Mehdi Khamassi

List of Publications by Year
in descending order

73 papers	3,126 citations	304368 22 h-index	182168 51 g-index
89 all docs	89 docs citations	89 times ranked	3204 citing authors

#	Article	IF	Citations
1	Coherent Theta Oscillations and Reorganization of Spike Timing in the Hippocampal- Prefrontal Network upon Learning. Neuron, 2010, 66, 921-936.	3.8	730
2	Replay of rule-learning related neural patterns in the prefrontal cortex during sleep. Nature Neuroscience, 2009, 12, 919-926.	7.1	647
3	Contextual modulation of value signals in reward and punishment learning. Nature Communications, 2015, 6, 8096.	5.8	204
4	Dopaminergic control of the exploration-exploitation trade-off via the basal ganglia. Frontiers in Neuroscience, 2012, 6, 9.	1.4	137
5	Principal component analysis of ensemble recordings reveals cell assemblies at high temporal resolution. Journal of Computational Neuroscience, 2010, 29, 309-325.	0.6	99
6	Sustainable computational science: the ReScience initiative. PeerJ Computer Science, 2017, 3, e142.	2.7	86
7	Modelling Individual Differences in the Form of Pavlovian Conditioned Approach Responses: A Dual Learning Systems Approach with Factored Representations. PLoS Computational Biology, 2014, 10, e1003466.	1.5	74
8	Integrating cortico-limbic-basal ganglia architectures for learning model-based and model-free navigation strategies. Frontiers in Behavioral Neuroscience, 2012, 6, 79.	1.0	72
9	The Psikharpax project: towards building an artificial rat. Robotics and Autonomous Systems, 2005, 50, 211-223.	3.0	68
10	Behavioral Regulation and the Modulation of Information Coding in the Lateral Prefrontal and Cingulate Cortex. Cerebral Cortex, 2015, 25, 3197-3218.	1.6	66
11	Robot Cognitive Control with a Neurophysiologically Inspired Reinforcement Learning Model. Frontiers in Neurorobotics, 2011, 5, 1.	1.6	65
12	Actorâ€“Critic Models of Reinforcement Learning in the Basal Ganglia: From Natural to Artificial Rats. Adaptive Behavior, 2005, 13, 131-148.	1.1	54
13	Reference-point centering and range-adaptation enhance human reinforcement learning at the cost of irrational preferences. Nature Communications, 2018, 9, 4503.	5.8	54
14	Dopamine blockade impairs the exploration-exploitation trade-off in rats. Scientific Reports, 2019, 9, 6770.	1.6	54
15	Global reward state affects learning and activity in raphe nucleus and anterior insula in monkeys. Nature Communications, 2020, 11, 3771.	5.8	49
16	A biologically inspired meta-control navigation system for the Psikharpax rat robot. Bioinspiration and Biomimetics, 2012, 7, 025009.	1.5	48
17	Modeling choice and reaction time during arbitrary visuomotor learning through the coordination of adaptive working memory and reinforcement learning. Frontiers in Behavioral Neuroscience, 2015, 9, 225.	1.0	44
18	Medial prefrontal cortex and the adaptive regulation of reinforcement learning parameters. Progress in Brain Research, 2013, 202, 441-464.	0.9	41

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19	Anticipatory reward signals in ventral striatal neurons of behaving rats. European Journal of Neuroscience, 2008, 28, 1849-1866.	1.2	40
20	Robot Fast Adaptation to Changes in Human Engagement During Simulated Dynamic Social Interaction With Active Exploration in Parameterized Reinforcement Learning. IEEE Transactions on Cognitive and Developmental Systems, 2018, 10, 881-893.	2.6	37
21	Toward Self-Aware Robots. Frontiers in Robotics and AI, 2018, 5, 88.	2.0	35
22	Hippocampal replays under the scrutiny of reinforcement learning models. Journal of Neurophysiology, 2018, 120, 2877-2896.	0.9	32
23	Optic Flow Stimuli Update Anterodorsal Thalamus Head Direction Neuronal Activity in Rats. Journal of Neuroscience, 2013, 33, 16790-16795.	1.7	26
24	Manipulating the revision of reward value during the intertrial interval increases sign tracking and dopamine release. PLoS Biology, 2018, 16, e2004015.	2.6	24
25	Rat anterodorsal thalamic head direction neurons depend upon dynamic visual signals to select anchoring landmark cues. European Journal of Neuroscience, 2004, 20, 530-536.	1.2	22
26	Sequential reinstatement of neocortical activity during slow oscillations depends on cellsâ€™ global activity. Frontiers in Systems Neuroscience, 2010, 3, 18.	1.2	22
27	The object space task shows cumulative memory expression in both mice and rats. PLoS Biology, 2019, 17, e3000322.	2.6	19
28	Experimental predictions drawn from a computational model of sign-trackers and goal-trackers. Journal of Physiology (Paris), 2015, 109, 78-86.	2.1	16
29	Interactions of spatial strategies producing generalization gradient and blocking: A computational approach. PLoS Computational Biology, 2018, 14, e1006092.	1.5	16
30	Adaptive reinforcement learning with active state-specific exploration for engagement maximization during simulated child-robot interaction. Paladyn, 2018, 9, 235-253.	1.9	15
31	Social prediction modulates activity of macaque superior temporal cortex. Science Advances, 2021, 7, eabh2392.	4.7	15
32	Design of a Control Architecture for Habit Learning in Robots. Lecture Notes in Computer Science, 2014, , 249-260.	1.0	15
33	Active Exploration and Parameterized Reinforcement Learning Applied to a Simulated Human-Robot Interaction Task. , 2017, , .		14
34	Respective Advantages and Disadvantages of Model-based and Model-free Reinforcement Learning in a Robotics Neuro-inspired Cognitive Architecture. Procedia Computer Science, 2015, 71, 178-184.	1.2	13
35	Modeling awake hippocampal reactivations with model-based bidirectional search. Biological Cybernetics, 2020, 114, 231-248.	0.6	12
36	Adaptive coordination of working-memory and reinforcement learning in non-human primates performing a trial-and-error problem solving task. Behavioural Brain Research, 2018, 355, 76-89.	1.2	9

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37	A Deep Learning Approach for Multi-View Engagement Estimation of Children in a Child-Robot Joint Attention Task. , 2019, , .		9
38	Analyzing Interactions between Navigation Strategies Using a Computational Model of Action Selection. Lecture Notes in Computer Science, 2008, , 71-86.	1.0	8
39	Modelling the learning of biomechanics and visual planning for decision-making of motor actions. Journal of Physiology (Paris), 2013, 107, 399-408.	2.1	7
40	Which criteria for autonomously shifting between goal-directed and habitual behaviors in robots?. , 2015, , .		7
41	A Novel Reinforcement-Based Paradigm for Children to Teach the Humanoid Kaspar Robot. International Journal of Social Robotics, 2020, 12, 709-720.	3.1	7
42	How to Reduce Computation Time While Sparing Performance During Robot Navigation? A Neuro-Inspired Architecture for Autonomous Shifting Between Model-Based and Model-Free Learning. Lecture Notes in Computer Science, 2020, , 68-79.	1.0	7
43	Impacts of inter-trial interval duration on a computational model of sign-tracking vs. goal-tracking behaviour. Psychopharmacology, 2019, 236, 2373-2388.	1.5	6
44	The rodent lateral orbitofrontal cortex as an arbitrator selecting between model-based and model-free learning systems.. Behavioral Neuroscience, 2021, 135, 226-244.	0.6	6
45	Prioritized Sweeping Neural DynaQ with Multiple Predecessors, and Hippocampal Replays. Lecture Notes in Computer Science, 2018, , 16-27.	1.0	6
46	A Framework for Robot Learning During Child-Robot Interaction with Human Engagement as Reward Signal. , 2018, , .		5
47	Periodic movement learning in a soft-robotic arm. , 2020, , .		5
48	Coping with the variability in humans reward during simulated human-robot interactions through the coordination of multiple learning strategies. , 2020, , .		5
49	The Object Space Task reveals increased expression of cumulative memory in a mouse model of Kleefstra syndrome. Neurobiology of Learning and Memory, 2020, 173, 107265.	1.0	5
50	Meta-Learning, Cognitive Control, and Physiological Interactions between Medial and Lateral Prefrontal Cortex. , 2011, , 350-369.		5
51	Accounting for Negative Automaintenance in Pigeons: A Dual Learning Systems Approach and Factored Representations. PLoS ONE, 2014, 9, e111050.	1.1	4
52	A drift diffusion model of biological source seeking for mobile robots. , 2017, , .		4
53	Which Temporal Difference Learning Algorithm Best Reproduces Dopamine Activity in a Multi-choice Task?. Lecture Notes in Computer Science, 2012, , 289-298.	1.0	4
54	Neuro-inspired Navigation Strategies Shifting for Robots: Integration of a Multiple Landmark Taxon Strategy. Lecture Notes in Computer Science, 2012, , 62-73.	1.0	4

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55	Reproduction of Human Demonstrations with a Soft-Robotic Arm based on a Library of Learned Probabilistic Movement Primitives. , 2022, , .		4
56	A Computational Model of Integration between Reinforcement Learning and Task Monitoring in the Prefrontal Cortex. Lecture Notes in Computer Science, 2010, , 424-434.	1.0	3
57	Bio-inspired meta-learning for active exploration during non-stationary multi-armed bandit tasks. , 2017, , .		3
58	The magical orbitofrontal cortex.. Behavioral Neuroscience, 2021, 135, 108-108.	0.6	3
59	Reinforcement Learning for Bio-Inspired Target Seeking. Lecture Notes in Computer Science, 2017, , 637-650.	1.0	3
60	When Artificial Intelligence and Computational Neuroscience Meet. , 2020, , 303-335.		2
61	Task Driven Skill Learning in a Soft-Robotic Arm. , 2021, , .		2
62	Computational Model of the Transition from Novice to Expert Interaction Techniques. ACM Transactions on Computer-Human Interaction, 2023, 30, 1-33.	4.6	2
63	Model-Based and Model-Free Replay Mechanisms for Reinforcement Learning in Neurorobotics. Frontiers in Neurorobotics, 0, 16, .	1.6	2
64	Sequential Action Selection and Active Sensing for Budgeted Localization in Robot Navigation. International Journal of Semantic Computing, 2018, 12, 109-127.	0.4	1
65	Spatial Decisions and Neuronal Activity in Hippocampal Projection Zones in Prefrontal Cortex and Striatum. , 2008, , 289-310.		1
66	Neural Ensembles and Local Field Potentials in the Hippocampal-Prefrontal Cortex System During Spatial Learning and Strategy Shifts in Rats. , 2008, , 285-288.		1
67	Which Temporal Difference learning algorithm best reproduces dopamine activity in a multi-choice task?. BMC Neuroscience, 2013, 14, .	0.8	0
68	Coordination of adaptive working memory and reinforcement learning systems explaining choice and reaction time in a human experiment. BMC Neuroscience, 2014, 15, .	0.8	0
69	Sequential Action Selection for Budgeted Localization in Robots. , 2017, , .		0
70	Computational Model of the User's Learning Process When Cued by a Social Versus Non-Social Agent. , 2018, , .		0
71	Using Reinforcement Learning to Attenuate for Stochasticity in Robot Navigation Controllers. , 2019, , .		0
72	Special Issue on Behavior Adaptation, Interaction, and Artificial Perception for Assistive Robotics. International Journal of Social Robotics, 2020, 12, 613-616.	3.1	0

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73	Adaptive Coordination of Multiple Learning Strategies in Brains and Robots. Lecture Notes in Computer Science, 2020, , 3-22.	1.0	0