

Benoît Girard

List of Publications by Year in descending order

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43
papers

812
citations

567281

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552781

26
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44
all docs

44
docs citations

44
times ranked

844
citing authors

#	ARTICLE	IF	CITATIONS
1	Sustainable computational science: the ReScience initiative. PeerJ Computer Science, 2017, 3, e142.	4.5	86
2	The Psikharpax project: towards building an artificial rat. Robotics and Autonomous Systems, 2005, 50, 211-223.	5.1	68
3	A hippocampo-cerebellar centred network for the learning and execution of sequence-based navigation. Scientific Reports, 2017, 7, 17812.	3.3	58
4	Actor-Critic Models of Reinforcement Learning in the Basal Ganglia: From Natural to Artificial Rats. Adaptive Behavior, 2005, 13, 131-148.	1.9	54
5	Dopamine blockade impairs the exploration-exploitation trade-off in rats. Scientific Reports, 2019, 9, 6770.	3.3	54
6	Path planning versus cue responding: a bio-inspired model of switching between navigation strategies. Biological Cybernetics, 2010, 103, 299-317.	1.3	45
7	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.	2.0	44
8	Motor Cost Influences Perceptual Decisions. PLoS ONE, 2015, 10, e0144841.	2.5	38
9	Toward Self-Aware Robots. Frontiers in Robotics and AI, 2018, 5, 88.	3.2	35
10	Geometry of the superior colliculus mapping and efficient oculomotor computation. Biological Cybernetics, 2007, 97, 279-292.	1.3	33
11	Hippocampal replays under the scrutiny of reinforcement learning models. Journal of Neurophysiology, 2018, 120, 2877-2896.	1.8	32
12	A BASAL GANGLIA INSPIRED MODEL OF ACTION SELECTION EVALUATED IN A ROBOTIC SURVIVAL TASK. Journal of Integrative Neuroscience, 2003, 02, 179-200.	1.7	31
13	A biologically constrained model of the whole basal ganglia addressing the paradoxes of connections and selection. Journal of Computational Neuroscience, 2014, 36, 445-468.	1.0	25
14	On-line fusion of trackers for single-object tracking. Pattern Recognition, 2018, 74, 459-473.	8.1	24
15	Integration of Navigation and Action Selection Functionalities in a Computational Model of Cortico-Basal-Ganglia-Thalamo-Cortical Loops. Adaptive Behavior, 2005, 13, 115-130.	1.9	22
16	A biologically constrained spiking neural network model of the primate basal ganglia with overlapping pathways exhibits action selection. European Journal of Neuroscience, 2021, 53, 2254-2277.	2.6	20
17	Design of a Control Architecture for Habit Learning in Robots. Lecture Notes in Computer Science, 2014, , 249-260.	1.3	15
18	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.	2.0	13

#	ARTICLE	IF	CITATIONS
19	Modeling awake hippocampal reactivations with model-based bidirectional search. <i>Biological Cybernetics</i> , 2020, 114, 231-248.	1.3	12
20	Importing the computational neuroscience toolbox into neuro-evolution-application to basal ganglia. , 2010, , .		10
21	Saccade learning with concurrent cortical and subcortical basal ganglia loops. <i>Frontiers in Computational Neuroscience</i> , 2014, 8, 48.	2.1	10
22	Bayesian models of eye movement selection with retinotopic maps. <i>Biological Cybernetics</i> , 2009, 100, 203-214.	1.3	9
23	Adaptive coordination of working-memory and reinforcement learning in non-human primates performing a trial-and-error problem solving task. <i>Behavioural Brain Research</i> , 2018, 355, 76-89.	2.2	9
24	Analyzing Interactions between Navigation Strategies Using a Computational Model of Action Selection. <i>Lecture Notes in Computer Science</i> , 2008, , 71-86.	1.3	8
25	Which criteria for autonomously shifting between goal-directed and habitual behaviors in robots?. , 2015, , .		7
26	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. <i>Lecture Notes in Computer Science</i> , 2020, , 68-79.	1.3	7
27	Biomimetic race model of the loop between the superior colliculus and the basal ganglia: Subcortical selection of saccade targets. <i>Neural Networks</i> , 2015, 67, 54-73.	5.9	6
28	Impacts of inter-trial interval duration on a computational model of sign-tracking vs. goal-tracking behaviour. <i>Psychopharmacology</i> , 2019, 236, 2373-2388.	3.1	6
29	Prioritized Sweeping Neural DynaQ with Multiple Predecessors, and Hippocampal Replays. <i>Lecture Notes in Computer Science</i> , 2018, , 16-27.	1.3	6
30	An Integrated Neuromimetic Model of the Saccadic Eye Movements for the Psikharpax Robot. <i>Lecture Notes in Computer Science</i> , 2010, , 114-125.	1.3	5
31	Neuro-inspired Navigation Strategies Shifting for Robots: Integration of a Multiple Landmark Taxon Strategy. <i>Lecture Notes in Computer Science</i> , 2012, , 62-73.	1.3	4
32	Analyzing Interactions between Cue-Guided and Place-Based Navigation with a Computational Model of Action Selection: Influence of Sensory Cues and Training. <i>Lecture Notes in Computer Science</i> , 2010, , 335-346.	1.3	3
33	Multi-objective Evolutionary Algorithms to Investigate Neurocomputational Issues: The Case Study of Basal Ganglia Models. <i>Lecture Notes in Computer Science</i> , 2010, , 597-606.	1.3	2
34	When Artificial Intelligence and Computational Neuroscience Meet. , 2020, , 303-335.		2
35	Computational Model of the Transition from Novice to Expert Interaction Techniques. <i>ACM Transactions on Computer-Human Interaction</i> , 2023, 30, 1-33.	5.7	2
36	Model-Based and Model-Free Replay Mechanisms for Reinforcement Learning in Neurorobotics. <i>Frontiers in Neurobotics</i> , 0, 16, .	2.8	2

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37	Sequential Action Selection and Active Sensing for Budgeted Localization in Robot Navigation. International Journal of Semantic Computing, 2018, 12, 109-127.	0.5	1
38	Maximum entropy perception-action space: a Bayesian model of eye movement selection. , 2011, , .		0
39	Learning a sequence of motor responses to attain reward: a speed-accuracy trade-off. BMC Neuroscience, 2013, 14, .	1.9	0
40	Biomimetic stochastic race model in the subcortical saccadic selection processes: a model of the tecto-basal loops. BMC Neuroscience, 2013, 14, .	1.9	0
41	Basal Ganglia: Control of Saccades. , 2014, , 1-4.		0
42	Basal Ganglia: Control of Saccades. , 2019, , 1-3.		0
43	Basal Ganglia: Control of Saccades. , 2022, , 376-379.		0