

Jörn Diedrichsen

List of Publications by Year in descending order

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Version: 2024-02-01

136
papers

16,136
citations

24978

57
h-index

20307

116
g-index

155
all docs

155
docs citations

155
times ranked

13105
citing authors

#	ARTICLE	IF	CITATIONS
1	Principles of sensorimotor learning. <i>Nature Reviews Neuroscience</i> , 2011, 12, 739-751.	4.9	1,161
2	A probabilistic MR atlas of the human cerebellum. <i>NeuroImage</i> , 2009, 46, 39-46.	2.1	1,128
3	A spatially unbiased atlas template of the human cerebellum. <i>NeuroImage</i> , 2006, 33, 127-138.	2.1	792
4	Sensory Prediction Errors Drive Cerebellum-Dependent Adaptation of Reaching. <i>Journal of Neurophysiology</i> , 2007, 98, 54-62.	0.9	749
5	Neural Correlates of Reach Errors. <i>Journal of Neuroscience</i> , 2005, 25, 9919-9931.	1.7	550
6	Disrupted Timing of Discontinuous But Not Continuous Movements by Cerebellar Lesions. <i>Science</i> , 2003, 300, 1437-1439.	6.0	427
7	The coordination of movement: optimal feedback control and beyond. <i>Trends in Cognitive Sciences</i> , 2010, 14, 31-39.	4.0	423
8	Reliability of dissimilarity measures for multi-voxel pattern analysis. <i>NeuroImage</i> , 2016, 137, 188-200.	2.1	413
9	Functional boundaries in the human cerebellum revealed by a multi-domain task battery. <i>Nature Neuroscience</i> , 2019, 22, 1371-1378.	7.1	406
10	The Cerebellum and Event Timing. <i>Annals of the New York Academy of Sciences</i> , 2002, 978, 302-317.	1.8	404
11	Ipsilateral Motor Cortex Activity During Unimanual Hand Movements Relates to Task Complexity. <i>Journal of Neurophysiology</i> , 2005, 93, 1209-1222.	0.9	395
12	Imaging the deep cerebellar nuclei: A probabilistic atlas and normalization procedure. <i>NeuroImage</i> , 2011, 54, 1786-1794.	2.1	319
13	Use-Dependent and Error-Based Learning of Motor Behaviors. <i>Journal of Neuroscience</i> , 2010, 30, 5159-5166.	1.7	296
14	The dissociable effects of punishment and reward on motor learning. <i>Nature Neuroscience</i> , 2015, 18, 597-602.	7.1	284
15	Detecting and adjusting for artifacts in fMRI time series data. <i>NeuroImage</i> , 2005, 27, 624-634.	2.1	252
16	Widespread age-related differences in the human brain microstructure revealed by quantitative magnetic resonance imaging. <i>Neurobiology of Aging</i> , 2014, 35, 1862-1872.	1.5	248
17	Representational models: A common framework for understanding encoding, pattern-component, and representational-similarity analysis. <i>PLoS Computational Biology</i> , 2017, 13, e1005508.	1.5	231
18	Surface-Based Information Mapping Reveals Crossmodal Vision-Action Representations in Human Parietal and Occipitotemporal Cortex. <i>Journal of Neurophysiology</i> , 2010, 104, 1077-1089.	0.9	222

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19	Surface-Based Display of Volume-Averaged Cerebellar Imaging Data. PLoS ONE, 2015, 10, e0133402.	1.1	221
20	Hand use predicts the structure of representations in sensorimotor cortex. Nature Neuroscience, 2015, 18, 1034-1040.	7.1	219
21	Motor skill learning between selection and execution. Trends in Cognitive Sciences, 2015, 19, 227-233.	4.0	206
22	Optimal Task-Dependent Changes of Bimanual Feedback Control and Adaptation. Current Biology, 2007, 17, 1675-1679.	1.8	205
23	Callosotomy patients exhibit temporal uncoupling during continuous bimanual movements. Nature Neuroscience, 2002, 5, 376-381.	7.1	198
24	Evolution of the cerebellar cortex: The selective expansion of prefrontal-projecting cerebellar lobules. NeuroImage, 2010, 49, 2045-2052.	2.1	190
25	Reach Adaptation: What Determines Whether We Learn an Internal Model of the Tool or Adapt the Model of Our Arm?. Journal of Neurophysiology, 2008, 100, 1455-1464.	0.9	183
26	A comparison of volume-based and surface-based multi-voxel pattern analysis. NeuroImage, 2011, 56, 593-600.	2.1	179
27	Cerebellar volume and cerebellocerebral structural covariance in schizophrenia: a multisite mega-analysis of 983 patients and 1349 healthy controls. Molecular Psychiatry, 2018, 23, 1512-1520.	4.1	175
28	Universal Transform or Multiple Functionality? Understanding the Contribution of the Human Cerebellum across Task Domains. Neuron, 2019, 102, 918-928.	3.8	169
29	Cerebellar regions involved in adaptation to force field and visuomotor perturbation. Journal of Neurophysiology, 2012, 107, 134-147.	0.9	164
30	Skill learning strengthens cortical representations of motor sequences. ELife, 2013, 2, e00801.	2.8	158
31	Two Distinct Ipsilateral Cortical Representations for Individuated Finger Movements. Cerebral Cortex, 2013, 23, 1362-1377.	1.6	155
32	Encoding of Sensory Prediction Errors in the Human Cerebellum. Journal of Neuroscience, 2012, 32, 4913-4922.	1.7	147
33	Why Does the Brain Predict Sensory Consequences of Oculomotor Commands? Optimal Integration of the Predicted and the Actual Sensory Feedback. Journal of Neuroscience, 2006, 26, 4188-4197.	1.7	140
34	Bihemispheric Transcranial Direct Current Stimulation Enhances Effector-Independent Representations of Motor Synergy and Sequence Learning. Journal of Neuroscience, 2014, 34, 1037-1050.	1.7	134
35	Cerebellar Involvement in Anticipating the Consequences of Self-Produced Actions During Bimanual Movements. Journal of Neurophysiology, 2005, 93, 801-812.	0.9	132
36	Neural substrates of visuomotor learning based on improved feedback control and prediction. NeuroImage, 2008, 39, 1383-1395.	2.1	126

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37	The human cerebellum has almost 80% of the surface area of the neocortex. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19538-19543.	3.3	117
38	Dissociating Timing and Coordination as Functions of the Cerebellum. Journal of Neuroscience, 2007, 27, 6291-6301.	1.7	111
39	Structural and functional MRI abnormalities of cerebellar cortex and nuclei in SCA3, SCA6 and Friedreich's ataxia. Brain, 2015, 138, 1182-1197.	3.7	106
40	Integration of sensory and motor representations of single fingers in the human cerebellum. Journal of Neurophysiology, 2011, 105, 3042-3053.	0.9	102
41	Transcranial magnetic stimulation of posterior parietal cortex affects decisions of hand choice. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17751-17756.	3.3	101
42	Mirror Reversal and Visual Rotation Are Learned and Consolidated via Separate Mechanisms: Recalibrating or Learning De Novo? Journal of Neuroscience, 2014, 34, 13768-13779.	1.7	99
43	Whole-Brain In-vivo Measurements of the Axonal G-Ratio in a Group of 37 Healthy Volunteers. Frontiers in Neuroscience, 2015, 9, 441.	1.4	97
44	Manipulating motor performance and memory through real-time fMRI neurofeedback. Biological Psychology, 2015, 108, 85-97.	1.1	97
45	Dissociating Variability and Effort as Determinants of Coordination. PLoS Computational Biology, 2009, 5, e1000345.	1.5	94
46	Separable systems for recovery of finger strength and control after stroke. Journal of Neurophysiology, 2017, 118, 1151-1163.	0.9	94
47	The Role of Human Primary Motor Cortex in the Production of Skilled Finger Sequences. Journal of Neuroscience, 2018, 38, 1430-1442.	1.7	90
48	Comparing the similarity and spatial structure of neural representations: A pattern-component model. NeuroImage, 2011, 55, 1665-1678.	2.1	87
49	Evidence for a motor and a non-motor domain in the human dentate nucleus – An fMRI study. NeuroImage, 2011, 54, 2612-2622.	2.1	87
50	Rethinking interhemispheric imbalance as a target for stroke neurorehabilitation. Annals of Neurology, 2019, 85, 502-513.	2.8	85
51	Peeling the Onion of Brain Representations. Annual Review of Neuroscience, 2019, 42, 407-432.	5.0	84
52	Human premotor areas parse sequences into their spatial and temporal features. ELife, 2014, 3, e03043.	2.8	83
53	Dissociating Task-set Selection from Task-set Inhibition in the Prefrontal Cortex. Journal of Cognitive Neuroscience, 2006, 18, 14-21.	1.1	76
54	Independent on-line control of the two hands during bimanual reaching. European Journal of Neuroscience, 2004, 19, 1643-1652.	1.2	75

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55	The Role of the Corpus Callosum in the Coupling of Bimanual Isometric Force Pulses. <i>Journal of Neurophysiology</i> , 2003, 90, 2409-2418.	0.9	73
56	Anticipatory adjustments in the unloading task: Is an efference copy necessary for learning?. <i>Experimental Brain Research</i> , 2003, 148, 272-276.	0.7	72
57	Goal-Selection and Movement-Related Conflict during Bimanual Reaching Movements. <i>Cerebral Cortex</i> , 2005, 16, 1729-1738.	1.6	72
58	Effector-Independent Motor Sequence Representations Exist in Extrinsic and Intrinsic Reference Frames. <i>Journal of Neuroscience</i> , 2014, 34, 5054-5064.	1.7	71
59	Perceptual decisions are biased by the cost to act. <i>ELife</i> , 2017, 6, .	2.8	70
60	Advances in functional imaging of the human cerebellum. <i>Current Opinion in Neurology</i> , 2010, 23, 382-387.	1.8	69
61	Cooperation Not Competition: Bihemispheric tDCS and fMRI Show Role for Ipsilateral Hemisphere in Motor Learning. <i>Journal of Neuroscience</i> , 2017, 37, 7500-7512.	1.7	66
62	The time course of spatial memory distortions. <i>Memory and Cognition</i> , 2002, 30, 718-730.	0.9	64
63	Effects of focal basal ganglia lesions on timing and force control. <i>Brain and Cognition</i> , 2005, 58, 62-74.	0.8	64
64	Rapid feedback corrections during a bimanual postural task. <i>Journal of Neurophysiology</i> , 2013, 109, 147-161.	0.9	62
65	A Dedicated Binding Mechanism for the Visual Control of Movement. <i>Current Biology</i> , 2014, 24, 780-785.	1.8	62
66	Pattern component modeling: A flexible approach for understanding the representational structure of brain activity patterns. <i>NeuroImage</i> , 2018, 180, 119-133.	2.1	62
67	Structural learning in feedforward and feedback control. <i>Journal of Neurophysiology</i> , 2012, 108, 2373-2382.	0.9	61
68	Bimanual cross-talk during reaching movements is primarily related to response selection, not the specification of motor parameters. <i>Psychological Research</i> , 2003, 67, 56-70.	1.0	59
69	A critical re-evaluation of fMRI signatures of motor sequence learning. <i>ELife</i> , 2020, 9, .	2.8	58
70	Immediate spatial distortions of pointing movements induced by visual landmarks. <i>Perception & Psychophysics</i> , 2004, 66, 89-103.	2.3	56
71	Ipsilateral finger representations in the sensorimotor cortex are driven by active movement processes, not passive sensory input. <i>Journal of Neurophysiology</i> , 2019, 121, 418-426.	0.9	55
72	Obtaining and maintaining cortical hand representation as evidenced from acquired and congenital handlessness. <i>ELife</i> , 2019, 8, .	2.8	53

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73	Obligatory Adaptation of Saccade Gains. <i>Journal of Neurophysiology</i> , 2008, 99, 1554-1558.	0.9	51
74	Bimanual interference associated with the selection of target locations.. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , 2003, 29, 64-77.	0.7	48
75	Cerebellar Cortex and Cerebellar Nuclei Are Concomitantly Activated during Eyeblink Conditioning: A 7T fMRI Study in Humans. <i>Journal of Neuroscience</i> , 2015, 35, 1228-1239.	1.7	48
76	Cortical beta oscillations are associated with motor performance following visuomotor learning. <i>NeuroImage</i> , 2019, 195, 340-353.	2.1	48
77	Evidence for a motor somatotopy in the cerebellar dentate nucleusâ€”An FMRI study in humans. <i>Human Brain Mapping</i> , 2012, 33, 2741-2749.	1.9	47
78	Evidence for a subcortical origin of mirror movements after stroke: a longitudinal study. <i>Brain</i> , 2018, 141, 837-847.	3.7	47
79	A multivariate method to determine the dimensionality of neural representation from population activity. <i>NeuroImage</i> , 2013, 76, 225-235.	2.1	45
80	Inferring brain-computational mechanisms with models of activity measurements. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2016, 371, 20160278.	1.8	45
81	Responsibility Assignment in Redundant Systems. <i>Current Biology</i> , 2010, 20, 1290-1295.	1.8	44
82	Temporal Evolution of Spatial Computations for Visuomotor Control. <i>Journal of Neuroscience</i> , 2016, 36, 2329-2341.	1.7	43
83	Integration of vision and haptics during tool use. <i>Journal of Vision</i> , 2009, 9, 3-3.	0.1	42
84	Proprioception in motor learning: lessons from a deafferented subject. <i>Experimental Brain Research</i> , 2015, 233, 2449-2459.	0.7	40
85	Motor planning brings human primary somatosensory cortex into action-specific preparatory states. <i>ELife</i> , 2022, 11, .	2.8	40
86	When Money Is Not Enough: Awareness, Success, and Variability in Motor Learning. <i>PLoS ONE</i> , 2014, 9, e86580.	1.1	39
87	Bimanual coordination as task-dependent linear control policies. <i>Human Movement Science</i> , 2009, 28, 334-347.	0.6	37
88	Active Learning: Learning a Motor Skill Without a Coach. <i>Journal of Neurophysiology</i> , 2008, 100, 879-887.	0.9	36
89	Bimanual interference associated with the selection of target locations. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , 2003, 29, 64-77.	0.7	35
90	Learning feedback and feedforward control in a mirror-reversed visual environment. <i>Journal of Neurophysiology</i> , 2015, 114, 2187-2193.	0.9	34

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91	Grip force regulates hand impedance to optimize object stability in high impact loads. <i>Neuroscience</i> , 2011, 189, 269-276.	1.1	32
92	Interaction of temporal and ordinal representations in movement sequences. <i>Journal of Neurophysiology</i> , 2013, 109, 1416-1424.	0.9	32
93	Intermanual interactions during initiation and production of rhythmic and discrete movements in individuals lacking a corpus callosum. <i>Experimental Brain Research</i> , 2007, 176, 559-574.	0.7	31
94	Spatial distortions induced by multiple visual landmarks: How local distortions combine to produce complex distortion patterns. <i>Perception & Psychophysics</i> , 2003, 65, 861-873.	2.3	28
95	Movement speed is biased by prior experience. <i>Journal of Neurophysiology</i> , 2014, 111, 128-134.	0.9	28
96	Transcranial Direct Current Stimulation of Right Dorsolateral Prefrontal Cortex Does Not Affect Model-Based or Model-Free Reinforcement Learning in Humans. <i>PLoS ONE</i> , 2014, 9, e86850.	1.1	27
97	Hand Interactions in Rapid Grip Force Adjustments Are Independent of Object Dynamics. <i>Journal of Neurophysiology</i> , 2008, 100, 2738-2745.	0.9	26
98	Illusions of Force Perception: The Role of Sensori-Motor Predictions, Visual Information, and Motor Errors. <i>Journal of Neurophysiology</i> , 2007, 97, 3305-3313.	0.9	25
99	Ipsilateral corticospinal projections do not predict congenital mirror movements: A case report. <i>Neuropsychologia</i> , 2007, 45, 844-852.	0.7	25
100	Modulation of 7ÄT fMRI Signal in the Cerebellar Cortex and Nuclei During Acquisition, Extinction, and Reacquisition of Conditioned Eyeblink Responses. <i>Human Brain Mapping</i> , 2017, 38, 3957-3974.	1.9	22
101	Restricted transfer of learning between unimanual and bimanual finger sequences. <i>Journal of Neurophysiology</i> , 2017, 117, 1043-1051.	0.9	22
102	Evaluating brain parcellations using the distanceâ€controlled boundary coefficient. <i>Human Brain Mapping</i> , 2022, 43, 3706-3720.	1.9	22
103	Repetition Suppression Dissociates Spatial Frames of Reference in Human Saccade Generation. <i>Journal of Neurophysiology</i> , 2010, 104, 1239-1248.	0.9	20
104	Comparing representational geometries using whitened unbiased-distance-matrix similarity. <i>Neurons, Behavior, Data Analysis, and Theory</i> , 2021, 5, .	1.8	20
105	A 7T fMRI study of cerebellar activation in sequential finger movement tasks. <i>Experimental Brain Research</i> , 2013, 228, 243-254.	0.7	19
106	In search of the engram, 2017. <i>Current Opinion in Behavioral Sciences</i> , 2018, 20, 56-60.	2.0	18
107	The effect of instruction on motor skill learning. <i>Journal of Neurophysiology</i> , 2020, 124, 1449-1457.	0.9	18
108	Reversal of Bimanual Feedback Responses With Changes in Task Goal. <i>Journal of Neurophysiology</i> , 2009, 101, 283-288.	0.9	17

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109	Flexible Switching of Feedback Control Mechanisms Allows for Learning of Different Task Dynamics. PLoS ONE, 2013, 8, e54771.	1.1	16
110	Chronic Stroke Survivors Improve Reaching Accuracy by Reducing Movement Variability at the Trained Movement Speed. Neurorehabilitation and Neural Repair, 2017, 31, 499-508.	1.4	15
111	Malleability of the cortical hand map following a finger nerve block. Science Advances, 2022, 8, eabk2393.	4.7	15
112	Mechanisms of responsibility assignment during redundant reaching movements. Journal of Neurophysiology, 2013, 109, 2021-2028.	0.9	14
113	Binding During Sequence Learning Does Not Alter Cortical Representations of Individual Actions. Journal of Neuroscience, 2019, 39, 6968-6977.	1.7	13
114	Structure of Population Activity in Primary Motor Cortex for Single Finger Flexion and Extension. Journal of Neuroscience, 2020, 40, 9210-9223.	1.7	13
115	Illusory conjunctions are alive and well: a reply to Donk (1999). Journal of Experimental Psychology: Human Perception and Performance, 2001, 27, 538-41.	0.7	13
116	Sensory cancellation of self-movement facilitates visual motion detection. Journal of Vision, 2011, 11, 5-5.	0.1	11
117	Illusory conjunctions are alive and well: A reply to Donk (1999).. Journal of Experimental Psychology: Human Perception and Performance, 2001, 27, 538-541.	0.7	10
118	Minimizing endpoint variability through reinforcement learning during reaching movements involving shoulder, elbow and wrist. PLoS ONE, 2017, 12, e0180803.	1.1	10
119	Mapping the Integration of Sensory Information across Fingers in Human Sensorimotor Cortex. Journal of Neuroscience, 2022, 42, 5173-5185.	1.7	10
120	Stimulating News about Modular Motor Control. Neuron, 2012, 76, 1043-1045.	3.8	9
121	Processing reafferent and exafferent visual information for action and perception. Journal of Vision, 2015, 15, 11.	0.1	9
122	<i>Repetita iuvant:</i> repetition facilitates online planning of sequential movements. Journal of Neurophysiology, 2020, 123, 1727-1738.	0.9	9
123	The Planning Horizon for Movement Sequences. ENeuro, 2021, 8, ENEURO.0085-21.2021.	0.9	9
124	Motor skill learning decreases movement variability and increases planning horizon. Journal of Neurophysiology, 2022, 127, 995-1006.	0.9	9
125	Sensory information from a slipping object elicits a rapid and automatic shoulder response. Journal of Neurophysiology, 2020, 123, 1103-1112.	0.9	7
126	Reading the mind to move the body. Science, 2015, 348, 860-861.	6.0	6

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127	Decoupling between the hand territory and the default mode network after bilateral arm transplantation: four-year follow-up case study. <i>Brain Imaging and Behavior</i> , 2018, 12, 296-302.	1.1	6
128	Combining Repetition Suppression and Pattern Analysis Provides New Insights into the Role of M1 and Parietal Areas in Skilled Sequential Actions. <i>Journal of Neuroscience</i> , 2021, 41, 7649-7661.	1.7	6
129	Comparing Continuous and Discrete Movements with fMRI. <i>Annals of the New York Academy of Sciences</i> , 2002, 978, 509-510.	1.8	5
130	No evidence for motor-recovery-related cortical connectivity changes after stroke using resting-state fMRI. <i>Journal of Neurophysiology</i> , 2022, 127, 637-650.	0.9	5
131	Hugo Liepmann revisited, this time with numbers. <i>Journal of Neurophysiology</i> , 2004, 91, 2934-2935.	0.9	4
132	Does the Cerebellum Preferentially Control Discrete and Not Continuous Movements?. <i>Annals of the New York Academy of Sciences</i> , 2002, 978, 542-544.	1.8	2
133	Motor Control: From Joints to Objects and Back. <i>Current Biology</i> , 2008, 18, R532-R533.	1.8	2
134	Gaze control during reaching is flexibly modulated to optimize task outcome. <i>Journal of Neurophysiology</i> , 2021, 126, 816-826.	0.9	1
135	Factors governing the assignment of visual consequence to the corresponding action. <i>Journal of Neurophysiology</i> , 2022, 127, 756-766.	0.9	1
136	The role of feedback in the production of skilled finger sequences. <i>Journal of Neurophysiology</i> , 2022, 127, 829-839.	0.9	1