John W Krakauer

List of Publications by Year
in descending order

109 papers	22,714 citations	14614 66 h-index	28224 105 g-index
126 all docs	126 docs citations	126 times ranked	14049 citing authors

#	Article	IF	Citations
1	Error Correction, Sensory Prediction, and Adaptation in Motor Control. Annual Review of Neuroscience, 2010, 33, 89-108.	5.0	1,435
2	Noninvasive cortical stimulation enhances motor skill acquisition over multiple days through an effect on consolidation. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1590-1595.	3.3	1,168
3	A computational neuroanatomy for motor control. Experimental Brain Research, 2008, 185, 359-381.	0.7	983
4	Neuroscience Needs Behavior: Correcting a Reductionist Bias. Neuron, 2017, 93, 480-490.	3.8	953
5	Motor learning: its relevance to stroke recovery and neurorehabilitation. Current Opinion in Neurology, 2006, 19, 84-90.	1.8	948
6	Independent learning of internal models for kinematic and dynamic control of reaching. Nature Neuroscience, 1999, 2, 1026-1031.	7.1	774
7	Sensory Prediction Errors Drive Cerebellum-Dependent Adaptation of Reaching. Journal of Neurophysiology, 2007, 98, 54-62.	0.9	749
8	Learning of Visuomotor Transformations for Vectorial Planning of Reaching Trajectories. Journal of Neuroscience, 2000, 20, 8916-8924.	1.7	746
9	An Implicit Plan Overrides an Explicit Strategy during Visuomotor Adaptation. Journal of Neuroscience, 2006, 26, 3642-3645.	1.7	692
10	Agreed definitions and a shared vision for new standards in stroke recovery research: The Stroke Recovery and Rehabilitation Roundtable taskforce. International Journal of Stroke, 2017, 12, 444-450.	2.9	624
11	Explicit and Implicit Contributions to Learning in a Sensorimotor Adaptation Task. Journal of Neuroscience, 2014, 34, 3023-3032.	1.7	606
12	Evolution of Cortical Activation During Recovery From Corticospinal Tract Infarction. Stroke, 2000, 31, 656-661.	1.0	580
13	Why Don't We Move Faster? Parkinson's Disease, Movement Vigor, and Implicit Motivation. Journal of Neuroscience, 2007, 27, 7105-7116.	1.7	488
14	Getting Neurorehabilitation Right. Neurorehabilitation and Neural Repair, 2012, 26, 923-931.	1.4	473
15	Inter-individual Variability in the Capacity for Motor Recovery After Ischemic Stroke. Neurorehabilitation and Neural Repair, 2008, 22, 64-71.	1.4	432
16	Inside the brain of an elite athlete: the neural processes that support high achievement in sports. Nature Reviews Neuroscience, 2009, 10, 585-596.	4.9	426
17	Human sensorimotor learning: adaptation, skill, and beyond. Current Opinion in Neurobiology, 2011, 21, 636-644.	2.0	425
18	Adaptation to Visuomotor Transformations: Consolidation, Interference, and Forgetting. Journal of Neuroscience, 2005, 25, 473-478.	1.7	416

#	Article	IF	Citations
19	Rethinking Motor Learning and Savings in Adaptation Paradigms: Model-Free Memory for Successful Actions Combines with Internal Models. Neuron, 2011, 70, 787-801.	3.8	400
20	Consolidation of motor memory. Trends in Neurosciences, 2006, 29, 58-64.	4.2	393
21	Motor Learning. , 2019, 9, 613-663.		393
22	Standardized measurement of sensorimotor recovery in stroke trials: Consensus-based core recommendations from the Stroke Recovery and Rehabilitation Roundtable. International Journal of Stroke, 2017, 12, 451-461.	2.9	352
23	How is a motor skill learned? Change and invariance at the levels of task success and trajectory control. Journal of Neurophysiology, 2012, 108, 578-594.	0.9	347
24	The uses and interpretations of the motor-evoked potential for understanding behaviour. Experimental Brain Research, 2015, 233, 679-689.	0.7	260
25	Motor learning principles for neurorehabilitation. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2013, 110, 93-103.	1.0	255
26	Improvement in Aphasia Scores After Stroke Is Well Predicted by Initial Severity. Stroke, 2010, 41, 1485-1488.	1.0	251
27	Motor Learning and Consolidation: The Case of Visuomotor Rotation. Advances in Experimental Medicine and Biology, 2009, 629, 405-421.	0.8	240
28	Consensus: Can transcranial direct current stimulation and transcranial magnetic stimulation enhance motor learning and memory formation?. Brain Stimulation, 2008, 1, 363-369.	0.7	225
29	Agreed Definitions and a Shared Vision for New Standards in Stroke Recovery Research: The Stroke Recovery and Rehabilitation Roundtable Taskforce. Neurorehabilitation and Neural Repair, 2017, 31, 793-799.	1.4	225
30	Differential Cortical and Subcortical Activations in Learning Rotations and Gains for Reaching: A PET Study. Journal of Neurophysiology, 2004, 91, 924-933.	0.9	215
31	The basal ganglia: from motor commands to the control of vigor. Current Opinion in Neurobiology, 2016, 37, 158-166.	2.0	203
32	The Influence of Movement Preparation Time on the Expression of Visuomotor Learning and Savings. Journal of Neuroscience, 2015, 35, 5109-5117.	1.7	199
33	Model-Based and Model-Free Mechanisms of Human Motor Learning. Advances in Experimental Medicine and Biology, 2013, 782, 1-21.	0.8	194
34	Generalization of Motor Learning Depends on the History of Prior Action. PLoS Biology, 2006, 4, e316.	2.6	186
35	Motor Planning. Neuroscientist, 2015, 21, 385-398.	2.6	181
36	Independence of Movement Preparation and Movement Initiation. Journal of Neuroscience, 2016, 36, 3007-3015.	1.7	173

#	Article	IF	Citations
37	Arm Function after Stroke: From Physiology to Recovery. Seminars in Neurology, 2005, 25, 384-395.	0.5	166
38	Overcoming Motor â€œForgettingâ€•Through Reinforcement Of Learned Actions. Journal of Neuroscience, 2012, 32, 14617-14621a.	1.7	166
39	Two Distinct Ipsilateral Cortical Representations for Individuated Finger Movements. Cerebral Cortex, 2013, 23, 1362-1377.	1.6	155
40	Are We Ready for a Natural History of Motor Learning?. Neuron, 2011, 72, 469-476.	3.8	154
41	Adaptation to Visuomotor Rotation Through Interaction Between Posterior Parietal and Motor Cortical Areas. Journal of Neurophysiology, 2009, 102, 2921-2932.	0.9	145
42	Learning of scaling factors and reference axes for reaching movements. NeuroReport, 1996, 7, 2357-2362.	0.6	144
43	Improvement After Constraint-Induced Movement Therapy. Neurorehabilitation and Neural Repair, 2013, 27, 99-109.	1.4	144
44	Standardized Measurement of Sensorimotor Recovery in Stroke Trials: Consensus-Based Core Recommendations from the Stroke Recovery and Rehabilitation Roundtable. Neurorehabilitation and Neural Repair, 2017, 31, 784-792.	1.4	135
45	Dual-process decomposition in human sensorimotor adaptation. Current Opinion in Neurobiology, 2015, 33, 71-77.	2.0	134
46	Probing for hemispheric specialization for motor skill learning: a transcranial direct current stimulation study. Journal of Neurophysiology, 2011, 106, 652-661.	0.9	127
47	Explaining Savings for Visuomotor Adaptation: Linear Time-Invariant State-Space Models Are Not Sufficient. Journal of Neurophysiology, 2008, 100, 2537-2548.	0.9	125
48	Computational neurorehabilitation: modeling plasticity and learning to predict recovery. Journal of NeuroEngineering and Rehabilitation, 2016, 13, 42.	2.4	125
49	Prediction of Motor Recovery Using Initial Impairment and fMRI 48 h Poststroke. Cerebral Cortex, 2011, 21, 2712-2721.	1.6	122
50	Motor skill depends on knowledge of facts. Frontiers in Human Neuroscience, 2013, 7, 503.	1.0	122
51	An Optimization Principle for Determining Movement Duration. Journal of Neurophysiology, 2006, 95, 3875-3886.	0.9	119
52	Learning of a Sequential Motor Skill Comprises Explicit and Implicit Components That Consolidate Differently. Journal of Neurophysiology, 2009, 101, 2218-2229.	0.9	119
53	A New Approach to Spatial Covariance Modeling of Functional Brain Imaging Data: Ordinal Trend Analysis. Neural Computation, 2005, 17, 1602-1645.	1.3	109
54	Time-dependent competition between goal-directed and habitual response preparation. Nature Human Behaviour, 2019, 3, 1252-1262.	6.2	107

#	Article	IF	Citations
55	Impaired anticipatory control of fingertip forces in patients with a pure motor or sensorimotor lacunar syndrome. Brain, 2006, 129, 1415-1425.	3.7	106
56	The reliability of repeated TMS measures in older adults and in patients with subacute and chronic stroke. Frontiers in Cellular Neuroscience, 2015, 9, 335.	1.8	104
57	The multiple effects of practice: skill, habit and reduced cognitive load. Current Opinion in Behavioral Sciences, 2018, 20, 196-201.	2.0	102
58	Unlearning versus savings in visuomotor adaptation: comparing effects of washout, passage of time, and removal of errors on motor memory. Frontiers in Human Neuroscience, 2013, 7, 307.	1.0	95
59	Formation of a long-term memory for visuomotor adaptation following only a few trials of practice. Journal of Neurophysiology, 2015, 114, 969-977.	0.9	95
60	Separable systems for recovery of finger strength and control after stroke. Journal of Neurophysiology, 2017, 118, 1151-1163.	0.9	94
61	Two views on the cognitive brain. Nature Reviews Neuroscience, 2021, 22, 359-371.	4.9	92
62	The cerebellum does more than sensory prediction error-based learning in sensorimotor adaptation tasks. Journal of Neurophysiology, 2017, 118, 1622-1636.	0.9	91
63	Rethinking interhemispheric imbalance as a target for stroke neurorehabilitation. Annals of Neurology, 2019, 85, 502-513.	2.8	85
64	Compensatory Motor Control After Stroke: An Alternative Joint Strategy for Object-Dependent Shaping of Hand Posture. Journal of Neurophysiology, 2010, 103, 3034-3043.	0.9	84
65	A Short and Distinct Time Window for Recovery of Arm Motor Control Early After Stroke Revealed With a Global Measure of Trajectory Kinematics. Neurorehabilitation and Neural Repair, 2017, 31, 552-560.	1.4	82
66	Medial Premotor Cortex Shows a Reduction in Inhibitory Markers and Mediates Recovery in a Mouse Model of Focal Stroke. Stroke, 2013, 44, 483-489.	1.0	81
67	Fluoxetine Maintains a State of Heightened Responsiveness to Motor Training Early After Stroke in a Mouse Model. Stroke, 2015, 46, 2951-2960.	1.0	75
68	Pretreatment Bloodâ€"Brain Barrier Damage and Post-Treatment Intracranial Hemorrhage in Patients Receiving Intravenous Tissue-Type Plasminogen Activator. Stroke, 2014, 45, 2030-2035.	1.0	73
69	Patterns of Impairment in Digit Independence After Subcortical Stroke. Journal of Neurophysiology, 2006, 95, 369-378.	0.9	72
70	Paradoxical Motor Recovery From a First Stroke After Induction of a Second Stroke. Neurorehabilitation and Neural Repair, 2016, 30, 794-800.	1.4	69
71	Persistent Residual Errors in Motor Adaptation Tasks: Reversion to Baseline and Exploratory Escape. Journal of Neuroscience, 2015, 35, 6969-6977.	1.7	66
72	Answer ALS, a large-scale resource for sporadic and familial ALS combining clinical and multi-omics data from induced pluripotent cell lines. Nature Neuroscience, 2022, 25, 226-237.	7.1	66

#	Article	IF	Citations
73	Hedging Your Bets: Intermediate Movements as Optimal Behavior in the Context of an Incomplete Decision. PLoS Computational Biology, 2015, 11, e1004171.	1.5	64
74	The neural correlates of learned motor acuity. Journal of Neurophysiology, 2014, 112, 971-980.	0.9	58
75	Practice induces a qualitative change in the memory representation for visuomotor learning. Journal of Neurophysiology, 2019, 122, 1050-1059.	0.9	58
76	Explicit knowledge enhances motor vigor and performance: motivation versus practice in sequence tasks. Journal of Neurophysiology, 2015, 114, 219-232.	0.9	57
77	Motor Learning in Stroke. Neurorehabilitation and Neural Repair, 2017, 31, 178-189.	1.4	53
78	Did We Get Sensorimotor Adaptation Wrong? Implicit Adaptation as Direct Policy Updating Rather than Forward-Model-Based Learning. Journal of Neuroscience, 2021, 41, 2747-2761.	1.7	50
79	Can patients with cerebellar disease switch learning mechanisms to reduce their adaptation deficits?. Brain, 2019, 142, 662-673.	3.7	48
80	Robotic therapy for chronic stroke: general recovery of impairment or improved task-specific skill?. Journal of Neurophysiology, 2015, 114, 1885-1894.	0.9	47
81	Evidence for a subcortical origin of mirror movements after stroke: a longitudinal study. Brain, 2018, 141, 837-847.	3.7	47
82	Reaction times can reflect habits rather than computations. ELife, 2017, 6, .	2.8	45
83	Competition between parallel sensorimotor learning systems. ELife, 2022, 11, .	2.8	44
84	Generalization and Multirate Models of Motor Adaptation. Neural Computation, 2012, 24, 939-966.	1.3	41
85	Learning Not to Generalize: Modular Adaptation of Visuomotor Gain. Journal of Neurophysiology, 2010, 103, 2938-2952.	0.9	39
86	Postural control of arm and fingers through integration of movement commands. ELife, 2020, 9, .	2.8	34
87	A motor planning stage represents the shape of upcoming movement trajectories. Journal of Neurophysiology, 2016, 116, 296-305.	0.9	33
88	A non-task-oriented approach based on high-dose playful movement exploration for rehabilitation of the upper limb early after stroke: A proposal. NeuroRehabilitation, 2018, 43, 31-40.	0.5	33
89	Differential Poststroke Motor Recovery in an Arm Versus Hand Muscle in the Absence of Motor Evoked Potentials. Neurorehabilitation and Neural Repair, 2019, 33, 568-580.	1.4	32
90	The relationship between habits and motor skills in humans. Trends in Cognitive Sciences, 2022, 26, 371-387.	4.0	29

#	Article	IF	Citations
91	Towards a computational neuropsychology of action. Progress in Brain Research, 2007, 165, 383-394.	0.9	24
92	Why Are Sequence Representations in Primary Motor Cortex So Elusive?. Neuron, 2019, 103, 956-958.	3.8	24
93	The explicit/implicit distinction in studies of visuomotor learning: Conceptual and methodological pitfalls. European Journal of Neuroscience, 2021, 53, 499-503.	1.2	24
94	Functional imaging of motor recovery after stroke: Remaining challenges. Current Neurology and Neuroscience Reports, 2004, 4, 42-46.	2.0	21
95	Avoiding performance and task confounds: Multimodal investigation of brain reorganization after stroke rehabilitation. Experimental Neurology, 2007, 204, 491-495.	2.0	18
96	Modeling Motor Learning Using Heteroscedastic Functional Principal Components Analysis. Journal of the American Statistical Association, 2018, 113, 1003-1015.	1.8	14
97	The intelligent reflex. Philosophical Psychology, 2019, 32, 822-830.	0.5	13
98	Recent insights into perceptual and motor skill learning. Frontiers in Human Neuroscience, 2014, 8, 683.	1.0	11
99	Motor Learning: The Great Rate Debate. Current Biology, 2014, 24, R386-R388.	1.8	9
100	The Future of Stroke Treatment. JAMA Neurology, 2014, 71, 1473.	4.5	6
101	No evidence for motor-recovery-related cortical connectivity changes after stroke using resting-state fMRI. Journal of Neurophysiology, 2022, 127, 637-650.	0.9	5
102	A Comparison of Two Methods for MRI Classification of At-Risk Tissue and Core Infarction. Frontiers in Neurology, 2014, 5, 155.	1.1	3
103	Radiation-induced intracranial vasculitis on high-resolution vessel wall MRI. Journal of Neurology, 2022, 269, 483-485.	1.8	3
104	In search of the golden skill. Progress in Brain Research, 2017, 232, 145-148.	0.9	2
105	On tests of activation map dimensionality for fMRI-based studies of learning. Frontiers in Neuroscience, 2015, 9, 85.	1.4	1
106	The Learning Salon: Toward a new participatory science. Neuron, 2021, 109, 3036-3040.	3.8	1
107	Reply: Further evidence for a non-cortical origin of mirror movements after stroke. Brain, 2019, 142, e2-e2.	3.7	0
108	The continued need for scientific monographs: an appreciation of John Rothwellâ€™s â€œControl of human voluntary movementâ€. Experimental Brain Research, 2020, 238, 1715-1717.	0.7	0

#	Article	IF	Citations
109	The Neurocene: essays at the interface of neuroscience and the world. Journal of Neurophysiology, 2021, 125, 522-522.	0.9	0