James M Rehg

List of Publications by Year
in descending order

156 papers	11,364 citations	136950 32 h-index	110387 64 g-index
159 all docs	159 docs citations	159 times ranked	7808 citing authors

#	Article	IF	Citations
1	Statistical Color Models with Application to Skin Detection. International Journal of Computer Vision, 2002, 46, 81-96.	15.6	999
2	The Secrets of Salient Object Segmentation. , 2014, , .		832
3	CENTRIST: A Visual Descriptor for Scene Categorization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 1489-1501.	13.9	534
4	Multiple Hypothesis Tracking Revisited. , 2015, , .		435
5	Video Segmentation by Tracking Many Figure-Ground Segments. , 2013, , .		361
6	Learning to recognize objects in egocentric activities. , 2011, , .		335
7	Fine-Grained Head Pose Estimation Without Keypoints. , 2018, , .		318
8	Understanding egocentric activities. , 2011, , .		281
9	Model-based tracking of self-occluding articulated objects. , 0, , .		253
10	Information theoretic MPC for model-based reinforcement learning. , 2017, , .		220
11	A Scalable Approach to Activity Recognition based on Object Use. , 2007, , .		214
12	3D-RCNN: Instance-Level 3D Object Reconstruction via Render-and-Compare. , 2018, , .		209
13	Learning to Recognize Daily Actions Using Gaze. Lecture Notes in Computer Science, 2012, , 314-327.	1.3	209
14	Social interactions: A first-person perspective. , 2012, , .		204
15	Fast Asymmetric Learning for Cascade Face Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 369-382.	13.9	184
16	Motion Coherent Tracking Using Multi-label MRF Optimization. International Journal of Computer Vision, 2012, 100, 190-202.	15.6	183
17	Terrain Synthesis from Digital Elevation Models. IEEE Transactions on Visualization and Computer Graphics, 2007, 13, 834-848.	4.4	170
18	Delving into egocentric actions. , 2015, 2015, 287-295.		170

#	Article	IF	Citations
19	Learning to Predict Gaze in Egocentric Video. , 2013, , .		169
20	On the Design of Cascades of Boosted Ensembles for Face Detection. International Journal of Computer Vision, 2008, 77, 65-86.	15.6	166
21	Aggressive driving with model predictive path integral control. , 2016, , .		161
22	Real-world visual statistics and infants' first-learned object names. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160055.	4.0	147
23	Automated macular pathology diagnosis in retinal OCT images using multi-scale spatial pyramid and local binary patterns in texture and shape encoding. Medical Image Analysis, 2011, 15, 748-759.	11.6	145
24	Multi-object Tracking with Neural Gating Using Bilinear LSTM. Lecture Notes in Computer Science, 2018, , 208-224.	1.3	144
25	Gaze-enabled egocentric video summarization via constrained submodular maximization. , 2015, 2015, 2235-2244.		117
26	In the Eye of Beholder: Joint Learning of Gaze and Actions in First Person Video. Lecture Notes in Computer Science, 2018, , 639-655.	1.3	116
27	Joint Semantic Segmentation and 3D Reconstruction from Monocular Video. Lecture Notes in Computer Science, 2014, , 703-718.	1.3	115
28	Information-Theoretic Model Predictive Control: Theory and Applications to Autonomous Driving. IEEE Transactions on Robotics, 2018, 34, 1603-1622.	10.3	109
29	Learning and Inferring Motion Patterns using Parametric Segmental Switching Linear Dynamic Systems. International Journal of Computer Vision, 2008, 77, 103-124.	15.6	107
30	Parallel vision for perception and understanding of complex scenes: methods, framework, and perspectives. Artificial Intelligence Review, 2017, 48, 299-329.	15.7	104
31	Decoding Children's Social Behavior. , 2013, , .		103
32	A data-driven approach to quantifying natural human motion. ACM Transactions on Graphics, 2005, 24, 1090-1097.	7.2	98
33	Autonomous screening of C. elegans identifies genes implicated in synaptogenesis. Nature Methods, 2012, 9, 977-980.	19.0	98
34	Modeling Actions through State Changes. , 2013, , .		93
35	An In Depth View of Saliency. , 2013, , .		90
36	Visual Place Categorization: Problem, dataset, and algorithm. , 2009, , .		84

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37	Real-time human detection using contour cues. , 2011, , .		83
38	GOSUS: Grassmannian Online Subspace Updates with Structured-Sparsity. , 2013, , .		81
39	RIGOR: Reusing Inference in Graph Cuts for Generating Object Regions. , 2014, , .		80
40	Detecting eye contact using wearable eye-tracking glasses. , 2012, , .		76
41	A Bayesian multiple-hypothesis approach to edge grouping and contour segmentation. International Journal of Computer Vision, 1993, 11, 5-24.	15.6	74
42	Singularity analysis for articulated object tracking. , 0, , .		71
43	Connecting Gaze, Scene, and Attention: Generalized Attention Estimation via Joint Modeling of Gaze and Scene Saliency. Lecture Notes in Computer Science, 2018, , 397-412.	1.3	70
44	Combining Self Training and Active Learning for Video Segmentation. , 2011, , .		69
45	Beyond the Euclidean distance: Creating effective visual codebooks using the Histogram Intersection Kernel. , 2009, , .		67
46	Detecting Attended Visual Targets in Video. , 2020, , .		66
47	AutoRally: An Open Platform for Aggressive Autonomous Driving. IEEE Control Systems, 2019, 39, 26-55.	0.8	61
48	Naturalistic Language Recordings Reveal â€œHypervocalâ€•Infants at High Familial Risk for Autism. Child Development, 2018, 89, e60-e73.	3.0	59
49	BioGlass: Physiological Parameter Estimation Using a Head-mounted Wearable Device. , 2014, , .		55
50	Boosted Bayesian network classifiers. Machine Learning, 2008, 73, 155-184.	5.4	53
51	Vision for a smart kiosk. , 0, , .		52
52	Learning Visual Object Categories for Robot Affordance Prediction. International Journal of Robotics Research, 2010, 29, 174-197.	8.5	51
53	Movement Pattern Histogram for Action Recognition and Retrieval. Lecture Notes in Computer Science, 2014, , 695-710.	1.3	51
54	Impact of dynamic model learning on classification of human motion. , 0, , .		49

#	Article	IF	Citations
55	Temporal causality for the analysis of visual events. , 2010, , .		49
56	Using Sound Source Localization in a Home Environment. Lecture Notes in Computer Science, 2005, , 19-36.	1.3	48
57	Center of excellence for mobile sensor data-to-knowledge (MD2K). Journal of the American Medical Informatics Association: JAMIA, 2015, 22, 1137-1142.	4.4	48
58	Unsupervised Learning of Edges. , 2016, , .		48
59	Haptic classification and recognition of objects using a tactile sensing forearm. , 2012, , .		46
60	Discriminative Appearance Modeling with Multi-track Pooling for Real-time Multi-object Tracking. , 2021, , .		46
61	Computerized Macular Pathology Diagnosis in Spectral Domain Optical Coherence Tomography Scans Based on Multiscale Texture and Shape Features. , 2011, 52, 8316.		45
62	A Compilation Framework for Power and Energy Management on Mobile Computers. Lecture Notes in Computer Science, 2003, , 115-131.	1.3	45
63	Large-scale image annotation using visual synset. , 2011, , .		43
64	Detecting Gaze Towards Eyes in Natural Social Interactions and Its Use in Child Assessment. , 2017, 1, 1-20.		43
65	Behavioral Imaging and Autism. IEEE Pervasive Computing, 2014, 13, 84-87.	1.3	40
66	Guided pushing for object singulation. , 2012, , .		39
67	Forecasting Human-Object Interaction: Joint Prediction of Motor Attention andÂActions in First Person Video. Lecture Notes in Computer Science, 2020, , 704-721.	1.3	39
68	Spatially constrained segmentation of dermoscopy images. , 2008, , .		38
69	Traversability classification using unsupervised on-line visual learning for outdoor robot navigation. , 0, , .		37
70	Linear Asymmetric Classifier for cascade detectors. , 2005, , .		37
71	Boosted learning in dynamic bayesian networks for multimodal speaker detection. Proceedings of the IEEE, 2003, 91, 1355-1369.	21.3	36
72	Human video textures. , 2009, , .		34

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73	Feature-preserving artifact removal from dermoscopy images. Proceedings of SPIE, 2008, , .	0.8	33
74	Weakly Supervised Learning of Object Segmentations from Web-Scale Video. Lecture Notes in Computer Science, 2012, , 198-208.	1.3	33
75	A flexible projector-camera system for multi-planar displays. , 0, , .		32
76	Where am I: Place instance and category recognition using spatial PACT. , 2008, , .		32
77	Vision-Based High-Speed Driving With a Deep Dynamic Observer. IEEE Robotics and Automation Letters, 2019, 4, 1564-1571.	5.1	32
78	Dermoscopy diagnosis of cancerous lesions utilizing dual deep learning algorithms via visual and audio (sonification) outputs: Laboratory and prospective observational studies. EBioMedicine, 2019, 40, 176-183.	6.1	31
79	Learning contact locations for pushing and orienting unknown objects. , 2013, , .		30
80	Multimodal speaker detection using error feedback dynamic Bayesian networks. , 0, , .		29
81	<formula formulatype="inline"><tex Notation="TeX">${m C}^{4}$</tex></formula>: A Real-Time Object Detection Framework. IEEE Transactions on Image Processing, 2013, 22, 4096-4107.	9.8	29
82	Boosting and structure learning in dynamic Bayesian networks for audio-visual speaker detection. , 0, , .		28
83	Increased Eye Contact During Conversation Compared to Play in Children With Autism. Journal of Autism and Developmental Disorders, 2017, 47, 607-614.	2.7	28
84	Visual tracking with deformation models. , 0, , .		26
85	Learning from examples in unstructured, outdoor environments. Journal of Field Robotics, 2006, 23, 1019-1036.	6.0	26
86	Monitoring Dressing Activity Failures through RFID and Video. Methods of Information in Medicine, 2012, 51, 45-54.	1.2	25
87	Best Response Model Predictive Control for Agile Interactions Between Autonomous Ground Vehicles. , 2018, , .		25
88	Decoupled Networks. , 2018, , .		24
89	Decoupling behavior, perception, and control for autonomous learning of affordances. , 2013, , .		23
90	Towards Accurate 3D Human Body Reconstruction from Silhouettes. , 2019, , .		23

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91	Real-life violent social interaction detection. , 2015, , .		22
92	Brief Report: Using a Point-of-View Camera to Measure Eye Gaze in Young Children with Autism Spectrum Disorder During Naturalistic Social Interactions: A Pilot Study. Journal of Autism and Developmental Disorders, 2017, 47, 898-904.	2.7	22
93	Efficient discriminative learning of Bayesian network classifier via boosted augmented naive Bayes. , 2005, , .		22
94	Traversability classification for UGV navigation: a comparison of patch and superpixel representations. , 2007, , .		21
95	Quasi-periodic event analysis for social game retrieval. , 2009, , .		21
96	Detection of eye contact with deep neural networks is as accurate as human experts. Nature Communications, 2020, 11, 6386.	12.8	21
97	Stampede: a cluster programming middleware for interactive stream-oriented applications. IEEE Transactions on Parallel and Distributed Systems, 2003, 14, 1140-1154.	5.6	20
98	Center of Excellence for Mobile Sensor Data-to-Knowledge (MD2K). IEEE Pervasive Computing, 2017, 16, 18-22.	1.3	19
99	Representing Sudden Shifts in Intensive Dyadic Interaction Data Using Differential Equation Models with Regime Switching. Psychometrika, 2018, 83, 476-510.	2.1	19
100	Video-Based Crowd Synthesis. IEEE Transactions on Visualization and Computer Graphics, 2013, 19, 1935-1947.	4.4	18
101	Longitudinal Modeling of Glaucoma Progression Using 2-Dimensional Continuous-Time Hidden Markov Model. Lecture Notes in Computer Science, 2013, 16, 444-451.	1.3	18
102	Analyzing articulated motion using expectation-maximization. , 0, , .		16
103	Rapid categorization of object properties from incidental contact with a tactile sensing robot arm. , 2013, , .		16
104	Learning Query-Specific Distance Functions for Large-Scale Web Image Search. IEEE Transactions on Multimedia, 2013, 15, 2022-2034.	7.2	16
105	Automatic cascade training with perturbation bias. , 0, , .		15
106	The Middle Child Problem: Revisiting Parametric Min-Cut and Seeds for Object Proposals. , 2015, , .		15
107	Inferring Object Properties with a Tactile-Sensing Array Given Varying Joint Stiffness and Velocity. International Journal of Humanoid Robotics, 2018, 15, 1750024.	1.1	15
108	Robust video segment proposals with painless occlusion handling. , 2015, , .		14

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109	Combining tactile sensing and vision for rapid haptic mapping. , 2015, , .		14
110	Shadow Elimination and Blinding Light Suppression for Interactive Projected Displays. IEEE Transactions on Visualization and Computer Graphics, 2007, 13, 508-517.	4.4	13
111	Learning the basic units in American Sign Language using discriminative segmental feature selection. , 2009, , .		13
112	4D Human Body Capture from Egocentric Video via 3D Scene Grounding. , 2021, , .		13
113	A data-driven approach to quantifying natural human motion. , 2005, , .		12
114	Categorizing Turn-Taking Interactions. Lecture Notes in Computer Science, 2012, , 383-396.	1.3	11
115	Efficient Learning of Continuous-Time Hidden Markov Models for Disease Progression. Advances in Neural Information Processing Systems, 2015, 28, 3599-3607.	2.8	11
116	Exemplar-based segmentation of pigmented skin lesions from dermoscopy images. , 2010, , .		10
117	Learning stable pushing locations. , 2013, , .		10
118	Stampede A Programming System for Emerging Scalable Interactive Multimedia Applications. Lecture Notes in Computer Science, 1999, , 83-99.	1.3	10
119	Learning and inference in parametric switching linear dynamic systems. , 2005, , .		9
120	Discriminative feature selection for hidden Markov models using Segmental Boosting. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	9
121	Dermoscopic interest point detector and descriptor. , 2009, , .		9
122	Multi-scale perception and path planning on probabilistic obstacle maps. , 2015, , .		9
123	A Bayesian multiple hypothesis approach to contour grouping. Lecture Notes in Computer Science, 1992, , 72-77.	1.3	9
124	Watching the TV Watchers. , 2018, 2, 1-27.		7
125	Ballistocardiography for Ambulatory Detection and Prediction of Heart Failure Decompensation. Journal of Cardiac Failure, 2018, 24, S116.	1.7	7
126	Shadow elimination and occluder light suppression for multi-projector displays. , 0, , .		6

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127	Behavior imaging and the study of autism. , 2013, , .		6
128	Catalysts for Change: The Role of Small Business Funders in the Creation and Dissemination of Innovation. Journal of Autism and Developmental Disorders, 2015, 45, 3900-3904.	2.7	6
129	Automated Macular Pathology Diagnosis in Retinal OCT Images Using Multi-Scale Spatial Pyramid with Local Binary Patterns. Lecture Notes in Computer Science, 2010, 13, 1-9.	1.3	6
130	Asymmetrically boosted HMM for speech reading. , 0, , .		5
131	Use of position tracking to infer social structure in rhesus macaques. , 2018, , .		5
132	Approximate Inverse Reinforcement Learning from Vision-based Imitation Learning. , 2021, , .		5
133	Boosted learning in dynamic Bayesian networks for multimodal detection. , 0, , .		4
134	Guest editors' introduction to the special section on graphical models in computer vision. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2003, 25, 785-786.	13.9	4
135	Learning Continuous-Time Hidden Markov Models for Event Data. , 2017, , 361-387.		4
136	Integrated Task and Data Parallel Support for Dynamic Applications. Scientific Programming, 1999, 7, 289-302.	0.7	3
137	Learning to reach into the unknown: Selecting initial conditions when reaching in clutter. , 2014, , .		3
138	First-Person Action Decomposition and Zero-Shot Learning. , 2017, , .		3
139	AF Classification from ECG Recording Using Feature Ensemble and Sparse Coding. , 0, , .		3
140	Multimodal Speaker Detection Using Input/Output Dynamic Bayesian Networks. Lecture Notes in Computer Science, 2000, , 308-316.	1.3	3
141	Detection of Unnatural Movement Using Epitomic Analysis. , 2008, , .		2
142	Minimizing Human Effort in Interactive Tracking by Incremental Learning of Model Parameters. , 2015, , .		2
143	Visual 3D tracking of child-adult social interactions. , 2017, , .		2
144	Object Detection. , 2012, , 225-250.		2

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145	Space-time memory. ACM SIGPLAN Notices, 1999, 34, 183-192.	0.2	1
146	Video editing using figure tracking and image-based rendering. , 2000, , .		1
147	Learning sparse covariance patterns for natural scenes. , 2012, , .		1
148	Finding people in depth. Communications of the ACM, 2013, 56, 115-115.	4.5	1
149	How everyday visual experience prepares the way for learning object names. , 2016, , .		1
150	Experiences with optimizing two stream-based applications for cluster execution. Journal of Parallel and Distributed Computing, 2005, 65, 678-691.	4.1	0
151	Development of dog-like retrieving capability in a ground robot. Proceedings of SPIE, 2013, , .	0.8	0
152	Behavioral imaging technology for modeling, analyzing, and visualizing social and communicative behavior. , 2015, , .		0
153	EyeWear 2016. , 2016, , .		0
154	Towards the Optimal Training of Cascades of Boosted Ensembles. Lecture Notes in Computer Science, 2006, , 301-320.	1.3	0
155	Automated Foveola Localization in Retinal 3D-OCT Images Using Structural Support Vector Machine Prediction. Lecture Notes in Computer Science, 2012, 15, 307-314.	1.3	0
156	First International Workshop on Video Segmentation - Panel Discussion. Lecture Notes in Computer Science, 2015, , 383-388.	1.3	0