Reza Shadmehr

List of Publications by Year
in descending order

87 papers	15,097 citations	36303 51 h-index	58581 82 g-index
161 all docs	161 docs citations	161 times ranked	7109 citing authors

#	Article	IF	Citations
1	Competition between parallel sensorimotor learning systems. ELife, 2022, 11, .	6.0	44
2	Synchronous spiking of cerebellar Purkinje cells during control of movements. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2118954119.	7.1	31
3	Neuromatch Academy: a 3-week, online summer school in computational neuroscience. The Journal of Open Source Education, 2022, 5, 118.	0.4	0
4	PrÃ©cis of <i>Vigor: Neuroeconomics of Movement Control</i>. Behavioral and Brain Sciences, 2021, 44, e123.	0.7	27
5	Perceived effort affects choice of limb and reaction time of movements. Journal of Neurophysiology, 2021, 125, 63-73.	1.8	13
6	Movement control, decision-making, and the building of Roman roads to link them. Behavioral and Brain Sciences, 2021, 44, e138.	0.7	0
7	An implicit memory of errors limits human sensorimotor adaptation. Nature Human Behaviour, 2021, 5, 920-934.	12.0	63
8	Adaptive control of movement deceleration during saccades. PLoS Computational Biology, 2021, 17, e1009176.	3.2	9
9	The cost of correcting for error during sensorimotor adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	10
10	P-sort: an open-source software for cerebellar neurophysiology. Journal of Neurophysiology, 2021, 126, 1055-1075.	1.8	19
11	Population coding in the cerebellum: a machine learning perspective. Journal of Neurophysiology, 2020, 124, 2022-2051.	1.8	20
12	Saccade vigor and the subjective economic value of visual stimuli. Journal of Neurophysiology, 2020, 123, 2161-2172.	1.8	21
13	The Origins of Anterograde Interference in Visuomotor Adaptation. Cerebral Cortex, 2020, 30, 4000-4010.	2.9	25
14	Postural control of arm and fingers through integration of movement commands. ELife, 2020, 9, .	6.0	34
15	Behavioral training of marmosets and electrophysiological recording from the cerebellum. Journal of Neurophysiology, 2019, 122, 1502-1517.	1.8	31
16	Reward Prediction Error Modulates Saccade Vigor. Journal of Neuroscience, 2019, 39, 5010-5017.	3.6	40
17	Movement Vigor as a Reflection of Subjective Economic Utility. Trends in Neurosciences, 2019, 42, 323-336.	8.6	116
18	The Aging Brain & the Dorsal Basal Ganglia: Implications for Age-Related Limitations of Mobility. Advances in Geriatric Medicine and Research, 2019, 1, .	0.6	15

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19	Encoding of error and learning to correct that error by the Purkinje cells of the cerebellum. Nature Neuroscience, 2018, 21, 736-743.	14.8	170
20	Estimating properties of the fast and slow adaptive processes during sensorimotor adaptation. Journal of Neurophysiology, 2018, 119, 1367-1393.	1.8	35
21	Control of movement vigor and decision making during foraging. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E10476-E10485.	7.1	83
22	Motor Learning: A Cortical System for Adaptive Motor Control. Current Biology, 2018, 28, R793-R795.	3.9	7
23	Vigor of reaching movements: reward discounts the cost of effort. Journal of Neurophysiology, 2018, 119, 2347-2357.	1.8	131
24	Movement vigor as a traitlike attribute of individuality. Journal of Neurophysiology, 2018, 120, 741-757.	1.8	58
25	How the cerebellum learns to build a sequence. ELife, 2018, 7, .	6.0	0
26	Learning to Predict and Control the Physics of Our Movements. Journal of Neuroscience, 2017, 37, 1663-1671.	3.6	45
27	Distinct neural circuits for control of movement vs. holding still. Journal of Neurophysiology, 2017, 117, 1431-1460.	1.8	67
28	A Representation of Effort in Decision-Making and Motor Control. Current Biology, 2016, 26, 1929-1934.	3.9	189
29	Cerebellar output encodes a corrective saccadic command (Commentary on Sun <i>et al</i>.). European Journal of Neuroscience, 2016, 44, 2528-2530.	2.6	4
30	The Neural Feedback Response to Error As a Teaching Signal for the Motor Learning System. Journal of Neuroscience, 2016, 36, 4832-4845.	3.6	64
31	Biometric Recognition via Eye Movements. ACM Transactions on Applied Perception, 2016, 13, 1-21.	1.9	37
32	Modulation of error-sensitivity during a prism adaptation task in people with cerebellar degeneration. Journal of Neurophysiology, 2015, 114, 2460-2471.	1.8	43
33	Behavioural and neural basis of anomalous motor learning in children with autism. Brain, 2015, 138, 784-797.	7.6	117
34	Persistent Residual Errors in Motor Adaptation Tasks: Reversion to Baseline and Exploratory Escape. Journal of Neuroscience, 2015, 35, 6969-6977.	3.6	66
35	Reward-Dependent Modulation of Movement Variability. Journal of Neuroscience, 2015, 35, 4015-4024.	3.6	147
36	Encoding of action by the Purkinje cells of the cerebellum. Nature, 2015, 526, 439-442.	27.8	271

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37	Altering Effort Costs in Parkinson's Disease with Noninvasive Cortical Stimulation. Journal of Neuroscience, 2015, 35, 12287-12302.	3.6	26
38	Modulation of Saccade Vigor during Value-Based Decision Making. Journal of Neuroscience, 2015, 35, 15369-15378.	3.6	92
39	Optimizing effort: increased efficiency of motor memory with time away from practice. Journal of Neurophysiology, 2015, 113, 445-454.	1.8	12
40	Vigor of Movements and the Cost of Time in Decision Making. Journal of Neuroscience, 2014, 34, 1212-1223.	3.6	92
41	Cerebellum estimates the sensory state of the body. Trends in Cognitive Sciences, 2014, 18, 66-67.	7.8	18
42	Motor variability is not noise, but grist for the learning mill. Nature Neuroscience, 2014, 17, 149-150.	14.8	110
43	A memory of errors in sensorimotor learning. Science, 2014, 345, 1349-1353.	12.6	279
44	Contributions of the cerebellum and the motor cortex to acquisition and retention of motor memories. NeuroImage, 2014, 98, 147-158.	4.2	157
45	Decay of Motor Memories in the Absence of Error. Journal of Neuroscience, 2013, 33, 7700-7709.	3.6	59
46	Changes in corticospinal excitability during reach adaptation in force fields. Journal of Neurophysiology, 2013, 109, 124-136.	1.8	33
47	Changes in saccade kinematics associated with the value and novelty of a stimulus. , 2012, , .		3
48	Sensitivity to prediction error in reach adaptation. Journal of Neurophysiology, 2012, 108, 1752-1763.	1.8	108
49	Evidence for Hyperbolic Temporal Discounting of Reward in Control of Movements. Journal of Neuroscience, 2012, 32, 11727-11736.	3.6	102
50	Cerebellar Contributions to Reach Adaptation and Learning Sensory Consequences of Action. Journal of Neuroscience, 2012, 32, 4230-4239.	3.6	268
51	Biological Learning and Control. , 2012, , .		102
52	TMS Perturbs Saccade Trajectories and Unmasks an Internal Feedback Controller for Saccades. Journal of Neuroscience, 2011, 31, 11537-11546.	3.6	39
53	Protection and Expression of Human Motor Memories. Journal of Neuroscience, 2011, 31, 13829-13839.	3.6	78
54	Control of movements and temporal discounting of reward. Current Opinion in Neurobiology, 2010, 20, 726-730.	4.2	57

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55	A Shared Resource between Declarative Memory and Motor Memory. Journal of Neuroscience, 2010, 30, 14817-14823.	3.6	127
56	Temporal Discounting of Reward and the Cost of Time in Motor Control. Journal of Neuroscience, 2010, 30, 10507-10516.	3.6	171
57	Error Correction, Sensory Prediction, and Adaptation in Motor Control. Annual Review of Neuroscience, 2010, 33, 89-108.	10.7	1,435
58	The intrinsic value of visual information affects saccade velocities. Experimental Brain Research, 2009, 196, 475-481.	1.5	134
59	Cerebellar Contributions to Adaptive Control of Saccades in Humans. Journal of Neuroscience, 2009, 29, 12930-12939.	3.6	163
60	A computational neuroanatomy for motor control. Experimental Brain Research, 2008, 185, 359-381.	1.5	983
61	Adaptive Control of Saccades via Internal Feedback. Journal of Neuroscience, 2008, 28, 2804-2813.	3.6	208
62	On-Line Processing of Uncertain Information in Visuomotor Control. Journal of Neuroscience, 2008, 28, 11360-11368.	3.6	120
63	Consolidation Patterns of Human Motor Memory. Journal of Neuroscience, 2008, 28, 9610-9618.	3.6	124
64	Changes in Control of Saccades during Gain Adaptation. Journal of Neuroscience, 2008, 28, 13929-13937.	3.6	102
65	Spontaneous Recovery of Motor Memory During Saccade Adaptation. Journal of Neurophysiology, 2008, 99, 2577-2583.	1.8	121
66	Impairment of Retention But Not Acquisition of a Visuomotor Skill Through Time-Dependent Disruption of Primary Motor Cortex. Journal of Neuroscience, 2007, 27, 13413-13419.	3.6	158
67	Sensory Prediction Errors Drive Cerebellum-Dependent Adaptation of Reaching. Journal of Neurophysiology, 2007, 98, 54-62.	1.8	749
68	The dynamics of memory as a consequence of optimal adaptation to a changing body. Nature Neuroscience, 2007, 10, 779-786.	14.8	383
69	Interacting Adaptive Processes with Different Timescales Underlie Short-Term Motor Learning. PLoS Biology, 2006, 4, e179.	5.6	953
70	Adaptation and generalization in acceleration-dependent force fields. Experimental Brain Research, 2006, 169, 496-506.	1.5	55
71	Dissociable effects of the implicit and explicit memory systems on learning control of reaching. Experimental Brain Research, 2006, 173, 425-437.	1.5	91
72	Effects of Human Cerebellar Thalamus Disruption on Adaptive Control of Reaching. Cerebral Cortex, 2006, 16, 1462-1473.	2.9	72

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73	Intact Ability to Learn Internal Models of Arm Dynamics in Huntington's Disease But Not Cerebellar Degeneration. Journal of Neurophysiology, 2005, 93, 2809-2821.	1.8	439
74	Neural Correlates of Reach Errors. Journal of Neuroscience, 2005, 25, 9919-9931.	3.6	550
75	Internal models of limb dynamics and the encoding of limb state. Journal of Neural Engineering, 2005, 2, S266-S278.	3.5	90
76	Generalization as a behavioral window to the neural mechanisms of learning internal models. Human Movement Science, 2004, 23, 543-568.	1.4	144
77	Learned Dynamics of Reaching Movements Generalize From Dominant to Nondominant Arm. Journal of Neurophysiology, 2003, 89, 168-176.	1.8	290
78	Quantifying Generalization from Trial-by-Trial Behavior of Adaptive Systems that Learn with Basis Functions: Theory and Experiments in Human Motor Control. Journal of Neuroscience, 2003, 23, 9032-9045.	3.6	415
79	Long-term adaptation to dynamics of reaching movements: a PET study. Experimental Brain Research, 2001, 140, 66-76.	1.5	109
80	Learning the dynamics of reaching movements results in the modification of arm impedance and long-latency perturbation responses. Biological Cybernetics, 2001, 85, 437-448.	1.3	72
81	Motor disorder in Huntington's disease begins as a dysfunction in error feedback control. Nature, 2000, 403, 544-549.	27.8	384
82	Learning of action through adaptive combination of motor primitives. Nature, 2000, 407, 742-747.	27.8	818
83	Spatial Generalization from Learning Dynamics of Reaching Movements. Journal of Neuroscience, 2000, 20, 7807-7815.	3.6	207
84	Computational nature of human adaptive control during learning of reaching movements in force fields. Biological Cybernetics, 1999, 81, 39-60.	1.3	293
85	Electromyographic Correlates of Learning an Internal Model of Reaching Movements. Journal of Neuroscience, 1999, 19, 8573-8588.	3.6	392
86	Time-Dependent Motor Memory Processes in Amnesic Subjects. Journal of Neurophysiology, 1998, 80, 1590-1597.	1.8	66
87	Consolidation in human motor memory. Nature, 1996, 382, 252-255.	27.8	883