

J Randall Flanagan

List of Publications by Year in descending order

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107
papers

12,887
citations

38660

50
h-index

27345

106
g-index

124
all docs

124
docs citations

124
times ranked

7766
citing authors

#	ARTICLE	IF	CITATIONS
1	Coding and use of tactile signals from the fingertips in object manipulation tasks. <i>Nature Reviews Neuroscience</i> , 2009, 10, 345-359.	4.9	1,519
2	Principles of sensorimotor learning. <i>Nature Reviews Neuroscience</i> , 2011, 12, 739-751.	4.9	1,161
3	Eye-Hand Coordination in Object Manipulation. <i>Journal of Neuroscience</i> , 2001, 21, 6917-6932.	1.7	724
4	Perspectives and problems in motor learning. <i>Trends in Cognitive Sciences</i> , 2001, 5, 487-494.	4.0	667
5	The Role of Internal Models in Motion Planning and Control: Evidence from Grip Force Adjustments during Movements of Hand-Held Loads. <i>Journal of Neuroscience</i> , 1997, 17, 1519-1528.	1.7	607
6	Action plans used in action observation. <i>Nature</i> , 2003, 424, 769-771.	13.7	603
7	Independence of perceptual and sensorimotor predictions in the size-weight illusion. <i>Nature Neuroscience</i> , 2000, 3, 737-741.	7.1	449
8	Control strategies in object manipulation tasks. <i>Current Opinion in Neurobiology</i> , 2006, 16, 650-659.	2.0	381
9	Prediction Precedes Control in Motor Learning. <i>Current Biology</i> , 2003, 13, 146-150.	1.8	375
10	Modulation of grip force with load force during point-to-point arm movements. <i>Experimental Brain Research</i> , 1993, 95, 131-43.	0.7	349
11	Failure to Consolidate the Consolidation Theory of Learning for Sensorimotor Adaptation Tasks. <i>Journal of Neuroscience</i> , 2004, 24, 8662-8671.	1.7	232
12	Eye-Hand Coordination during Learning of a Novel Visuomotor Task. <i>Journal of Neuroscience</i> , 2005, 25, 8833-8842.	1.7	230
13	Control of Trajectory Modifications in Target-Directed Reaching. <i>Journal of Motor Behavior</i> , 1993, 25, 140-152.	0.5	211
14	Perception of the Consequences of Self-Action Is Temporally Tuned and Event Driven. <i>Current Biology</i> , 2005, 15, 1125-1128.	1.8	193
15	Decision-making in sensorimotor control. <i>Nature Reviews Neuroscience</i> , 2018, 19, 519-534.	4.9	183
16	Kinematics and Dynamics Are Not Represented Independently in Motor Working Memory: Evidence from an Interference Study. <i>Journal of Neuroscience</i> , 2002, 22, 1108-1113.	1.7	180
17	Attenuation of Self-Generated Tactile Sensations Is Predictive, not Postdictive. <i>PLoS Biology</i> , 2006, 4, e28.	2.6	170
18	Experience Can Change Distinct Size-Weight Priors Engaged in Lifting Objects and Judging their Weights. <i>Current Biology</i> , 2008, 18, 1742-1747.	1.8	160

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19	Composition and Decomposition of Internal Models in Motor Learning under Altered Kinematic and Dynamic Environments. <i>Journal of Neuroscience</i> , 1999, 19, RC34-RC34.	1.7	158
20	Relation between reaction time and reach errors during visuomotor adaptation. <i>Behavioural Brain Research</i> , 2011, 219, 8-14.	1.2	155
21	Where One Hand Meets the Other: Limb-Specific and Action-Dependent Movement Plans Decoded from Preparatory Signals in Single Human Frontoparietal Brain Areas. <i>Journal of Neuroscience</i> , 2013, 33, 1991-2008.	1.7	144
22	Tangential Torque Effects on the Control of Grip Forces When Holding Objects With a Precision Grip. <i>Journal of Neurophysiology</i> , 1997, 78, 1619-1630.	0.9	142
23	Control of Grasp Stability in Humans Under Different Frictional Conditions During Multidigit Manipulation. <i>Journal of Neurophysiology</i> , 1999, 82, 2393-2405.	0.9	137
24	Control of Fingertip Forces in Multidigit Manipulation. <i>Journal of Neurophysiology</i> , 1999, 81, 1706-1717.	0.9	136
25	Sensorimotor prediction and memory in object manipulation.. <i>Canadian Journal of Experimental Psychology</i> , 2001, 55, 87-95.	0.7	132
26	Learning and recall of incremental kinematic and dynamic sensorimotor transformations. <i>Experimental Brain Research</i> , 2005, 164, 250-259.	0.7	123
27	Representation of Object Weight in Human Ventral Visual Cortex. <i>Current Biology</i> , 2014, 24, 1866-1873.	1.8	102
28	Parallel specification of competing sensorimotor control policies for alternative action options. <i>Nature Neuroscience</i> , 2016, 19, 320-326.	7.1	102
29	The influence of visual illusions on grasp position. <i>Experimental Brain Research</i> , 1999, 125, 109-114.	0.7	98
30	Visuomotor rotations of varying size and direction compete for a single internal model in a motor working memory.. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , 2002, 28, 447-457.	0.7	96
31	Stimulus-locked responses on human arm muscles reveal a rapid neural pathway linking visual input to arm motor output. <i>European Journal of Neuroscience</i> , 2010, 32, 1049-1057.	1.2	96
32	The Inertial Anisotropy of the Arm Is Accurately Predicted during Movement Planning. <i>Journal of Neuroscience</i> , 2001, 21, 1361-1369.	1.7	95
33	Material evidence: interaction of well-learned priors and sensorimotor memory when lifting objects. <i>Journal of Neurophysiology</i> , 2012, 108, 1262-1269.	0.9	95
34	Motor learning. <i>Current Biology</i> , 2010, 20, R467-R472.	1.8	94
35	Distinct and distributed functional connectivity patterns across cortex reflect the domain-specific constraints of object, face, scene, body, and tool category-selective modules in the ventral visual pathway. <i>NeuroImage</i> , 2014, 96, 216-236.	2.1	88
36	Computations underlying sensorimotor learning. <i>Current Opinion in Neurobiology</i> , 2016, 37, 7-11.	2.0	86

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37	Effects of surface texture on weight perception when lifting objects with a precision grip. <i>Perception & Psychophysics</i> , 1995, 57, 282-290.	2.3	84
38	Fast But Fleeting: Adaptive Motor Learning Processes Associated with Aging and Cognitive Decline. <i>Journal of Neuroscience</i> , 2014, 34, 13411-13421.	1.7	84
39	Eye Movements When Observing Predictable and Unpredictable Actions. <i>Journal of Neurophysiology</i> , 2006, 96, 1358-1369.	0.9	76
40	Motor learning of novel dynamics is not represented in a single global coordinate system: evaluation of mixed coordinate representations and local learning. <i>Journal of Neurophysiology</i> , 2014, 111, 1165-1182.	0.9	74
41	Visuomotor rotations of varying size and direction compete for a single internal model in motor working memory. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , 2002, 28, 447-57.	0.7	74
42	Anticipatory postural adjustments in stance and grip. <i>Experimental Brain Research</i> , 1997, 116, 122-130.	0.7	73
43	Eye-hand coordination in a sequential target contact task. <i>Experimental Brain Research</i> , 2009, 195, 273-283.	0.7	71
44	Action plan co-optimization reveals the parallel encoding of competing reach movements. <i>Nature Communications</i> , 2015, 6, 7428.	5.8	67
45	Multiple Grasp-Specific Representations of Tool Dynamics Mediate Skillful Manipulation. <i>Current Biology</i> , 2010, 20, 618-623.	1.8	65
46	Activity patterns in the category-selective occipitotemporal cortex predict upcoming motor actions. <i>European Journal of Neuroscience</i> , 2013, 38, 2408-2424.	1.2	65
47	A Rapid Tactile-Motor Reflex Automatically Guides Reaching toward Handheld Objects. <i>Current Biology</i> , 2016, 26, 788-792.	1.8	65
48	Task-Specific Internal Models for Kinematic Transformations. <i>Journal of Neurophysiology</i> , 2003, 90, 578-585.	0.9	64
49	Neural Correlates of Internal-Model Loading. <i>Current Biology</i> , 2006, 16, 2440-2445.	1.8	63
50	Coming to grips with weight perception: Effects of grasp configuration on perceived heaviness. <i>Perception & Psychophysics</i> , 2000, 62, 1204-1219.	2.3	62
51	Effects of surface texture and grip force on the discrimination of hand-held loads. <i>Perception & Psychophysics</i> , 1997, 59, 111-118.	2.3	57
52	Flexible Representations of Dynamics Are Used in Object Manipulation. <i>Current Biology</i> , 2008, 18, 763-768.	1.8	56
53	Planning Ahead: Object-Directed Sequential Actions Decoded from Human Frontoparietal and Occipitotemporal Networks. <i>Cerebral Cortex</i> , 2015, 26, bhu302.	1.6	51
54	Functional subdivisions of medial parieto-occipital cortex in humans and nonhuman primates using resting-state fMRI. <i>NeuroImage</i> , 2015, 116, 10-29.	2.1	48

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55	Using gaze behavior to parcellate the explicit and implicit contributions to visuomotor learning. <i>Journal of Neurophysiology</i> , 2018, 120, 1602-1615.	0.9	48
56	Fast and accurate edge orientation processing during object manipulation. <i>ELife</i> , 2018, 7, .	2.8	48
57	Multiple motor memories are learned to control different points on a tool. <i>Nature Human Behaviour</i> , 2018, 2, 300-311.	6.2	47
58	The intermanual transfer of anticipatory force control in precision grip lifting is not influenced by the perception of weight. <i>Experimental Brain Research</i> , 2008, 185, 319-329.	0.7	45
59	Motor, not visual, encoding of potential reach targets. <i>Current Biology</i> , 2014, 24, R953-R954.	1.8	45
60	Selective Modulation of Early Visual Cortical Activity by Movement Intention. <i>Cerebral Cortex</i> , 2019, 29, 4662-4678.	1.6	43
61	Interference between velocity-dependent and position-dependent force-fields indicates that tasks depending on different kinematic parameters compete for motor working memory. <i>Experimental Brain Research</i> , 2005, 163, 400-405.	0.7	38
62	Context-Dependent Decay of Motor Memories during Skill Acquisition. <i>Current Biology</i> , 2013, 23, 1107-1112.	1.8	36
63	Rapid Automatic Motor Encoding of Competing Reach Options. <i>Cell Reports</i> , 2017, 18, 1619-1626.	2.9	36
64	Functional Use of Eye Movements for an Acting System. <i>Trends in Cognitive Sciences</i> , 2021, 25, 252-263.	4.0	36
65	A Single-Rate Context-Dependent Learning Process Underlies Rapid Adaptation to Familiar Object Dynamics. <i>PLoS Computational Biology</i> , 2011, 7, e1002196.	1.5	35
66	Simultaneous encoding of the direction and orientation of potential targets during reach planning: evidence of multiple competing reach plans. <i>Journal of Neurophysiology</i> , 2013, 110, 807-816.	0.9	35
67	The sequential encoding of competing action goals involves dynamic restructuring of motor plans in working memory. <i>Journal of Neurophysiology</i> , 2016, 115, 3113-3122.	0.9	34
68	Human Somatosensory Cortex Is Modulated during Motor Planning. <i>Journal of Neuroscience</i> , 2021, 41, 5909-5922.	1.7	34
69	Separate Contributions of Kinematic and Kinetic Errors to Trajectory and Grip Force Adaptation When Transporting Novel Hand-Held Loads. <i>Journal of Neuroscience</i> , 2013, 33, 2229-2236.	1.7	33
70	Gaze Behavior When Reaching to Remembered Targets. <i>Journal of Neurophysiology</i> , 2008, 100, 1533-1543.	0.9	32
71	Different gaze strategies during eye versus hand tracking of a moving target. <i>Scientific Reports</i> , 2018, 8, 10059.	1.6	32
72	Sensorimotor memory of weight asymmetry in object manipulation. <i>Experimental Brain Research</i> , 2007, 184, 127-133.	0.7	31

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73	The role of haptic feedback when manipulating nonrigid objects. <i>Journal of Neurophysiology</i> , 2012, 107, 433-441.	0.9	29
74	Rapid target foraging with reach or gaze: The hand looks further ahead than the eye. <i>PLoS Computational Biology</i> , 2017, 13, e1005504.	1.5	28
75	Rapid Visuomotor Corrective Responses during Transport of Hand-Held Objects Incorporate Novel Object Dynamics. <i>Journal of Neuroscience</i> , 2015, 35, 10572-10580.	1.7	27
76	Feeling bumps and holes. <i>Nature</i> , 2001, 412, 389-391.	13.7	26
77	Engagement of Gaze in Capturing Targets for Future Sequential Manual Actions. <i>Journal of Neurophysiology</i> , 2002, 88, 1716-1725.	0.9	25
78	Adaptation of lift forces in object manipulation through action observation. <i>Experimental Brain Research</i> , 2013, 228, 221-234.	0.7	24
79	Gaze behavior when learning to link sequential action phases in a manual task. <i>Journal of Vision</i> , 2014, 14, 3-3.	0.1	22
80	Integrating actions into object location memory: A benefit for active versus passive reaching movements. <i>Behavioural Brain Research</i> , 2015, 279, 234-239.	1.2	22
81	Grip force when reaching with target uncertainty provides evidence for motor optimization over averaging. <i>Scientific Reports</i> , 2017, 7, 11703.	1.6	21
82	Common Encoding of Novel Dynamic Loads Applied to the Hand and Arm. <i>Journal of Neuroscience</i> , 2005, 25, 5425-5429.	1.7	20
83	Q&A: Robotics as a tool to understand the brain. <i>BMC Biology</i> , 2010, 8, 92.	1.7	19
84	The role of observers' gaze behaviour when watching object manipulation tasks: predicting and evaluating the consequences of action. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013, 368, 20130063.	1.8	19
85	Control and Prediction Components of Movement Planning in Stuttering Versus Nonstuttering Adults. <i>Journal of Speech, Language, and Hearing Research</i> , 2014, 57, 2131-2141.	0.7	18
86	Grip force adjustments during rapid hand movements suggest that detailed movement kinematics are predicted. <i>Behavioral and Brain Sciences</i> , 1995, 18, 753-754.	0.4	17
87	Visuomotor feedback gains are modulated by gaze position. <i>Journal of Neurophysiology</i> , 2018, 120, 2522-2531.	0.9	17
88	Conceptual change and preschoolers' theory of mind: Evidence from load force adaptation. <i>Neural Networks</i> , 2010, 23, 1043-1050.	3.3	14
89	Skill learning involves optimizing the linking of action phases. <i>Journal of Neurophysiology</i> , 2013, 110, 1291-1300.	0.9	14
90	Motor Planning Modulates Neural Activity Patterns in Early Human Auditory Cortex. <i>Cerebral Cortex</i> , 2021, 31, 2952-2967.	1.6	14

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91	Parallel Specification of Visuomotor Feedback Gains during Bimanual Reaching to Independent Goals. <i>ENeuro</i> , 2017, 4, ENEURO.0026-17.2017.	0.9	14
92	Hand-held tools with complex kinematics are efficiently incorporated into movement planning and online control. <i>Journal of Neurophysiology</i> , 2012, 108, 1954-1964.	0.9	12
93	An error-tuned model for sensorimotor learning. <i>PLoS Computational Biology</i> , 2017, 13, e1005883.	1.5	11
94	Motor memories of object dynamics are categorically organized. <i>ELife</i> , 2021, 10, .	2.8	11
95	Neural excursions from manifold structure explain patterns of learning during human sensorimotor adaptation. <i>ELife</i> , 2022, 11, .	2.8	11
96	Representing multiple object weights: competing priors and sensorimotor memories. <i>Journal of Neurophysiology</i> , 2016, 116, 1615-1625.	0.9	10
97	Human decision making anticipates future performance in motor learning. <i>PLoS Computational Biology</i> , 2020, 16, e1007632.	1.5	10
98	Distinct contributions of explicit and implicit memory processes to weight prediction when lifting objects and judging their weights: an aging study. <i>Journal of Neurophysiology</i> , 2016, 116, 1128-1136.	0.9	9
99	Linking actions and objects: Context-specific learning of novel weight priors. <i>Cognition</i> , 2017, 163, 121-127.	1.1	9
100	Correcting for natural visuo-proprioceptive matching errors based on reward as opposed to error feedback does not lead to higher retention. <i>Experimental Brain Research</i> , 2019, 237, 735-741.	0.7	9
101	Human variation in error-based and reinforcement motor learning is associated with entorhinal volume. <i>Cerebral Cortex</i> , 2022, 32, 3423-3440.	1.6	7
102	Eye Tracking of Occluded Self-Moved Targets: Role of Haptic Feedback and Hand-Target Dynamics. <i>ENeuro</i> , 2017, 4, ENEURO.0101-17.2017.	0.9	6
103	Gaze behavior during visuomotor tracking with complex hand-cursor dynamics. <i>Journal of Vision</i> , 2019, 19, 24.	0.1	4
104	Separate motor memories are formed when controlling different implicitly specified locations on a tool. <i>Journal of Neurophysiology</i> , 2019, 121, 1342-1351.	0.9	4
105	Motor memories in manipulation tasks are linked to contact goals between objects. <i>Journal of Neurophysiology</i> , 2020, 124, 994-1004.	0.9	4
106	Eye-hand coordination during visuomotor tracking under complex hand-cursor mapping. <i>Journal of Vision</i> , 2017, 17, 278.	0.1	0
107	Reach adaption to a visuomotor gain with terminal error feedback involves reinforcement learning. <i>PLoS ONE</i> , 2022, 17, e0269297.	1.1	0