

# Yiannis Demiris

## List of Publications by Year in descending order

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Version: 2024-02-01

168  
papers

4,311  
citations

218381

26  
h-index

174990

52  
g-index

169  
all docs

169  
docs citations

169  
times ranked

3467  
citing authors

#	ARTICLE	IF	CITATIONS
1	HammerDrive: A Task-Aware Driving Visual Attention Model. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 5573-5585.	4.7	6
2	Predicting Secondary Task Performance: A Directly Actionable Metric for Cognitive Overload Detection. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 1474-1485.	2.6	5
3	A Cloud-based Robot System for Long-term Interaction: Principles, Implementation, Lessons Learned. ACM Transactions on Human-Robot Interaction, 2022, 11, 1-27.	3.2	9
4	Combining haptics and inertial motion capture to enhance remote control of a dual-arm robot. Journal on Multimodal User Interfaces, 2022, 16, 219-238.	2.0	7
5	Proactive Robot Assistance: Affordance-Aware Augmented Reality User Interfaces. IEEE Robotics and Automation Magazine, 2022, 29, 22-34.	2.2	4
6	Special issue on Symbol Emergence in Robotics and Cognitive Systems (I). Advanced Robotics, 2022, 36, 1-2.	1.1	0
7	Special issue on symbol emergence in robotics and cognitive systems (II). Advanced Robotics, 2022, 36, 217-218.	1.1	0
8	Learning garment manipulation policies toward robot-assisted dressing. Science Robotics, 2022, 7, eabm6010.	9.9	15
9	What Is The Patient Looking At? Robust Gaze-Scene Intersection Under Free-Viewing Conditions. , 2022, , .		0
10	Using a Single Input to Forecast Human Action Keystates in Everyday Pick and Place Actions. , 2022, , .		0
11	Monocular Visual Traffic Surveillance: A Review. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 14148-14165.	4.7	15
12	Faster, Better Blink Detection through Curriculum Learning by Augmentation. , 2022, , .		1
13	Message Passing Framework for Vision Prediction Stability in Human Robot Interaction. , 2022, , .		0
14	Kinematic Structure Estimation of Arbitrary Articulated Rigid Objects for Event Cameras. , 2022, , .		2
15	Using Eye Gaze to Forecast Human Pose in Everyday Pick and Place Actions. , 2022, , .		0
16	Haptic and Visual Feedback Assistance for Dual-Arm Robot Teleoperation in Surface Conditioning Tasks. IEEE Transactions on Haptics, 2021, 14, 44-56.	1.8	34
17	Rotational Adjoint Methods for Learning-Free 3D Human Pose Estimation from IMU Data. , 2021, , .		2
18	Live Demonstration: Incremental Motion Estimation for Event-based Cameras by Dispersion Minimisation. , 2021, , .		0

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19	Embodied Reasoning for Discovering Object Properties via Manipulation. , 2021, , .		0
20	Fast Collision Prediction for Autonomous Vehicles using a Stochastic Dynamics Model. , 2021, , .		3
21	Multitask Variational Autoencoding of Human-to-Human Object Handover. , 2021, , .		1
22	Continuous Non-Invasive Eye Tracking In Intensive Care. , 2021, 2021, 1869-1873.		1
23	Online Knowledge Level Tracking with Data-Driven Student Models and Collaborative Filtering. IEEE Transactions on Knowledge and Data Engineering, 2020, 32, 2000-2013.	4.0	13
24	Multimodal representation models for prediction and control from partial information. Robotics and Autonomous Systems, 2020, 123, 103312.	3.0	17
25	Computational Modeling of Embodied Visual Perspective Taking. IEEE Transactions on Cognitive and Developmental Systems, 2020, 12, 723-732.	2.6	11
26	Learning Grasping Points for Garment Manipulation in Robot-Assisted Dressing. , 2020, , .		18
27	Improving Generalisation in Learning Assistance by Demonstration for Smart Wheelchairs. , 2020, , .		2
28	Real-Time Multi-Person Pose Tracking using Data Assimilation. , 2020, , .		5
29	User Modelling Using Multimodal Information for Personalised Dressing Assistance. IEEE Access, 2020, 8, 45700-45714.	2.6	7
30	Transparent Intent for Explainable Shared Control in Assistive Robotics. , 2020, , .		2
31	Decision Anticipation for Driving Assistance Systems. , 2020, , .		6
32	Augmented Reality User Interfaces for Heterogeneous Multirobot Control. , 2020, , .		2
33	Socio-Cognitive Engineering of a Robotic Partner for Child's Diabetes Self-Management. Frontiers in Robotics and AI, 2019, 6, 118.	2.0	29
34	Inferring Human Knowledgeability from Eye Gaze in Mobile Learning Environments. Lecture Notes in Computer Science, 2019, , 193-209.	1.0	2
35	Probabilistic Real-Time User Posture Tracking for Personalized Robot-Assisted Dressing. IEEE Transactions on Robotics, 2019, 35, 873-888.	7.3	37
36	The Sixth Visual Object Tracking VOT2018 Challenge Results. Lecture Notes in Computer Science, 2019, , 3-53.	1.0	152

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37	Towards Explainable Shared Control using Augmented Reality. , 2019, , .		16
38	Inference of user-intention in remote robot wheelchair assistance using multimodal interfaces. , 2019, , .		5
39	Online Unsupervised Learning of the 3D Kinematic Structure of Arbitrary Rigid Bodies. , 2019, , .		2
40	RT-BENE: A Dataset and Baselines for Real-Time Blink Estimation in Natural Environments. , 2019, , .		27
41	Augmented Reality Controlled Smart Wheelchair Using Dynamic Signifiers for Affordance Representation. , 2019, , .		9
42	Editorial: Machine Learning Methods for High-Level Cognitive Capabilities in Robotics. <i>Frontiers in Neurorobotics</i> , 2019, 13, 83.	1.6	1
43	instruMentor: An Interactive Robot for Musical Instrument Tutoring. <i>Lecture Notes in Computer Science</i> , 2019, , 303-315.	1.0	2
44	LibRob: An Autonomous Assistive Librarian. <i>Lecture Notes in Computer Science</i> , 2019, , 15-26.	1.0	3
45	Assistive Robotic Technology to Combat Social Isolation in Acute Hospital Settings. <i>International Journal of Social Robotics</i> , 2018, 10, 607-620.	3.1	27
46	Learning Shared Control by Demonstration for Personalized Wheelchair Assistance. <i>IEEE Transactions on Haptics</i> , 2018, 11, 431-442.	1.8	30
47	Highly Articulated Kinematic Structure Estimation Combining Motion and Skeleton Information. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2018, 40, 2165-2179.	9.7	7
48	Quality and Diversity Optimization: A Unifying Modular Framework. <i>IEEE Transactions on Evolutionary Computation</i> , 2018, 22, 245-259.	7.5	125
49	DAC-h3: A Proactive Robot Cognitive Architecture to Acquire and Express Knowledge About the World and the Self. <i>IEEE Transactions on Cognitive and Developmental Systems</i> , 2018, 10, 1005-1022.	2.6	48
50	Head-Mounted Augmented Reality for Explainable Robotic Wheelchair Assistance. , 2018, , .		31
51	Context-Aware Deep Feature Compression for High-Speed Visual Tracking. , 2018, , .		157
52	Hierarchical behavioral repertoires with unsupervised descriptors. , 2018, , .		20
53	Real-Time Workload Classification during Driving using HyperNetworks. , 2018, , .		9
54	Transferring Visuomotor Learning from Simulation to the Real World for Robotics Manipulation Tasks. , 2018, , .		12

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55	Augmented Reality for Feedback in a Shared Control Spraying Task. , 2018, , .		8
56	iCub-HRI: A Software Framework for Complex Human-Robot Interaction Scenarios on the iCub Humanoid Robot. Frontiers in Robotics and AI, 2018, 5, 22.	2.0	13
57	Learning Kinematic Structure Correspondences Using Multi-Order Similarities. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018, 40, 2920-2934.	9.7	6
58	RT-GENE: Real-Time Eye Gaze Estimation in Natural Environments. Lecture Notes in Computer Science, 2018, , 339-357.	1.0	146
59	Adaptive user modelling in car racing games using behavioural and physiological data. User Modeling and User-Adapted Interaction, 2017, 27, 267-311.	2.9	36
60	Multi-task and multi-kernel Gaussian process dynamical systems. Pattern Recognition, 2017, 66, 190-201.	5.1	4
61	Assisted painting of 3D structures using shared control with a hand-held robot. , 2017, , .		3
62	Online Multimodal Ensemble Learning Using Self-Learned Sensorimotor Representations. IEEE Transactions on Cognitive and Developmental Systems, 2017, 9, 113-126.	2.6	28
63	Variational Autoencoded Regression: High Dimensional Regression of Visual Data on Complex Manifold. , 2017, , .		13
64	Attentional Correlation Filter Network for Adaptive Visual Tracking. , 2017, , .		222
65	Personalized robot-assisted dressing using user modeling in latent spaces. , 2017, , .		21
66	Markerless perspective taking for humanoid robots in unconstrained environments. , 2016, , .		15
67	Personalised track design in car racing games. , 2016, , .		4
68	Visual Tracking Using Attention-Modulated Disintegration and Integration. , 2016, , .		143
69	Multimodal imitation using self-learned sensorimotor representations. , 2016, , .		2
70	Iterative path optimisation for personalised dressing assistance using vision and force information. , 2016, , .		46
71	A Motivational Approach to Support Healthy Habits in Long-term Child-Robot Interaction. International Journal of Social Robotics, 2016, 8, 599-617.	3.1	12
72	Kinematic Structure Correspondences via Hypergraph Matching. , 2016, , .		6

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73	The Visual Object Tracking VOT2016 Challenge Results. Lecture Notes in Computer Science, 2016, , 777-823.	1.0	312
74	Hierarchical action learning by instruction through interactive grounding of body parts and proto-actions. , 2016, , .		6
75	Lifelong Augmentation of Multimodal Streaming Autobiographical Memories. IEEE Transactions on Cognitive and Developmental Systems, 2016, 8, 201-213.	2.6	18
76	Active Learning of Object and Body Models with Time Constraints on a Humanoid Robot. IEEE Transactions on Cognitive and Developmental Systems, 2016, 8, 26-41.	2.6	12
77	Towards Long-Term Social Child-Robot Interaction: Using Multi-Activity Switching to Engage Young Users. Journal of Human-robot Interaction, 2016, 5, 32.	2.0	72
78	User modelling for personalised dressing assistance by humanoid robots. , 2015, , .		8
79	Unsupervised learning of complex articulated kinematic structures combining motion and skeleton information. , 2015, , .		10
80	Towards a synchronised Grammars framework for adaptive musical human-robot collaboration. , 2015, , .		4
81	Where is my keyboard? Model-based active adaptation of action-space in a humanoid robot. , 2015, , .		1
82	One-shot assistance estimation from expert demonstrations for a shared control wheelchair system. , 2015, , .		13
83	Kinematic-free position control of a 2-DOF planar robot arm. , 2015, , .		18
84	Encoderless position control of a two-link robot manipulator. , 2015, , .		12
85	Spatio-Temporal Learning With the Online Finite and Infinite Echo-State Gaussian Processes. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 522-536.	7.2	42
86	STARE: Spatio-Temporal Attention Relocation for Multiple Structured Activities Detection. IEEE Transactions on Image Processing, 2015, 24, 5916-5927.	6.0	16
87	Predicting car states through learned models of vehicle dynamics and user behaviours. , 2015, , .		7
88	Learning Assistance by Demonstration: Smart Mobility With Shared Control and Paired Haptic Controllers. Journal of Human-robot Interaction, 2015, 4, 76.	2.0	24
89	Increasing the accuracy and the repeatability of position control for micromanipulations using Heteroscedastic Gaussian Processes. , 2014, , .		1
90	Behavioral accommodation towards a dance robot tutor. , 2014, , .		10

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91	Adaptive human-robot interaction in sensorimotor task instruction: From human to robot dance tutors. <i>Robotics and Autonomous Systems</i> , 2014, 62, 707-720.	3.0	58
92	Information Processing in the Mirror Neuron System in Primates and Machines. <i>Neuroinformatics</i> , 2014, 12, 63-91.	1.5	23
93	Incrementally Learning Objects by Touch: Online Discriminative and Generative Models for Tactile-Based Recognition. <i>IEEE Transactions on Haptics</i> , 2014, 7, 512-525.	1.8	39
94	A morphable template framework for robot learning by demonstration: Integrating one-shot and incremental learning approaches. <i>Robotics and Autonomous Systems</i> , 2014, 62, 1517-1530.	3.0	16
95	A syntactic approach to robot imitation learning using probabilistic activity grammars. <i>Robotics and Autonomous Systems</i> , 2013, 61, 1323-1334.	3.0	52
96	The Coordinating Role of Language in Real-Time Multimodal Learning of Cooperative Tasks. <i>IEEE Transactions on Autonomous Mental Development</i> , 2013, 5, 3-17.	2.3	39
97	The Infinite-Order Conditional Random Field Model for Sequential Data Modeling. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2013, 35, 1523-1534.	9.7	16
98	When and how to help: An iterative probabilistic model for learning assistance by demonstration. , 2013, , .		11
99	Enhanced kinematic model for dexterous manipulation with an underactuated hand. , 2013, , .		1
100	Online quantum mixture regression for trajectory learning by demonstration. , 2013, , .		7
101	Contextual action recognition and target localization with an active allocation of attention on a humanoid robot. <i>Bioinspiration and Biomimetics</i> , 2013, 8, 035002.	1.5	23
102	iCharibot: Design and Field Trials of a Fundraising Robot. <i>Lecture Notes in Computer Science</i> , 2013, , 412-421.	1.0	7
103	A Humanoid Robot Companion for Wheelchair Users. <i>Lecture Notes in Computer Science</i> , 2013, , 432-441.	1.0	10
104	Time to Change: Deciding When to Switch Action Plans during a Social Interaction. <i>Lecture Notes in Computer Science</i> , 2013, , 47-58.	1.0	9
105	Hierarchies for Embodied Action Perception. , 2013, , 81-98.		5
106	Multimodal Child-Robot Interaction: Building Social Bonds. <i>Journal of Human-robot Interaction</i> , 2013, 1, .	2.0	98
107	Online spatio-temporal Gaussian process experts with application to tactile classification. , 2012, , .		36
108	Incremental learning of an optical flow model for sensorimotor anticipation in a mobile robot. , 2012, , .		5

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109	Learning reusable task components using hierarchical activity grammars with uncertainties. , 2012, , .		5
110	Collaborative Control for a Robotic Wheelchair: Evaluation of Performance, Attention, and Workload. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 876-888.	5.5	194
111	A Quantum-Statistical Approach Toward Robot Learning by Demonstration. IEEE Transactions on Robotics, 2012, 28, 1371-1381.	7.3	13
112	Exploiting affordance symmetries for task reproduction planning. , 2012, , .		2
113	Robust grasping for an under-actuated anthropomorphic hand under object position uncertainty. , 2012, , .		17
114	Nonparametric Mixtures of Gaussian Processes With Power-Law Behavior. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 1862-1871.	7.2	20
115	Context-GMM: Incremental learning of sparse priors for Gaussian mixture regression. , 2012, , .		0
116	Iterative temporal learning and prediction with the sparse online echo state gaussian process. , 2012, , .		17
117	A spatially-constrained normalized Gamma process prior. Expert Systems With Applications, 2012, 39, 13019-13025.	4.4	1
118	A Spatially-Constrained Normalized Gamma Process for Data Clustering. International Federation for Information Processing, 2012, , 337-346.	0.4	1
119	A sparse nonparametric hierarchical Bayesian approach towards inductive transfer for preference modeling. Expert Systems With Applications, 2012, 39, 7235-7246.	4.4	1
120	The echo state conditional random field model for sequential data modeling. Expert Systems With Applications, 2012, 39, 10303-10309.	4.4	4
121	A nonparametric Bayesian approach toward robot learning by demonstration. Robotics and Autonomous Systems, 2012, 60, 789-802.	3.0	27
122	The copula echo state network. Pattern Recognition, 2012, 45, 570-577.	5.1	12
123	A reservoir-driven non-stationary hidden Markov model. Pattern Recognition, 2012, 45, 3985-3996.	5.1	4
124	Towards Contextual Action Recognition and Target Localization with Active Allocation of Attention. Lecture Notes in Computer Science, 2012, , 192-203.	1.0	2
125	Towards an open-source social middleware for humanoid robots. , 2011, , .		10
126	Towards incremental learning of task-dependent action sequences using probabilistic parsing. , 2011, , .		4



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127	The One-Hidden Layer Non-parametric Bayesian Kernel Machine. , 2011, , .		5
128	Learning dynamical representations of tools for tool-use recognition. , 2011, , .		9
129	Echo State Gaussian Process. IEEE Transactions on Neural Networks, 2011, 22, 1435-1445.	4.8	96
130	Evolving policies for multi-reward partially observable markov decision processes (MR-POMDPs). , 2011, , .		17
131	Multi-reward policies for medical applications. , 2011, , .		4
132	Child-robot interaction in the wild. , 2011, , .		69
133	Generalising human demonstration data by identifying affordance symmetries in object interaction trajectories. , 2011, , .		1
134	Adapting robot behavior to user's capabilities. , 2011, , .		5
135	Spectral clustering in multi-agent systems. Knowledge and Information Systems, 2010, 25, 607-622.	2.1	9
136	Towards One Shot Learning by imitation for humanoid robots. , 2010, , .		17
137	Towards anthropomorphic robot Thereminist. , 2010, , .		3
138	Increasing robotic wheelchair safety with collaborative control: Evidence from secondary task experiments. , 2010, , .		30
139	Hierarchical learning approach for one-shot action imitation in humanoid robots. , 2010, , .		6
140	Partial observability during predictions of the opponent's movements in an RTS game. , 2010, , .		7
141	Converging Bio-inspired Robotics and Socio-inspired Agents for Intelligent Transportation Systems. Lecture Notes in Computer Science, 2010, , 304-306.	1.0	0
142	Multi-robot plan adaptation by constrained minimal distortion feature mapping. , 2009, , .		5
143	Knowing when to assist: Developmental issues in lifelong assistive robotics. , 2009, 2009, 3357-60.		20
144	Efficient template-based path imitation by invariant feature mapping. , 2009, , .		5

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145	Predicting the Movements of Robot Teams Using Generative Models. , 2009, , 533-542.		2
146	A Groovy Virtual Drumming Agent. Lecture Notes in Computer Science, 2009, , 104-117.	1.0	2
147	The robot in the crib: a developmental analysis of imitation skills in infants and robots. Infant and Child Development, 2008, 17, 43-53.	0.9	113
148	Balancing Spectral Clustering for Segmenting Spatio-temporal Observations of Multi-agent Systems. , 2008, , .		4
149	Human-wheelchair collaboration through prediction of intention and adaptive assistance. , 2008, , .		70
150	Content-based control of goal-directed attention during human action perception. Interaction Studies, 2008, 9, 353-376.	0.4	6
151	A Drum Machine That Learns to Groove. Lecture Notes in Computer Science, 2008, , 144-151.	1.0	1
152	Simulation theory of understanding others: a robotics perspective. , 2007, , 89-102.		4
153	Special Issue on Robot Learning by Observation, Demonstration, and Imitation. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 254-255.	5.5	15
154	Prediction of intent in robotics and multi-agent systems. Cognitive Processing, 2007, 8, 151-158.	0.7	89
155	Using robots to study the mechanisms of imitation. , 2007, , 159-178.		1
156	Content-based control of goal-directed attention during human action perception. , 2006, , .		3
157	Perceiving the unusual: Temporal properties of hierarchical motor representations for action perception. Neural Networks, 2006, 19, 272-284.	3.3	30
158	Object Grasping using the Minimum Variance Model. Biological Cybernetics, 2006, 94, 393-407.	0.6	14
159	Hierarchical attentive multiple models for execution and recognition of actions. Robotics and Autonomous Systems, 2006, 54, 361-369.	3.0	255
160	Tracking football player movement from a single moving camera using particle filters. , 2006, , .		29
161	Optimal robot arm control using the minimum variance model. Journal of Field Robotics, 2005, 22, 677-690.	0.7	32
162	Perceptual Perspective Taking and Action Recognition. International Journal of Advanced Robotic Systems, 2005, 2, 32.	1.3	50

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163	Editorial: Introduction to the Special Issue on Epigenetic Robotics. Adaptive Behavior, 2003, 11, 75-77.	1.1	8
164	Distributed, predictive perception of actions: a biologically inspired robotics architecture for imitation and learning. Connection Science, 2003, 15, 231-243.	1.8	147
165	Deferred imitation of human head movements by an active stereo vision head. , 0, , .		58
166	Biologically inspired optimal robot arm control with signal-dependent noise. , 0, , .		3
167	Imitation of human demonstration using a biologically inspired modular optimal control scheme. , 0, , .		8
168	Attention shifts during action sequence recognition for social robots. , 0, , .		0