

# Ian D Reid

## List of Publications by Year in descending order

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Version: 2024-02-01

172  
papers

19,535  
citations

101384

36  
h-index

56606

83  
g-index

175  
all docs

175  
docs citations

175  
times ranked

12549  
citing authors

#	ARTICLE	IF	CITATIONS
1	MonoSLAM: Real-Time Single Camera SLAM. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 1052-1067.	9.7	2,893
2	Generalized Intersection Over Union: A Metric and a Loss for Bounding Box Regression. , 2019, , .		2,262
3	Past, Present, and Future of Simultaneous Localization and Mapping: Toward the Robust-Perception Age. IEEE Transactions on Robotics, 2016, 32, 1309-1332.	7.3	2,239
4	RefineNet: Multi-path Refinement Networks for High-Resolution Semantic Segmentation. , 2017, , .		1,754
5	Learning Depth from Single Monocular Images Using Deep Convolutional Neural Fields. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016, 38, 2024-2039.	9.7	884
6	Unsupervised CNN for Single View Depth Estimation: Geometry to the Rescue. Lecture Notes in Computer Science, 2016, , 740-756.	1.0	630
7	Single View Metrology. International Journal of Computer Vision, 2000, 40, 123-148.	10.9	482
8	Stable multi-target tracking in real-time surveillance video. , 2011, , .		440
9	Articulated Body Motion Capture by Stochastic Search. International Journal of Computer Vision, 2005, 61, 185-205.	10.9	341
10	Drones count wildlife more accurately and precisely than humans. Methods in Ecology and Evolution, 2018, 9, 1160-1167.	2.2	266
11	From Motion Blur to Motion Flow: A Deep Learning Solution for Removing Heterogeneous Motion Blur. , 2017, , .		246
12	A comparison of loop closing techniques in monocular SLAM. Robotics and Autonomous Systems, 2009, 57, 1188-1197.	3.0	222
13	Deep learning features at scale for visual place recognition. , 2017, , .		218
14	Joint Probabilistic Data Association Revisited. , 2015, , .		208
15	Smart Mining for Deep Metric Learning. , 2017, , .		186
16	Multi-modal Cycle-Consistent Generalized Zero-Shot Learning. Lecture Notes in Computer Science, 2018, , 21-37.	1.0	183
17	Global Stereo Reconstruction under Second-Order Smoothness Priors. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 2115-2128.	9.7	182
18	A plane measuring device. Image and Vision Computing, 1999, 17, 625-634.	2.7	171

#	ARTICLE	IF	CITATIONS
19	RSLAM: A System for Large-Scale Mapping in Constant-Time Using Stereo. International Journal of Computer Vision, 2011, 94, 198-214.	10.9	159
20	Real-Time SLAM Relocalisation. , 2007, , .		156
21	Deep Regression Tracking with Shrinkage Loss. Lecture Notes in Computer Science, 2018, , 369-386.	1.0	155
22	PWP3D: Real-Time Segmentation and Tracking of 3D Objects. International Journal of Computer Vision, 2012, 98, 335-354.	10.9	153
23	Meaningful maps with object-oriented semantic mapping. , 2017, , .		140
24	MOTChallenge: A Benchmark for Single-Camera Multiple Target Tracking. International Journal of Computer Vision, 2021, 129, 845-881.	10.9	139
25	Vast-scale Outdoor Navigation Using Adaptive Relative Bundle Adjustment. International Journal of Robotics Research, 2010, 29, 958-980.	5.8	138
26	Structured Learning of Human Interactions in TV Shows. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 2441-2453.	9.7	137
27	A general method for human activity recognition in video. Computer Vision and Image Understanding, 2006, 104, 232-248.	3.0	135
28	Joint tracking and segmentation of multiple targets. , 2015, , .		129
29	Self-Calibration of Rotating and Zooming Cameras. International Journal of Computer Vision, 2001, 45, 107-127.	10.9	128
30	Navigating, Recognizing and Describing Urban Spaces With Vision and Lasers. International Journal of Robotics Research, 2009, 28, 1406-1433.	5.8	108
31	Robust Real-Time Visual Tracking Using Pixel-Wise Posteriors. Lecture Notes in Computer Science, 2008, , 831-844.	1.0	106
32	Modelling pedestrian trajectory patterns with Gaussian processes. , 2009, , .		103
33	Manhattan scene understanding using monocular, stereo, and 3D features. , 2011, , .		102
34	Dense Reconstruction Using 3D Object Shape Priors. , 2013, , .		102
35	Towards Context-Aware Interaction Recognition for Visual Relationship Detection. , 2017, , .		94
36	Unsupervised Scale-Consistent Depth Learning from Video. International Journal of Computer Vision, 2021, 129, 2548-2564.	10.9	87

#	ARTICLE	IF	CITATIONS
37	Active tracking of foveated feature clusters using affine structure. International Journal of Computer Vision, 1996, 18, 41-60.	10.9	84
38	On the comparison of uncertainty criteria for active SLAM. , 2012, , .		83
39	GMS: Grid-Based Motion Statistics for Fast, Ultra-robust Feature Correspondence. International Journal of Computer Vision, 2020, 128, 1580-1593.	10.9	83
40	Automatic Relocalization and Loop Closing for Real-Time Monocular SLAM. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 1699-1712.	9.7	82
41	Driving saccade to pursuit using image motion. International Journal of Computer Vision, 1995, 16, 205-228.	10.9	76
42	The active recovery of 3D motion trajectories and their use in prediction. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1997, 19, 219-234.	9.7	75
43	Guiding Visual Surveillance by Tracking Human Attention. , 2009, , .		73
44	A Constant-Time Efficient Stereo SLAM System. , 2009, , .		72
45	A modular head/eye platform for real-time reactive vision. Mechatronics, 1993, 3, 517-535.	2.0	68
46	Real-Time Joint Semantic Segmentation and Depth Estimation Using Asymmetric Annotations. , 2019, , .		65
47	Exploring Context with Deep Structured Models for Semantic Segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 1352-1366.	9.7	64
48	High Five: Recognising human interactions in TV shows. , 2010, , .		64
49	Dense 3D Face Correspondence. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 1584-1598.	9.7	61
50	Projective calibration of a laser-stripe range finder. Image and Vision Computing, 1996, 14, 659-666.	2.7	58
51	Nonlinear shape manifolds as shape priors in level set segmentation and tracking. , 2011, , .		55
52	Deep Reinforcement Learning for Active Breast Lesion Detection from DCE-MRI. Lecture Notes in Computer Science, 2017, , 665-673.	1.0	55
53	Real-time Image Smoothing via Iterative Least Squares. ACM Transactions on Graphics, 2020, 39, 1-24.	4.9	55
54	Real-time tracking of multiple occluding objects using level sets. , 2010, , .		53

#	ARTICLE	IF	CITATIONS
55	On combining visual SLAM and visual odometry. , 2010, , .		53
56	Unsupervised learning of a scene-specific coarse gaze estimator. , 2011, , .		53
57	Attend in Groups: A Weakly-Supervised Deep Learning Framework for Learning from Web Data. , 2017, , .		52
58	Goal-directed video metrology. Lecture Notes in Computer Science, 1996, , 647-658.	1.0	51
59	Multi-modal Auto-Encoders as Joint Estimators for Robotics Scene Understanding. , 0, , .		50
60	Bootstrapping the Performance of Webly Supervised Semantic Segmentation. , 2018, , .		45
61	Real-Time Monocular Object-Model Aware Sparse SLAM. , 2019, , .		45
62	3D hand tracking for human computer interaction. Image and Vision Computing, 2012, 30, 236-250.	2.7	44
63	Learning Local Image Descriptors with Deep Siamese and Triplet Convolutional Networks by Minimizing Global Loss Functions. , 2016, , .		42
64	Scalable Place Recognition Under Appearance Change for Autonomous Driving. , 2019, , .		42
65	An image-to-map loop closing method for monocular SLAM. , 2008, , .		41
66	Growing semantically meaningful models for visual SLAM. , 2010, , .		41
67	Sequence searching with deep-learnt depth for condition- and viewpoint-invariant route-based place recognition. , 2015, , .		41
68	Information-theoretic active scene exploration. , 2008, , .		40
69	Geometrically consistent plane extraction for dense indoor 3D maps segmentation. , 2016, , .		39
70	Integrating Object Detection with 3D Tracking Towards a Better Driver Assistance System. , 2010, , .		37
71	Deep learning for 2D scan matching and loop closure. , 2017, , .		35
72	Socially and Contextually Aware Human Motion and Pose Forecasting. IEEE Robotics and Automation Letters, 2020, 5, 6033-6040.	3.3	35

#	ARTICLE	IF	CITATIONS
73	STAR3D: Simultaneous Tracking and Reconstruction of 3D Objects Using RGB-D Data. , 2013, , .		34
74	FroDO: From Detections to 3D Objects. , 2020, , .		34
75	A hybrid SLAM representation for dynamic marine environments. , 2010, , .		33
76	Joint Learning of Social Groups, Individuals Action and Sub-group Activities in Videos. Lecture Notes in Computer Science, 2020, , 177-195.	1.0	33
77	Saccade and pursuit on an active head/eye platform. Image and Vision Computing, 1994, 12, 155-163.	2.7	32
78	Estimating Gaze Direction from Low-Resolution Faces in Video. Lecture Notes in Computer Science, 2006, , 402-415.	1.0	32
79	Automatic Relocalisation for a Single-Camera Simultaneous Localisation and Mapping System. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	32
80	A Dynamic Programming Approach to Reconstructing Building Interiors. Lecture Notes in Computer Science, 2010, , 394-407.	1.0	31
81	Real-Time 3D Tracking and Reconstruction on Mobile Phones. IEEE Transactions on Visualization and Computer Graphics, 2015, 21, 557-570.	2.9	31
82	RGBD Based Dimensional Decomposition Residual Network for 3D Semantic Scene Completion. , 2019, , .		31
83	Latent Data Association: Bayesian Model Selection for Multi-target Tracking. , 2013, , .		30
84	Video synchronization from human motion using rank constraints. Computer Vision and Image Understanding, 2009, 113, 891-906.	3.0	29
85	Direct semi-dense SLAM for rolling shutter cameras. , 2016, , .		29
86	Modeling and generating complex motion blur for real-time tracking. , 2008, , .		27
87	A distributed camera system for multi-resolution surveillance. , 2009, , .		27
88	Training Medical Image Analysis Systems like Radiologists. Lecture Notes in Computer Science, 2018, , 546-554.	1.0	27
89	SceneCut: Joint Geometric and Object Segmentation for Indoor Scenes. , 2018, , .		27
90	Probabilistic surveillance with multiple active cameras. , 2010, , .		26

#	ARTICLE	IF	CITATIONS
91	Scaling CNNs for High Resolution Volumetric Reconstruction from a Single Image. , 2017, , .		26
92	Depth Based Semantic Scene Completion With Position Importance Aware Loss. IEEE Robotics and Automation Letters, 2020, 5, 219-226.	3.3	26
93	Structure Aware SLAM Using Quadrics and Planes. Lecture Notes in Computer Science, 2019, , 410-426.	1.0	26
94	Simultaneous Monocular 2D Segmentation, 3D Pose Recovery and 3D Reconstruction. Lecture Notes in Computer Science, 2013, , 593-606.	1.0	26
95	Cognitive visual tracking and camera control. Computer Vision and Image Understanding, 2012, 116, 457-471.	3.0	25
96	Efficient Point Process Inference for Large-Scale Object Detection. , 2016, , .		24
97	Simultaneous 3D tracking and reconstruction on a mobile phone. , 2013, , .		23
98	Real-Time Tracking of Single and Multiple Objects from Depth-Colour Imagery Using 3D Signed Distance Functions. International Journal of Computer Vision, 2017, 124, 80-95.	10.9	23
99	Addressing Challenging Place Recognition Tasks Using Generative Adversarial Networks. , 2018, , .		23
100	Visual SLAM: Why Bundle Adjust?. , 2019, , .		23
101	Efficient 3D Scene Labeling Using Fields of Trees. , 2013, , .		21
102	NeuRoRA: Neural Robust Rotation Averaging. Lecture Notes in Computer Science, 2020, , 137-154.	1.0	21
103	Automatic Reasoning about Causal Events in Surveillance Video. Eurasip Journal on Image and Video Processing, 2011, 2011, 1-19.	1.7	20
104	A fast, modular scene understanding system using context-aware object detection. , 2015, , .		20
105	Efficient Dense Point Cloud Object Reconstruction Using Deformation Vector Fields. Lecture Notes in Computer Science, 2018, , 508-524.	1.0	20
106	Shared shape spaces. , 2011, , .		19
107	Hierarchical Higher-Order Regression Forest Fields: An Application to 3D Indoor Scene Labelling. , 2015, , .		18
108	Self-supervised Learning for Single View Depth and Surface Normal Estimation. , 2019, , .		18

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109	Pre and post-hoc diagnosis and interpretation of malignancy from breast DCE-MRI. Medical Image Analysis, 2019, 58, 101562.	7.0	18
110	3D Tracking of Multiple Objects with Identical Appearance Using RGB-D Input. , 2014, , .		17
111	Joint Probabilistic Matching Using m-Best Solutions. , 2016, , .		17
112	Dense monocular reconstruction using surface normals. , 2017, , .		17
113	Dual-Attention-Guided Network for Ghost-Free High Dynamic Range Imaging. International Journal of Computer Vision, 2022, 130, 76-94.	10.9	17
114	DeepSetNet: Predicting Sets with Deep Neural Networks. , 2017, , .		16
115	A Unified Energy Minimization Framework for Model Fitting in Depth. Lecture Notes in Computer Science, 2012, , 72-82.	1.0	15
116	“Maximizing Rigidity” Revisited: A Convex Programming Approach for Generic 3D Shape Reconstruction from Multiple Perspective Views. , 2017, , .		14
117	Multi-Task Structure-Aware Context Modeling for Robust Keypoint-Based Object Tracking. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 915-927.	9.7	14
118	Unconstrained Multiple-People Tracking. Lecture Notes in Computer Science, 2006, , 505-514.	1.0	14
119	COMBINING TRAFFIC SIGN DETECTION WITH 3D TRACKING TOWARDS BETTER DRIVER ASSISTANCE. Series in Computer Vision, 2011, , 425-446.	0.1	14
120	Planes, trains and automobiles &#x2014; autonomy for the modern robot. , 2010, , .		13
121	Bayesian Semantic Instance Segmentation in Open Set World. Lecture Notes in Computer Science, 2018, , 3-18.	1.0	13
122	PWP3D: Real-time segmentation and tracking of 3D objects. , 2009, , .		12
123	Measuring the performance of single image depth estimation methods. , 2016, , .		11
124	Online unsupervised feature learning for visual tracking. Image and Vision Computing, 2016, 51, 84-94.	2.7	11
125	MOLTR: Multiple Object Localization, Tracking and Reconstruction From Monocular RGB Videos. IEEE Robotics and Automation Letters, 2021, 6, 3341-3348.	3.3	11
126	Model-based recognition and range imaging for a guided vehicle. Image and Vision Computing, 1992, 10, 197-207.	2.7	10



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127	Automated Alignment of Robotic Pan-Tilt Camera Units Using Vision. International Journal of Computer Vision, 2006, 68, 219-237.	10.9	10
128	The k-support norm and convex envelopes of cardinality and rank. , 2015, , .		10
129	Approximate Fisher Information Matrix to Characterize the Training of Deep Neural Networks. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 15-26.	9.7	10
130	ODAM: Object Detection, Association, and Mapping using Posed RGB Video. , 2021, , .		10
131	Steering without Representation with the Use of Active Fixation. Perception, 1997, 26, 1519-1528.	0.5	9
132	Camera calibration from human motion. Image and Vision Computing, 2008, 26, 851-862.	2.7	9
133	Target tracking using mean-shift and affine structure. , 2008, , .		9
134	Self-alignment of a binocular robot. Image and Vision Computing, 1996, 14, 635-640.	2.7	8
135	Robust 3D hand tracking for human computer interaction. , 2011, , .		8
136	Automatic Human Behaviour Recognition and Explanation for CCTV Video Surveillance. Security Journal, 2008, 21, 173-188.	1.0	7
137	Hybrid Inference Optimization for robust pose graph estimation. , 2014, , .		7
138	Exploiting Temporal Information for DCNN-Based Fine-Grained Object Classification. , 2016, , .		7
139	A discrete-time attitude observer on SO(3) for vision and GPS fusion. , 2017, , .		7
140	Recognition of parameterized objects from 3D data: a parallel implementation. Image and Vision Computing, 1994, 12, 573-582.	2.7	6
141	Transfer of Fixation Using Affine Structure: Extending the Analysis to Stereo. International Journal of Computer Vision, 1998, 29, 47-58.	10.9	6
142	SG-VAE: Scene Grammar Variational Autoencoder to Generate New Indoor Scenes. Lecture Notes in Computer Science, 2020, , 155-171.	1.0	6
143	Multiview segmentation and tracking of dynamic occluding layers. Image and Vision Computing, 2010, 28, 1022-1030.	2.7	5
144	Understanding Interactions and Guiding Visual Surveillance by Tracking Attention. Lecture Notes in Computer Science, 2011, , 380-389.	1.0	5

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145	Structured Binary Neural Networks for Image Recognition. International Journal of Computer Vision, 2022, 130, 2081-2102.	10.9	5
146	Regressing Local to Global Shape Properties for Online Segmentation and Tracking. International Journal of Computer Vision, 2014, 106, 269-281.	10.9	4
147	RRD-SLAM: Radial-distorted rolling-shutter direct SLAM. , 2017, , .		4
148	A branch-and-bound algorithm for checkerboard extraction in camera-laser calibration. , 2017, , .		4
149	Improving Global Multi-target Tracking with Local Updates. Lecture Notes in Computer Science, 2015, , 174-190.	1.0	4
150	Rotation Coordinate Descent for Fast Globally Optimal Rotation Averaging. , 2021, , .		4
151	Meta Learning with Differentiable Closed-form Solver for Fast Video Object Segmentation. , 2020, , .		4
152	Multi-Object Model-Free Tracking with Joint Appearance and Motion Inference. , 2017, , .		3
153	Learning Deeply Supervised Good Features to Match for Dense Monocular Reconstruction. Lecture Notes in Computer Science, 2019, , 609-624.	1.0	3
154	Learning Multi-level Region Consistency with Dense Multi-label Networks for Semantic Segmentation. , 2017, , .		3
155	Image interpolation for virtual sports scenarios. Machine Vision and Applications, 2005, 16, 236-245.	1.7	2
156	Gaze directed camera control for face image acquisition. , 2011, , .		2
157	Cognitive active vision for human identification. , 2012, , .		2
158	Visual localization under appearance change: filtering approaches. Neural Computing and Applications, 2021, 33, 7325-7338.	3.2	2
159	HMM <sup>4</sup> : Hidden Markov Model With Memory Management for Visual Place Recognition. IEEE Robotics and Automation Letters, 2021, 6, 167-174.	3.3	2
160	Autonomy and Perception for Space Mining. , 2022, , .		2
161	The Pipe-group Architecture for Real-Time Active Vision. Real Time Imaging, 1997, 3, 319-330.	1.6	1
162	PhD forum: Probabilistic surveillance with multiple active cameras. , 2009, , .		1

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163	SPRINT: Subgraph Place Recognition for INtelligent Transportation. , 2020, , .		1
164	Improved Visual Localization via Graph Filtering. Journal of Imaging, 2021, 7, 20.	1.7	1
165	Learning texton models for real-time scene context. , 2009, , .		1
166	Regressing Local to Global Shape Properties for Online Segmentation and Tracking. , 2011, , .		1
167	Mean-Shift Visual Tracking with NP-Windows Density Estimates. , 2010, , .		1
168	Recurrent Motion Neural Network for Low Resolution Drone Detection. , 2020, , .		1
169	Influence of zoom selection on a Kalman filter. , 2008, , .		0
170	Temporally-coherent Novel Video Synthesis Using Texture-based Priors. IPSJ Transactions on Computer Vision and Applications, 2009, 1, 72-81.	4.4	0
171	Real-Time Human Gaze Estimation. , 2019, , .		0
172	Augmentation Network for Generalised Zero-Shot Learning. Lecture Notes in Computer Science, 2021, , 442-458.	1.0	0