

James M Rehg

List of Publications by Year in descending order

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Version: 2024-02-01

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	Approximate Inverse Reinforcement Learning from Vision-based Imitation Learning. , 2021, , .		5
2	Discriminative Appearance Modeling with Multi-track Pooling for Real-time Multi-object Tracking. , 2021, , .		46
3	4D Human Body Capture from Egocentric Video via 3D Scene Grounding. , 2021, , .		13
4	Detecting Attended Visual Targets in Video. , 2020, , .		66
5	Detection of eye contact with deep neural networks is as accurate as human experts. Nature Communications, 2020, 11, 6386.	12.8	21
6	Forecasting Human-Object Interaction: Joint Prediction of Motor Attention and Actions in First Person Video. Lecture Notes in Computer Science, 2020, , 704-721.	1.3	39
7	Towards Accurate 3D Human Body Reconstruction from Silhouettes. , 2019, , .		23
8	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
9	AutoRally: An Open Platform for Aggressive Autonomous Driving. IEEE Control Systems, 2019, 39, 26-55.	0.8	61
10	Vision-Based High-Speed Driving With a Deep Dynamic Observer. IEEE Robotics and Automation Letters, 2019, 4, 1564-1571.	5.1	32
11	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
12	Representing Sudden Shifts in Intensive Dyadic Interaction Data Using Differential Equation Models with Regime Switching. Psychometrika, 2018, 83, 476-510.	2.1	19
13	Naturalistic Language Recordings Reveal "Hypervocal" Infants at High Familial Risk for Autism. Child Development, 2018, 89, e60-e73.	3.0	59
14	3D-RCNN: Instance-Level 3D Object Reconstruction via Render-and-Compare. , 2018, , .		209
15	Decoupled Networks. , 2018, , .		24
16	Fine-Grained Head Pose Estimation Without Keypoints. , 2018, , .		318
17	Use of position tracking to infer social structure in rhesus macaques. , 2018, , .		5
18	Information-Theoretic Model Predictive Control: Theory and Applications to Autonomous Driving. IEEE Transactions on Robotics, 2018, 34, 1603-1622.	10.3	109

#	ARTICLE	IF	CITATIONS
19	Best Response Model Predictive Control for Agile Interactions Between Autonomous Ground Vehicles. , 2018, , .		25
20	Watching the TV Watchers. , 2018, 2, 1-27.		7
21	Ballistocardiography for Ambulatory Detection and Prediction of Heart Failure Decompensation. Journal of Cardiac Failure, 2018, 24, S116.	1.7	7
22	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
23	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
24	Multi-object Tracking with Neural Gating Using Bilinear LSTM. Lecture Notes in Computer Science, 2018, , 208-224.	1.3	144
25	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
26	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
27	Center of Excellence for Mobile Sensor Data-to-Knowledge (MD2K). IEEE Pervasive Computing, 2017, 16, 18-22.	1.3	19
28	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
29	Information theoretic MPC for model-based reinforcement learning. , 2017, , .		220
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	First-Person Action Decomposition and Zero-Shot Learning. , 2017, , .		3
32	Detecting Gaze Towards Eyes in Natural Social Interactions and Its Use in Child Assessment. , 2017, 1, 1-20.		43
33	Visual 3D tracking of child-adult social interactions. , 2017, , .		2
34	Learning Continuous-Time Hidden Markov Models for Event Data. , 2017, , 361-387.		4
35	Unsupervised Learning of Edges. , 2016, , .		48
36	How everyday visual experience prepares the way for learning object names. , 2016, , .		1

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37	EyeWear 2016. , 2016, , .		0
38	Aggressive driving with model predictive path integral control. , 2016, , .		161
39	Behavioral imaging technology for modeling, analyzing, and visualizing social and communicative behavior. , 2015, , .		0
40	Gaze-enabled egocentric video summarization via constrained submodular maximization. , 2015, 2015, 2235-2244.		117
41	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
42	Delving into egocentric actions. , 2015, 2015, 287-295.		170
43	Multiple Hypothesis Tracking Revisited. , 2015, , .		435
44	Minimizing Human Effort in Interactive Tracking by Incremental Learning of Model Parameters. , 2015, , .		2
45	The Middle Child Problem: Revisiting Parametric Min-Cut and Seeds for Object Proposals. , 2015, , .		15
46	Real-life violent social interaction detection. , 2015, , .		22
47	Robust video segment proposals with painless occlusion handling. , 2015, , .		14
48	Combining tactile sensing and vision for rapid haptic mapping. , 2015, , .		14
49	Multi-scale perception and path planning on probabilistic obstacle maps. , 2015, , .		9
50	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
51	First International Workshop on Video Segmentation - Panel Discussion. Lecture Notes in Computer Science, 2015, , 383-388.	1.3	0
52	Efficient Learning of Continuous-Time Hidden Markov Models for Disease Progression. Advances in Neural Information Processing Systems, 2015, 28, 3599-3607.	2.8	11
53	The Secrets of Salient Object Segmentation. , 2014, , .		832
54	Learning to reach into the unknown: Selecting initial conditions when reaching in clutter. , 2014, , .		3

#	ARTICLE	IF	CITATIONS
55	Behavioral Imaging and Autism. IEEE Pervasive Computing, 2014, 13, 84-87.	1.3	40
56	RIGOR: Reusing Inference in Graph Cuts for Generating Object Regions. , 2014, , .		80
57	Joint Semantic Segmentation and 3D Reconstruction from Monocular Video. Lecture Notes in Computer Science, 2014, , 703-718.	1.3	115
58	Movement Pattern Histogram for Action Recognition and Retrieval. Lecture Notes in Computer Science, 2014, , 695-710.	1.3	51
59	BioClass: Physiological Parameter Estimation Using a Head-mounted Wearable Device. , 2014, , .		55
60	Learning stable pushing locations. , 2013, , .		10
61	Video-Based Crowd Synthesis. IEEE Transactions on Visualization and Computer Graphics, 2013, 19, 1935-1947.	4.4	18
62	mC^4 : A Real-Time Object Detection Framework. IEEE Transactions on Image Processing, 2013, 22, 4096-4107.	9.8	29
63	Rapid categorization of object properties from incidental contact with a tactile sensing robot arm. , 2013, , .		16
64	Development of dog-like retrieving capability in a ground robot. Proceedings of SPIE, 2013, , .	0.8	0
65	Behavior imaging and the study of autism. , 2013, , .		6
66	Finding people in depth. Communications of the ACM, 2013, 56, 115-115.	4.5	1
67	Learning Query-Specific Distance Functions for Large-Scale Web Image Search. IEEE Transactions on Multimedia, 2013, 15, 2022-2034.	7.2	16
68	Video Segmentation by Tracking Many Figure-Ground Segments. , 2013, , .		361
69	Decoding Children's Social Behavior. , 2013, , .		103
70	GOSUS: Grassmannian Online Subspace Updates with Structured-Sparsity. , 2013, , .		81
71	Modeling Actions through State Changes. , 2013, , .		93
72	Decoupling behavior, perception, and control for autonomous learning of affordances. , 2013, , .		23

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73	Learning to Predict Gaze in Egocentric Video. , 2013, , .		169
74	Learning contact locations for pushing and orienting unknown objects. , 2013, , .		30
75	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
76	An In Depth View of Saliency. , 2013, , .		90
77	Detecting eye contact using wearable eye-tracking glasses. , 2012, , .		76
78	Social interactions: A first-person perspective. , 2012, , .		204
79	Guided pushing for object singulation. , 2012, , .		39
80	Autonomous screening of C. elegans identifies genes implicated in synaptogenesis. Nature Methods, 2012, 9, 977-980.	19.0	98
81	Learning sparse covariance patterns for natural scenes. , 2012, , .		1
82	Motion Coherent Tracking Using Multi-label MRF Optimization. International Journal of Computer Vision, 2012, 100, 190-202.	15.6	183
83	Haptic classification and recognition of objects using a tactile sensing forearm. , 2012, , .		46
84	Monitoring Dressing Activity Failures through RFID and Video. Methods of Information in Medicine, 2012, 51, 45-54.	1.2	25
85	Object Detection. , 2012, , 225-250.		2
86	Categorizing Turn-Taking Interactions. Lecture Notes in Computer Science, 2012, , 383-396.	1.3	11
87	Learning to Recognize Daily Actions Using Gaze. Lecture Notes in Computer Science, 2012, , 314-327.	1.3	209
88	Weakly Supervised Learning of Object Segmentations from Web-Scale Video. Lecture Notes in Computer Science, 2012, , 198-208.	1.3	33
89	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
90	Real-time human detection using contour cues. , 2011, , .		83

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91	CENTRIST: A Visual Descriptor for Scene Categorization. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 1489-1501.	13.9	534
92	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
93	Learning to recognize objects in egocentric activities. , 2011, , .		335
94	Large-scale image annotation using visual synset. , 2011, , .		43
95	Understanding egocentric activities. , 2011, , .		281
96	Computerized Macular Pathology Diagnosis in Spectral Domain Optical Coherence Tomography Scans Based on Multiscale Texture and Shape Features. , 2011, 52, 8316.		45
97	Combining Self Training and Active Learning for Video Segmentation. , 2011, , .		69
98	Learning Visual Object Categories for Robot Affordance Prediction. International Journal of Robotics Research, 2010, 29, 174-197.	8.5	51
99	Temporal causality for the analysis of visual events. , 2010, , .		49
100	Exemplar-based segmentation of pigmented skin lesions from dermoscopy images. , 2010, , .		10
101	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
102	Dermoscopic interest point detector and descriptor. , 2009, , .		9
103	Visual Place Categorization: Problem, dataset, and algorithm. , 2009, , .		84
104	Learning the basic units in American Sign Language using discriminative segmental feature selection. , 2009, , .		13
105	Beyond the Euclidean distance: Creating effective visual codebooks using the Histogram Intersection Kernel. , 2009, , .		67
106	Quasi-periodic event analysis for social game retrieval. , 2009, , .		21
107	Human video textures. , 2009, , .		34
108	Boosted Bayesian network classifiers. Machine Learning, 2008, 73, 155-184.	5.4	53

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109	On the Design of Cascades of Boosted Ensembles for Face Detection. International Journal of Computer Vision, 2008, 77, 65-86.	15.6	166
110	Learning and Inferring Motion Patterns using Parametric Segmental Switching Linear Dynamic Systems. International Journal of Computer Vision, 2008, 77, 103-124.	15.6	107
111	Spatially constrained segmentation of dermoscopy images. , 2008, , .		38
112	Fast Asymmetric Learning for Cascade Face Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 369-382.	13.9	184
113	Feature-preserving artifact removal from dermoscopy images. Proceedings of SPIE, 2008, , .	0.8	33
114	Where am I: Place instance and category recognition using spatial PACT. , 2008, , .		32
115	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
116	Detection of Unnatural Movement Using Epitomic Analysis. , 2008, , .		2
117	Terrain Synthesis from Digital Elevation Models. IEEE Transactions on Visualization and Computer Graphics, 2007, 13, 834-848.	4.4	170
118	Traversability classification for UGV navigation: a comparison of patch and superpixel representations. , 2007, , .		21
119	A Scalable Approach to Activity Recognition based on Object Use. , 2007, , .		214
120	Shadow Elimination and Blinding Light Suppression for Interactive Projected Displays. IEEE Transactions on Visualization and Computer Graphics, 2007, 13, 508-517.	4.4	13
121	Learning from examples in unstructured, outdoor environments. Journal of Field Robotics, 2006, 23, 1019-1036.	6.0	26
122	Towards the Optimal Training of Cascades of Boosted Ensembles. Lecture Notes in Computer Science, 2006, , 301-320.	1.3	0
123	Experiences with optimizing two stream-based applications for cluster execution. Journal of Parallel and Distributed Computing, 2005, 65, 678-691.	4.1	0
124	A data-driven approach to quantifying natural human motion. , 2005, , .		12
125	A data-driven approach to quantifying natural human motion. ACM Transactions on Graphics, 2005, 24, 1090-1097.	7.2	98
126	Using Sound Source Localization in a Home Environment. Lecture Notes in Computer Science, 2005, , 19-36.	1.3	48

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127	Learning and inference in parametric switching linear dynamic systems. , 2005, , .		9
128	Efficient discriminative learning of Bayesian network classifier via boosted augmented naive Bayes. , 2005, , .		22
129	Linear Asymmetric Classifier for cascade detectors. , 2005, , .		37
130	Boosted learning in dynamic bayesian networks for multimodal speaker detection. Proceedings of the IEEE, 2003, 91, 1355-1369.	21.3	36
131	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
132	Stampede: a cluster programming middleware for interactive stream-oriented applications. IEEE Transactions on Parallel and Distributed Systems, 2003, 14, 1140-1154.	5.6	20
133	A Compilation Framework for Power and Energy Management on Mobile Computers. Lecture Notes in Computer Science, 2003, , 115-131.	1.3	45
134	Statistical Color Models with Application to Skin Detection. International Journal of Computer Vision, 2002, 46, 81-96.	15.6	999
135	Video editing using figure tracking and image-based rendering. , 2000, , .		1
136	Multimodal Speaker Detection Using Input/Output Dynamic Bayesian Networks. Lecture Notes in Computer Science, 2000, , 308-316.	1.3	3
137	Integrated Task and Data Parallel Support for Dynamic Applications. Scientific Programming, 1999, 7, 289-302.	0.7	3
138	Space-time memory. ACM SIGPLAN Notices, 1999, 34, 183-192.	0.2	1
139	Stampede A Programming System for Emerging Scalable Interactive Multimedia Applications. Lecture Notes in Computer Science, 1999, , 83-99.	1.3	10
140	A Bayesian multiple-hypothesis approach to edge grouping and contour segmentation. International Journal of Computer Vision, 1993, 11, 5-24.	15.6	74
141	A Bayesian multiple hypothesis approach to contour grouping. Lecture Notes in Computer Science, 1992, , 72-77.	1.3	9
142	Visual tracking with deformation models. , 0, , .		26
143	Model-based tracking of self-occluding articulated objects. , 0, , .		253
144	Analyzing articulated motion using expectation-maximization. , 0, , .		16

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145	Vision for a smart kiosk. , 0, , .		52
146	Singularity analysis for articulated object tracking. , 0, , .		71
147	Impact of dynamic model learning on classification of human motion. , 0, , .		49
148	Multimodal speaker detection using error feedback dynamic Bayesian networks. , 0, , .		29
149	Boosted learning in dynamic Bayesian networks for multimodal detection. , 0, , .		4
150	Boosting and structure learning in dynamic Bayesian networks for audio-visual speaker detection. , 0, , .		28
151	Shadow elimination and occluder light suppression for multi-projector displays. , 0, , .		6
152	A flexible projector-camera system for multi-planar displays. , 0, , .		32
153	Asymmetrically boosted HMM for speech reading. , 0, , .		5
154	Automatic cascade training with perturbation bias. , 0, , .		15
155	Traversability classification using unsupervised on-line visual learning for outdoor robot navigation. , 0, , .		37
156	AF Classification from ECG Recording Using Feature Ensemble and Sparse Coding. , 0, , .		3