J Randall Flanagan

List of Publications by Year
in descending order

107 papers	12,887 citations	38742 50 h-index	27406 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. Nature Reviews Neuroscience, 2009, 10, 345-359.	10.2	1,519
2	Principles of sensorimotor learning. Nature Reviews Neuroscience, 2011, 12, 739-751.	10.2	1,161
3	Eyeâ€“Hand Coordination in Object Manipulation. Journal of Neuroscience, 2001, 21, 6917-6932.	3.6	724
4	Perspectives and problems in motor learning. Trends in Cognitive Sciences, 2001, 5, 487-494.	7.8	667
5	The Role of Internal Models in Motion Planning and Control: Evidence from Grip Force Adjustments during Movements of Hand-Held Loads. Journal of Neuroscience, 1997, 17, 1519-1528.	3.6	607
6	Action plans used in action observation. Nature, 2003, 424, 769-771.	27.8	603
7	Independence of perceptual and sensorimotor predictions in the sizeâ€“weight illusion. Nature Neuroscience, 2000, 3, 737-741.	14.8	449
8	Control strategies in object manipulation tasks. Current Opinion in Neurobiology, 2006, 16, 650-659.	4.2	381
9	Prediction Precedes Control in Motor Learning. Current Biology, 2003, 13, 146-150.	3.9	375
10	Modulation of grip force with load force during point-to-point arm movements. Experimental Brain Research, 1993, 95, 131-43.	1.5	349
11	Failure to Consolidate the Consolidation Theory of Learning for Sensorimotor Adaptation Tasks. Journal of Neuroscience, 2004, 24, 8662-8671.	3.6	232
12	Eye-Hand Coordination during Learning of a Novel Visuomotor Task. Journal of Neuroscience, 2005, 25, 8833-8842.	3.6	230
13	Control of Trajectory Modifications in Target-Directed Reaching. Journal of Motor Behavior, 1993, 25, 140-152.	0.9	211
14	Perception of the Consequences of Self-Action Is Temporally Tuned and Event Driven. Current Biology, 2005, 15, 1125-1128.	3.9	193
15	Decision-making in sensorimotor control. Nature Reviews Neuroscience, 2018, 19, 519-534.	10.2	183
16	Kinematics and Dynamics Are Not Represented Independently in Motor Working Memory: Evidence from an Interference Study. Journal of Neuroscience, 2002, 22, 1108-1113.	3.6	180
17	Attenuation of Self-Generated Tactile Sensations Is Predictive, not Postdictive. PLoS Biology, 2006, 4, e28.	5.6	170
18	Experience Can Change Distinct Size-Weight Priors Engaged in Lifting Objects and Judging their Weights. Current Biology, 2008, 18, 1742-1747.	3.9	160

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19	Composition and Decomposition of Internal Models in Motor Learning under Altered Kinematic and Dynamic Environments. Journal of Neuroscience, 1999, 19, RC34-RC34.	3.6	158
20	Relation between reaction time and reach errors during visuomotor adaptation. Behavioural Brain Research, 2011, 219, 8-14.	2.2	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. Journal of Neuroscience, 2013, 33, 1991-2008.	3.6	144
22	Tangential Torque Effects on the Control of Grip Forces When Holding Objects With a Precision Grip. Journal of Neurophysiology, 1997, 78, 1619-1630.	1.8	142
23	Control of Grasp Stability in Humans Under Different Frictional Conditions During Multidigit Manipulation. Journal of Neurophysiology, 1999, 82, 2393-2405.	1.8	137
24	Control of Fingertip Forces in Multidigit Manipulation. Journal of Neurophysiology, 1999, 81, 1706-1717.	1.8	136
25	Sensorimotor prediction and memory in object manipulation.. Canadian Journal of Experimental Psychology, 2001, 55, 87-95.	0.8	132
26	Learning and recall of incremental kinematic and dynamic sensorimotor transformations. Experimental Brain Research, 2005, 164, 250-259.	1.5	123
27	Representation of Object Weight in Human Ventral Visual Cortex. Current Biology, 2014, 24, 1866-1873.	3.9	102
28	Parallel specification of competing sensorimotor control policies for alternative action options. Nature Neuroscience, 2016, 19, 320-326.	14.8	102
29	The influence of visual illusions on grasp position. Experimental Brain Research, 1999, 125, 109-114.	1.5	98
30	Visuomotor rotations of varying size and direction compete for a single internal model in a motor working memory.. Journal of Experimental Psychology: Human Perception and Performance, 2002, 28, 447-457.	0.9	96
31	Stimulusâ€locked responses on human arm muscles reveal a rapid neural pathway linking visual input to arm motor output. European Journal of Neuroscience, 2010, 32, 1049-1057.	2.6	96
32	The Inertial Anisotropy of the Arm Is Accurately Predicted during Movement Planning. Journal of Neuroscience, 2001, 21, 1361-1369.	3.6	95
33	Material evidence: interaction of well-learned priors and sensorimotor memory when lifting objects. Journal of Neurophysiology, 2012, 108, 1262-1269.	1.8	95
34	Motor learning. Current Biology, 2010, 20, R467-R472.	3.9	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. NeuroImage, 2014, 96, 216-236.	4.2	88
36	Computations underlying sensorimotor learning. Current Opinion in Neurobiology, 2016, 37, 7-11.	4.2	86

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37	Effects of surface texture on weight perception when lifting objects with a precision grip. Perception & Psychophysics, 1995, 57, 282-290.	2.3	84
38	Fast But Fleeting: Adaptive Motor Learning Processes Associated with Aging and Cognitive Decline. Journal of Neuroscience, 2014, 34, 13411-13421.	3.6	84
39	Eye Movements When Observing Predictable and Unpredictable Actions. Journal of Neurophysiology, 2006, 96, 1358-1369.	1.8	76
40	Motor learning of novel dynamics is not represented in a single global coordinate system: evaluation of mixed coordinate representations and local learning. Journal of Neurophysiology, 2014, 111, 1165-1182.	1.8	74
41	Visuomotor rotations of varying size and direction compete for a single internal model in a motor working memory.. Journal of Experimental Psychology: Human Perception and Performance, 2002, 28, 447-457.	0.9	74
42	Anticipatory postural adjustments in stance and grip. Experimental Brain Research, 1997, 116, 122-130.	1.5	73
43	Eyeâ€"hand coordination in a sequential target contact task. Experimental Brain Research, 2009, 195, 273-283.	1.5	71
44	Action plan co-optimization reveals the parallel encoding of competing reach movements. Nature Communications, 2015, 6, 7428.	12.8	67
45	Multiple Grasp-Specific Representations of Tool Dynamics Mediate Skillful Manipulation. Current Biology, 2010, 20, 618-623.	3.9	65
46	Activity patterns in the categoryâ€selective occipitotemporal cortex predict upcoming motor actions. European Journal of Neuroscience, 2013, 38, 2408-2424.	2.6	65
47	A Rapid Tactile-Motor Reflex Automatically Guides Reaching toward Handheld Objects. Current Biology, 2016, 26, 788-792.	3.9	65
48	Task-Specific Internal Models for Kinematic Transformations. Journal of Neurophysiology, 2003, 90, 578-585.	1.8	64
49	Neural Correlates of Internal-Model Loading. Current Biology, 2006, 16, 2440-2445.	3.9	63
50	Coming to grips with weight perception: Effects of grasp configuration on perceived heaviness. Perception & Psychophysics, 2000, 62, 1204-1219.	2.3	62
51	Effects of surface texture and grip force on the discrimination of hand-held loads. Perception & Psychophysics, 1997, 59, 111-118.	2.3	57
52	Flexible Representations of Dynamics Are Used in Object Manipulation. Current Biology, 2008, 18, 763-768.	3.9	56
53	Planning Ahead: Object-Directed Sequential Actions Decoded from Human Frontoparietal and Occipitotemporal Networks. Cerebral Cortex, 2015, 26, bhu302.	2.9	51
54	Functional subdivisions of medial parieto-occipital cortex in humans and nonhuman primates using resting-state fMRI. NeuroImage, 2015, 116, 10-29.	4.2	48

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55	Using gaze behavior to parcellate the explicit and implicit contributions to visuomotor learning. Journal of Neurophysiology, 2018, 120, 1602-1615.	1.8	48
56	Fast and accurate edge orientation processing during object manipulation. ELife, 2018, 7, .	6.0	48
57	Multiple motor memories are learned to control different points on a tool. Nature Human Behaviour, 2018, 2, 300-311.	12.0	47
58	The intermanual transfer of anticipatory force control in precision grip lifting is not influenced by the perception of weight. Experimental Brain Research, 2008, 185, 319-329.	1.5	45
59	Motor, not visual, encoding of potential reach targets. Current Biology, 2014, 24, R953-R954.	3.9	45
60	Selective Modulation of Early Visual Cortical Activity by Movement Intention. Cerebral Cortex, 2019, 29, 4662-4678.	2.9	43
61	Interference between velocity-dependent and position-dependent force-fields indicates that tasks depending on different kinematic parameters compete for motor working memory. Experimental Brain Research, 2005, 163, 400-405.	1.5	38
62	Context-Dependent Decay of Motor Memories during Skill Acquisition. Current Biology, 2013, 23, 1107-1112.	3.9	36
63	Rapid Automatic Motor Encoding of Competing Reach Options. Cell Reports, 2017, 18, 1619-1626.	6.4	36
64	Functional Use of Eye Movements for an Acting System. Trends in Cognitive Sciences, 2021, 25, 252-263.	7.8	36
65	A Single-Rate Context-Dependent Learning Process Underlies Rapid Adaptation to Familiar Object Dynamics. PLoS Computational Biology, 2011, 7, e1002196.	3.2	35
66	Simultaneous encoding of the direction and orientation of potential targets during reach planning: evidence of multiple competing reach plans. Journal of Neurophysiology, 2013, 110, 807-816.	1.8	35
67	The sequential encoding of competing action goals involves dynamic restructuring of motor plans in working memory. Journal of Neurophysiology, 2016, 115, 3113-3122.	1.8	34
68	Human Somatosensory Cortex Is Modulated during Motor Planning. Journal of Neuroscience, 2021, 41, 5909-5922.	3.6	34
69	Separate Contributions of Kinematic and Kinetic Errors to Trajectory and Grip Force Adaptation When Transporting Novel Hand-Held Loads. Journal of Neuroscience, 2013, 33, 2229-2236.	3.6	33
70	Gaze Behavior When Reaching to Remembered Targets. Journal of Neurophysiology, 2008, 100, 1533-1543.	1.8	32
71	Different gaze strategies during eye versus hand tracking of a moving target. Scientific Reports, 2018, 8, 10059.	3.3	32
72	Sensorimotor memory of weight asymmetry in object manipulation. Experimental Brain Research, 2007, 184, 127-133.	1.5	31

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73	The role of haptic feedback when manipulating nonrigid objects. Journal of Neurophysiology, 2012, 107, 433-441.	1.8	29
74	Rapid target foraging with reach or gaze: The hand looks further ahead than the eye. PLoS Computational Biology, 2017, 13, e1005504.	3.2	28
75	Rapid Visuomotor Corrective Responses during Transport of Hand-Held Objects Incorporate Novel Object Dynamics. Journal of Neuroscience, 2015, 35, 10572-10580.	3.6	27
76	Feeling bumps and holes. Nature, 2001, 412, 389-391.	27.8	26
77	Engagement of Gaze in Capturing Targets for Future Sequential Manual Actions. Journal of Neurophysiology, 2002, 88, 1716-1725.	1.8	25
78	Adaptation of lift forces in object manipulation through action observation. Experimental Brain Research, 2013, 228, 221-234.	1.5	24
79	Gaze behavior when learning to link sequential action phases in a manual task. Journal of Vision, 2014, 14, 3-3.	0.3	22
80	Integrating actions into object location memory: A benefit for active versus passive reaching movements. Behavioural Brain Research, 2015, 279, 234-239.	2.2	22
81	Grip force when reaching with target uncertainty provides evidence for motor optimization over averaging. Scientific Reports, 2017, 7, 11703.	3.3	21
82	Common Encoding of Novel Dynamic Loads Applied to the Hand and Arm. Journal of Neuroscience, 2005, 25, 5425-5429.	3.6	20
83	Q&A: Robotics as a tool to understand the brain. BMC Biology, 2010, 8, 92.	3.8	19
84	The role of observers' gaze behaviour when watching object manipulation tasks: predicting and evaluating the consequences of action. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20130063.	4.0	19
85	Control and Prediction Components of Movement Planning in Stuttering Versus Nonstuttering Adults. Journal of Speech, Language, and Hearing Research, 2014, 57, 2131-2141.	1.6	18
86	Grip force adjustments during rapid hand movements suggest that detailed movement kinematics are predicted. Behavioral and Brain Sciences, 1995, 18, 753-754.	0.7	17
87	Visuomotor feedback gains are modulated by gaze position. Journal of Neurophysiology, 2018, 120, 2522-2531.	1.8	17
88	Conceptual change and preschoolersâ€™ theory of mind: Evidence from loadâ€“force adaptation. Neural Networks, 2010, 23, 1043-1050.	5.9	14
89	Skill learning involves optimizing the linking of action phases. Journal of Neurophysiology, 2013, 110, 1291-1300.	1.8	14
90	Motor Planning Modulates Neural Activity Patterns in Early Human Auditory Cortex. Cerebral Cortex, 2021, 31, 2952-2967.	2.9	14

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91	Parallel Specification of Visuomotor Feedback Gains during Bimanual Reaching to Independent Goals. ENeuro, 2017, 4, ENEURO.0026-17.2017.	1.9	14
92	Hand-held tools with complex kinematics are efficiently incorporated into movement planning and online control. Journal of Neurophysiology, 2012, 108, 1954-1964.	1.8	12
93	An error-tuned model for sensorimotor learning. PLoS Computational Biology, 2017, 13, e1005883.	3.2	11
94	Motor memories of object dynamics are categorically organized. ELife, 2021, 10, .	6.0	11
95	Neural excursions from manifold structure explain patterns of learning during human sensorimotor adaptation. ELife, 2022, 11, .	6.0	11
96	Representing multiple object weights: competing priors and sensorimotor memories. Journal of Neurophysiology, 2016, 116, 1615-1625.	1.8	10
97	Human decision making anticipates future performance in motor learning. PLoS Computational Biology, 2020, 16, e1007632.	3.2	10
98	Distinct contributions of explicit and implicit memory processes to weight prediction when lifting objects and judging their weights: an aging study. Journal of Neurophysiology, 2016, 116, 1128-1136.	1.8	9
99	Linking actions and objects: Context-specific learning of novel weight priors. Cognition, 2017, 163, 121-127.	2.2	9
100	Correcting for natural visuo-proprioceptive matching errors based on reward as opposed to error feedback does not lead to higher retention. Experimental Brain Research, 2019, 237, 735-741.	1.5	9
101	Human variation in error-based and reinforcement motor learning is associated with entorhinal volume. Cerebral Cortex, 2022, 32, 3423-3440.	2.9	7
102	Eye Tracking of Occluded Self-Moved Targets: Role of Haptic Feedback and Hand-Target Dynamics. ENeuro, 2017, 4, ENEURO.0101-17.2017.	1.9	6
103	Gaze behavior during visuomotor tracking with complex hand-cursor dynamics. Journal of Vision, 2019, 19, 24.	0.3	4
104	Separate motor memories are formed when controlling different implicitly specified locations on a tool. Journal of Neurophysiology, 2019, 121, 1342-1351.	1.8	4
105	Motor memories in manipulation tasks are linked to contact goals between objects. Journal of Neurophysiology, 2020, 124, 994-1004.	1.8	4
106	Eye-hand coordination during visuomotor tracking under complex hand-cursor mapping. Journal of Vision, 2017, 17, 278.	0.3	0
107	Reach adaption to a visuomotor gain with terminal error feedback involves reinforcement learning. PLoS ONE, 2022, 17, e0269297.	2.5	0