015, 162, 171-179.	3.5	20
81	Improved Real-Time Stereo on Commodity Graphics Hardware. , 0, , .		19
82	BRDF invariant stereo using light transport constancy. , 2005, , .		19
83	Robust and Accurate Visual Echo Cancelation in a Full-duplex Projector-Camera System. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 1831-1840.	9.7	19
84	Interreflection removal for photometric stereo by using spectrum-dependent albedo. , 2011, , .		19
85	Personal Photograph Enhancement Using Internet Photo Collections. IEEE Transactions on Visualization and Computer Graphics, 2014, 20, 262-275.	2.9	19
86	DVI: Depth Guided Video Inpainting for Autonomous Driving. Lecture Notes in Computer Science, 2020, , 1-17.	1.0	19
87	Eye contact in video conference via fusion of time-of-flight depth sensor and stereo. 3D Research, 2011, 2, 1.	1.8	18
88	A new infrared small and dim target detection algorithm based on multi-directional composite window. Infrared Physics and Technology, 2015, 71, 402-407.	1.3	18
89	Fast Texture Mapping Adjustment via Local/Global Optimization. IEEE Transactions on Visualization and Computer Graphics, 2019, 25, 2296-2303.	2.9	18
90	Plane Segmentation Based on the Optimal-Vector-Field in LiDAR Point Clouds. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 3991-4007.	9.7	18

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91	Illumination and Person-Insensitive Head Pose Estimation Using Distance Metric Learning. Lecture Notes in Computer Science, 2008, , 624-637.	1.0	18
92	Safe Navigation With Human Instructions in Complex Scenes. IEEE Robotics and Automation Letters, 2019, 4, 753-760.	3.3	17
93	Dynamic Non-Rigid Objects Reconstruction with a Single RGB-D Sensor. Sensors, 2018, 18, 886.	2.1	16
94	Search Space Reduction for MRF Stereo. Lecture Notes in Computer Science, 2008, , 576-588.	1.0	16
95	BRDF Invariant Stereo Using Light Transport Constancy. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 1616-1626.	9.7	15
96	Display control based on eye gaze estimation. , 2011, , .		15
97	3D Reconstruction in the presence of glasses by acoustic and stereo fusion. , 2015, , .		15
98	Detailed Surface Geometry and Albedo Recovery from RGB-D Video under Natural Illumination. , 2017, , .		15
99	Omnidirectional Depth Extension Networks. , 2020, , .		15
100	Immersive electronic books for surgical training. IEEE MultiMedia, 2005, 12, 22-35.	1.5	14
101	Joint depth and alpha matte optimization via fusion of stereo and time-of-flight sensor. , 2009, , .		14
102	Data-Driven Flower Petal Modeling with Botany Priors. , 2014, , .		14
103	Efficient rendering of integral images. , 2005, , .		13
104	Endoscopic Video Texture Mapping on Pre-Built 3-D Anatomical Objects Without Camera Tracking. IEEE Transactions on Medical Imaging, 2010, 29, 1213-1223.	5.4	13
105	Measurement of mirror surfaces using specular reflection and analytical computation. Machine Vision and Applications, 2013, 24, 289-304.	1.7	13
106	Analytical reconstruction of three-dimensional weld pool surface in GTAW. Journal of Manufacturing Processes, 2013, 15, 34-40.	2.8	13
107	Interactive Visual Hull Refinement for Specular and Transparent Object Surface Reconstruction. , 2015, , .		13
108	Mask-off: Synthesizing Face Images in the Presence of Head-mounted Displays. , 2019, , .		13

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109	Learning 3D shape from a single facial image via non-linear manifold embedding and alignment. , 2010, , .		12
110	Simulation Guided Hair Dynamics Modeling from Video. Computer Graphics Forum, 2012, 31, 2003-2010.	1.8	12
111	3D Reconstruction in the Presence of Glass and Mirrors by Acoustic and Visual Fusion. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 1785-1798.	9.7	12
112	A Search and Rescue System for Maritime Personnel in Disaster Carried on Unmanned Aerial Vehicle. , 2019, , .		12
113	Compact Reachability Map for Excavator Motion Planning. , 2019, , .		11
114	Geometric and photometric restoration of distorted documents. , 2005, , .		10
115	Examplar-based Shape from Shading. International Conference on 3-D Digital Imaging and Modeling, Proceedings, 2007, , .	0.0	10
116	A generative human-robot motion retargeting approach using a single depth sensor. , 2017, , .		10
117	Learning Resilient Behaviors for Navigation Under Uncertainty. , 2020, , .		10
118	SparseFusion: Dynamic Human Avatar Modeling From Sparse RGBD Images. IEEE Transactions on Multimedia, 2021, 23, 1617-1629.	5.2	10
119	Towards space. , 2005, , .		9
120	View-dependent textured splatting. Visual Computer, 2006, 22, 456-467.	2.5	9
121	Physically guided liquid surface modeling from videos. , 2009, , .		9
122	Real-Time Large-Scale Dense Mapping with Surfels. Sensors, 2018, 18, 1493.	2.1	9
123	Geometrically correct imagery for teleconferencing. , 1999, , .		8
124	Space-Time Light Field Rendering. IEEE Transactions on Visualization and Computer Graphics, 2007, 13, 697-710.	2.9	8
125	Simultaneous Time-of-Flight sensing and photometric stereo with a single ToF sensor. , 2015, , .		8
126	AutoTrajectory: Label-Free Trajectory Extraction and Prediction from Videos Using Dynamic Points. Lecture Notes in Computer Science, 2020, , 646-662.	1.0	8

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127	Predictive control for robot arm teleoperation. , 2013, , .		7
128	RotPredictor: Unsupervised Canonical Viewpoint Learning for Point Cloud Classification. , 2020, , .		7
129	Unsupervised learning of high-order structural semantics from images. , 2009, , .		6
130	A Generative Human-Robot Motion Retargeting Approach Using a Single RGBD Sensor. IEEE Access, 2019, 7, 51499-51512.	2.6	6
131	Inexact descent methods for elastic parameter optimization. ACM Transactions on Graphics, 2019, 37, 1-14.	4.9	6
132	Interactive free-viewpoint video generation. Virtual Reality & Intelligent Hardware, 2020, 2, 247-260.	1.8	6
133	Robust and Accurate Visual Echo Cancelation in a Full-Duplex Projector-Camera System. , 0, , .		5
134	Online Building Segmentation from Ground-Based LiDAR Data in Urban Scenes. , 2013, , .		5
135	Light field projection for lighting reproduction. , 2015, , .		5
136	3D Part Guided Image Editing for Fine-Grained Object Understanding. , 2020, , .		5
137	InstanceFusion: Realâ€time Instanceâ€level 3D Reconstruction Using a Single RGBD Camera. Computer Graphics Forum, 2020, 39, 433-445.	1.8	5
138	Manifold Estimation in View-Based Feature Space for Face Synthesis across Poses. Lecture Notes in Computer Science, 2010, , 37-47.	1.0	5
139	Remote 3D medical consultation. , 0, , .		4
140	User centered design of a hybrid-reality display for weld monitoring. , 2014, , .		4
141	Towards virtualized welding: Visualization and monitoring of remote welding. , 2014, , .		4
142	Single-Shot Time-of-Flight Phase Unwrapping Using Two Modulation Frequencies. , 2016, , .		4
143	Genetic Transformation of Tribonema minus, a Eukaryotic Filamentous Oleaginous Yellow-Green Alga. International Journal of Molecular Sciences, 2020, 21, 2106.	1.8	4
144	Angus Cattle Recognition Using Deep Learning. , 2021, , .		4

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145	Photo Realistic 3D Cartoon Face Modeling Based on Active Shape Model. Lecture Notes in Computer Science, 2009, , 299-311.	1.0	4
146	An Intelligent Self-Driving Truck System for Highway Transportation. Frontiers in Neurorobotics, 2022, 16, .	1.6	4
147	Immersive Video Teleconferencing with User-Steerable Views. Presence: Teleoperators and Virtual Environments, 2007, 16, 188-205.	0.3	3
148	Estimating pose and illumination direction for frontal face synthesis. , 2008, , .		3
149	Robust varying-resolution iris recognition. , 2012, , .		3
150	Guest Editorial: 3D Imaging, Processing and Modelling. International Journal of Computer Vision, 2013, 102, 1-2.	10.9	3
151	High-Quality Stereo Video Matching via User Interaction and Space-Time Propagation. , 2013, , .		3
152	Video face beautification. , 2014, , .		3
153	TraEDITS: Diversity and Irregularity-Aware Traffic Trajectory Editing. IEEE Robotics and Automation Letters, 2022, 7, 2937-2944.	3.3	3
154	Interactive 3D teleconferencing with user-adaptive views. , 2004, , .		2
155	Flexible Pixel Compositor for Plug-and-Play Multi-Projector Displays. , 2007, , .		2
156	Real-time Light Fall-off Stereo. , 2008, , .		2
157	A novel see-through screen based on weave fabrics. , 2011, , .		2
158	Analytic measurement of mirror surfaces by a single shot with united modeling of incident rays. Measurement Science and Technology, 2012, 23, 125404.	1.4	2
159	3D Imaging Techniques and Multimedia Applications [Guest editor's introduction]. IEEE MultiMedia, 2013, 20, 14-16.	1.5	2
160	Development of a Hybrid Reality Display for Welders through Applied Cognitive Task Analysis. Proceedings of the Human Factors and Ergonomics Society, 2014, 58, 1174-1178.	0.2	2
161	Robust Surface Light Field Modeling. , 2018, , .		2
162	Detailed Surface Geometry and Albedo Recovery from RGB-D Video under Natural Illumination. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2720-2734.	9.7	2

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163	High-speed Depth Stream Generation from a Hybrid Camera. , 2016, , .		2
164	Reducing resolution loss in two-pass rendering by optimal view directions and display-surface partitioning. , 2008, , .		1
165	See-through Image Enhancement through Sensor Fusion. , 2012, , .		1
166	Robust near-infrared structured light scanning for 3D human model reconstruction. , 2014, , .		1
167	A Performance Comparison between Circular and Spline-Based Methods for Iris Segmentation. , 2014, , .		1
168	Virtualized welding based teleoperation with pipe gas tungsten arc welding applications. , 2014, , .		1
169	Scientific Computing on Commodity Graphics Hardware. Lecture Notes in Computer Science, 2004, , 1100-1105.	1.0	1
170	Joint depth and alpha matte optimization via fusion of stereo and time-of-flight sensor. , 2009, , .		1
171	View-dependent textured splatting for rendering live scenes. , 2004, , .		0
172	Multispectral color acquisition and display using commodity hardware. , 2004, 5558, 586.		0
173	Flexible pixel compositor for autostereoscopic displays. Proceedings of SPIE, 2008, , .	0.8	0
174	Anywhere pixel router. , 2008, , .		0
175	Multimedia processing on commodity graphics hardware. , 2009, , .		0
176	A novel pixel router for large-scale multiprojector displays. Proceedings of SPIE, 2009, , .	0.8	0
177	Complete 3D model reconstruction using two types of depth sensors. , 2010, , .		0
178	Complete 3D model reconstruction using a depth sensor. , 2010, , .		0
179	A red-eye detector for iris segmentation using shape context. Proceedings of SPIE, 2013, , .	0.8	0
180	Video Enhancement of People Wearing Polarized Glasses: Darkening Reversal and Reflection Reduction. , 2013, , .		0

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181	Virtualized welding. , 2014, , .		0
182	Does an Abstract Weld Pool Visualization Help Novice Welders Assess the Performance of a Weldbot?. Proceedings of the Human Factors and Ergonomics Society, 2016, 60, 1309-1313.	0.2	0
183	Image deblurring for less intrusive iris capture. , 2009, , .		0
184	Color calibration of multi-projector displays through automatic optimization of hardware settings. , 2009, , .		0