

Roland S Johansson

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133
papers

19,339
citations

70
h-index

139
g-index

140
ext. papers

21,304
ext. citations

4.5
avg, IF

6.7
L-index

#	Paper	IF	Citations
133	Roles of glabrous skin receptors and sensorimotor memory in automatic control of precision grip when lifting rougher or more slippery objects. <i>Experimental Brain Research</i> , 1984 , 56, 550-64	2.3	1151
132	Coding and use of tactile signals from the fingertips in object manipulation tasks. <i>Nature Reviews Neuroscience</i> , 2009 , 10, 345-59	13.5	1079
131	Tactile sensibility in the human hand: relative and absolute densities of four types of mechanoreceptive units in glabrous skin. <i>Journal of Physiology</i> , 1979 , 286, 283-300	3.9	805
130	Factors influencing the force control during precision grip. <i>Experimental Brain Research</i> , 1984 , 53, 277-84	2.3	697
129	Eye-hand coordination in object manipulation. <i>Journal of Neuroscience</i> , 2001 , 21, 6917-32	6.6	599
128	Signals in tactile afferents from the fingers eliciting adaptive motor responses during precision grip. <i>Experimental Brain Research</i> , 1987 , 66, 141-54	2.3	544
127	Action plans used in action observation. <i>Nature</i> , 2003 , 424, 769-71	50.4	516
126	Coordinated isometric muscle commands adequately and erroneously programmed for the weight during lifting task with precision grip. <i>Experimental Brain Research</i> , 1988 , 71, 59-71	2.3	486
125	Cortical activity in precision- versus power-grip tasks: an fMRI study. <i>Journal of Neurophysiology</i> , 2000 , 83, 528-36	3.2	483
124	Tactile sensory coding in the glabrous skin of the human hand. <i>Trends in Neurosciences</i> , 1983 , 6, 27-32	13.3	423
123	Contractile speed and EMG changes during fatigue of sustained maximal voluntary contractions. <i>Journal of Neurophysiology</i> , 1983 , 50, 313-24	3.2	416
122	First spikes in ensembles of human tactile afferents code complex spatial fingertip events. <i>Nature Neuroscience</i> , 2004 , 7, 170-7	25.5	413
121	Reflex origin for the slowing of motoneurone firing rates in fatigue of human voluntary contractions. <i>Journal of Physiology</i> , 1986 , 379, 451-9	3.9	407
120	Memory representations underlying motor commands used during manipulation of common and novel objects. <i>Journal of Neurophysiology</i> , 1993 , 69, 1789-96	3.2	345
119	Responses of mechanoreceptive afferent units in the glabrous skin of the human hand to sinusoidal skin displacements. <i>Brain Research</i> , 1982 , 244, 17-25	3.7	327
118	Changes in motoneurone firing rates during sustained maximal voluntary contractions. <i>Journal of Physiology</i> , 1983 , 340, 335-46	3.9	323
117	Sensory-motor coordination during grasping and manipulative actions. <i>Current Opinion in Neurobiology</i> , 1992 , 2, 815-23	7.6	321

116	Control strategies in object manipulation tasks. <i>Current Opinion in Neurobiology</i> , 2006 , 16, 650-9	7.6	317
115	Responses in glabrous skin mechanoreceptors during precision grip in humans. <i>Experimental Brain Research</i> , 1987 , 66, 128-40	2.3	316
114	Prediction precedes control in motor learning. <i>Current Biology</i> , 2003 , 13, 146-50	6.3	311
113	Motor-unit discharge rates in maximal voluntary contractions of three human muscles. <i>Journal of Neurophysiology</i> , 1983 , 50, 1380-92	3.2	299
112	Visual size cues in the programming of manipulative forces during precision grip. <i>Experimental Brain Research</i> , 1991 , 83, 477-82	2.3	298
111	Tactile sensibility in the human hand: receptive field characteristics of mechanoreceptive units in the glabrous skin area. <i>Journal of Physiology</i> , 1978 , 281, 101-25	3.9	290
110	Programmed and triggered actions to rapid load changes during precision grip. <i>Experimental Brain Research</i> , 1988 , 71, 72-86	2.3	289
109	Biomimetic Tactile Sensor Array. <i>Advanced Robotics</i> , 2008 , 22, 829-849	1.7	244
108	Development of human precision grip. I: Basic coordination of force. <i>Experimental Brain Research</i> , 1991 , 85, 451-7	2.3	243
107	Encoding of direction of fingertip forces by human tactile afferents. <i>Journal of Neuroscience</i> , 2001 , 21, 8222-37	6.6	242
106	Visual and somatosensory information about object shape control manipulative fingertip forces. <i>Journal of Neuroscience</i> , 1997 , 17, 4486-99	6.6	219
105	Detection of tactile stimuli. Thresholds of afferent units related to psychophysical thresholds in the human hand. <i>Journal of Physiology</i> , 1979 , 297, 405-22	3.9	212
104	Corticospinal control during reach, grasp, and precision lift in man. <i>Journal of Neuroscience</i> , 1995 , 15, 6145-56	6.6	191
103	Eye-hand coordination during learning of a novel visuomotor task. <i>Journal of Neuroscience</i> , 2005 , 25, 8833-42	6.6	190
102	Mechanoreceptor activity from the human face and oral mucosa. <i>Experimental Brain Research</i> , 1988 , 72, 204-8	2.3	181
101	Independent control of human finger-tip forces at individual digits during precision lifting. <i>Journal of Physiology</i> , 1992 , 450, 547-64	3.9	169
100	Somatosensory control of precision grip during unpredictable pulling loads. I. Changes in load force amplitude. <i>Experimental Brain Research</i> , 1992 , 89, 181-91	2.3	163
99	Somatosensory control of precision grip during unpredictable pulling loads. III. Impairments during digital anesthesia. <i>Experimental Brain Research</i> , 1992 , 89, 204-13	2.3	163

98	Grasp stability during manipulative actions. <i>Canadian Journal of Physiology and Pharmacology</i> , 1994 , 72, 511-24	2.4	157
97	Thresholds of mechanosensitive afferents in the human hand as measured with von Frey hairs. <i>Brain Research</i> , 1980 , 184, 343-51	3.7	153
96	Spatial properties of the population of mechanoreceptive units in the glabrous skin of the human hand. <i>Brain Research</i> , 1980 , 184, 353-66	3.7	152
95	Responses of human mechanoreceptive afferents to embossed dot arrays scanned across fingerpad skin. <i>Journal of Neuroscience</i> , 1992 , 12, 827-39	6.6	143
94	Development of human precision grip. II. Anticipatory control of isometric forces targeted for object weight. <i>Experimental Brain Research</i> , 1992 , 90, 393-8	2.3	133
93	Somatosensory control of precision grip during unpredictable pulling loads. II. Changes in load force rate. <i>Experimental Brain Research</i> , 1992 , 89, 192-203	2.3	133
92	Edge-orientation processing in first-order tactile neurons. <i>Nature Neuroscience</i> , 2014 , 17, 1404-9	25.5	126
91	Tangential torque effects on the control of grip forces when holding objects with a precision grip. <i>Journal of Neurophysiology</i> , 1997 , 78, 1619-30	3.2	125
90	Evidence for the involvement of the posterior parietal cortex in coordination of fingertip forces for grasp stability in manipulation. <i>Journal of Neurophysiology</i> , 2003 , 90, 2978-86	3.2	124
89	Experience can change distinct size-weight priors engaged in lifting objects and judging their weights. <i>Current Biology</i> , 2008 , 18, 1742-7	6.3	123
88	Control of grasp stability in humans under different frictional conditions during multidigit manipulation. <i>Journal of Neurophysiology</i> , 1999 , 82, 2393-405	3.2	120
87	Control of fingertip forces in multidigit manipulation. <i>Journal of Neurophysiology</i> , 1999 , 81, 1706-17	3.2	120
86	Orofacial mechanoreceptors in humans: encoding characteristics and responses during natural orofacial behaviors. <i>Behavioural Brain Research</i> , 2002 , 135, 27-33	3.4	106
85	Control of grip force during restraint of an object held between finger and thumb: responses of cutaneous afferents from the digits. <i>Experimental Brain Research</i> , 1996 , 108, 155-71	2.3	106
84	Representation of braille characters in human nerve fibres. <i>Experimental Brain Research</i> , 1990 , 81, 589-92	2.3	106
83	Encoding of tooth loads by human periodontal afferents and their role in jaw motor control. <i>Progress in Neurobiology</i> , 1996 , 49, 267-84	10.9	105
82	Integration of sensory information during the programming of precision grip: comments on the contributions of size cues. <i>Experimental Brain Research</i> , 1991 , 85, 226-9	2.3	100
81	Sensorimotor prediction and memory in object manipulation. <i>Canadian Journal of Experimental Psychology</i> , 2001 , 55, 87-95	0.8	98

80	Mechanoreceptive afferent activity in the infraorbital nerve in man during speech and chewing movements. <i>Experimental Brain Research</i> , 1988 , 72, 209-14	2.3	98
79	Force-frequency relationships of human thenar motor units. <i>Journal of Neurophysiology</i> , 1991 , 65, 1509-16	3.6	96
78	Twitch properties of human thenar motor units measured in response to intraneural motor-axon stimulation. <i>Journal of Neurophysiology</i> , 1990 , 64, 1339-46	3.2	94
77	Sensitivity to edges of mechanoreceptive afferent units innervating the glabrous skin of the human head. <i>Brain Research</i> , 1982 , 244, 27-35	3.7	93
76	Control of grip force during restraint of an object held between finger and thumb: responses of muscle and joint afferents from the digits. <i>Experimental Brain Research</i> , 1996 , 108, 172-84	2.3	92
75	The integration of haptically acquired size information in the programming of precision grip. <i>Experimental Brain Research</i> , 1991 , 83, 483-8	2.3	92
74	Influence of object shape on responses of human tactile afferents under conditions characteristic of manipulation. <i>European Journal of Neuroscience</i> , 2003 , 18, 164-76	3.5	91
73	Visual and tactile information about object-curvature control fingertip forces and grasp kinematics in human dexterous manipulation. <i>Journal of Neurophysiology</i> , 2000 , 84, 2984-97	3.2	91
72	Friction at the digit-object interface scales the sensorimotor transformation for grip responses to pulling loads. <i>Experimental Brain Research</i> , 1993 , 95, 523-32	2.3	87
71	Control of grip force when tilting objects: effect of curvature of grasped surfaces and applied tangential torque. <i>Journal of Neuroscience</i> , 1998 , 18, 10724-34	6.6	83
70	Directional sensitivity of human periodontal mechanoreceptive afferents to forces applied to the teeth. <i>Journal of Physiology</i> , 1992 , 447, 373-89	3.9	83
69	Sensory input and control of grip. <i>Novartis Foundation Symposium</i> , 1998 , 218, 45-59; discussion 59-63		80
68	Nondigital afferent input in reactive control of fingertip forces during precision grip. <i>Experimental Brain Research</i> , 1996 , 110, 131-41	2.3	76
67	Development of human precision grip. IV. Tactile adaptation of isometric finger forces to the frictional condition. <i>Experimental Brain Research</i> , 1995 , 104, 323-30	2.3	75
66	Material evidence: interaction of well-learned priors and sensorimotor memory when lifting objects. <i>Journal of Neurophysiology</i> , 2012 , 108, 1262-9	3.2	74
65	Attempts to physiologically classify human thenar motor units. <i>Journal of Neurophysiology</i> , 1991 , 65, 1501-8	3.2	72
64	Development of human precision grip. V. anticipatory and triggered grip actions during sudden loading. <i>Experimental Brain Research</i> , 1995 , 106, 425-33	2.3	70
63	Regional differences and interindividual variability in sensitivity to vibration in the glabrous skin of the human hand. <i>Brain Research</i> , 1984 , 301, 65-72	3.7	69

62	Encoding of amplitude and rate of forces applied to the teeth by human periodontal mechanoreceptive afferents. <i>Journal of Neurophysiology</i> , 1994 , 72, 1734-44	3.2	67
61	A comparison of human thenar motor-unit properties studied by intraneural motor-axon stimulation and spike-triggered averaging. <i>Journal of Neurophysiology</i> , 1990 , 64, 1347-51	3.2	66
60	Control of grasp stability when humans lift objects with different surface curvatures. <i>Journal of Neurophysiology</i> , 1998 , 79, 1643-52	3.2	65
59	Eye movements when observing predictable and unpredictable actions. <i>Journal of Neurophysiology</i> , 2006 , 96, 1358-69	3.2	64
58	Grip-force responses to unanticipated object loading: load direction reveals body- and gravity-referenced intrinsic task variables. <i>Experimental Brain Research</i> , 1996 , 110, 142-50	2.3	62
57	Development of human precision grip. III. Integration of visual size cues during the programming of isometric forces. <i>Experimental Brain Research</i> , 1992 , 90, 399-403	2.3	62
56	Microelectrode recordings from human oral mechanoreceptors. <i>Brain Research</i> , 1976 , 118, 307-11	3.7	61
55	Eye-hand coordination in a sequential target contact task. <i>Experimental Brain Research</i> , 2009 , 195, 273-83.	3.3	60
54	Coordination of fingertip forces during human manipulation can emerge from independent neural networks controlling each engaged digit. <i>Experimental Brain Research</i> , 1997 , 117, 67-79	2.3	60
53	Forces applied by the incisors and roles of periodontal afferents during food-holding and -biting tasks. <i>Experimental Brain Research</i> , 1996 , 107, 486-96	2.3	60
52	Tactile detection thresholds for a single asperity on an otherwise smooth surface. <i>Somatosensory & Motor Research</i> , 1983 , 1, 21-31		59
51	Control of grasp stability during pronation and supination movements. <i>Experimental Brain Research</i> , 1999 , 128, 20-30	2.3	57
50	Action tremor during object manipulation in Parkinson's disease. <i>Movement Disorders</i> , 2000 , 15, 244-54	7	55
49	Adaptability of mastication in people with implant-supported bridges. <i>Journal of Clinical Periodontology</i> , 2011 , 38, 395-404	7.7	51
48	How a lateralized brain supports symmetrical bimanual tasks. <i>PLoS Biology</i> , 2006 , 4, e158	9.7	49
47	Pattern of pulses that maximize force output from single human thenar motor units. <i>Journal of Neurophysiology</i> , 1999 , 82, 3188-95	3.2	48
46	Slowly adapting mechanoreceptors in the borders of the human fingernail encode fingertip forces. <i>Journal of Neuroscience</i> , 2009 , 29, 9370-9	6.6	47
45	Robotic stiffness control and calibration as applied to human grasping tasks. <i>IEEE Transactions on Automation Science and Engineering</i> , 1997 , 13, 557-566		47

44	Integration of sensory quanta in cuneate nucleus neurons in vivo. <i>PLoS ONE</i> , 2013 , 8, e56630	3.7	45
43	Information about complex fingertip parameters in individual human tactile afferent neurons. <i>Journal of Neuroscience</i> , 2009 , 29, 8022-31	6.6	45
42	Acute impairment of the sensitivity of skin mechanoreceptive units caused by vibration exposure of the hand. <i>Ergonomics</i> , 1986 , 29, 687-98	2.9	45
41	Mechanisms for force adjustments to unpredictable frictional changes at individual digits during two-fingered manipulation. <i>Journal of Neurophysiology</i> , 1998 , 80, 1989-2002	3.2	41
40	Sensorimotor interactions between pairs of fingers in bimanual and unimanual manipulative tasks. <i>Experimental Brain Research</i> , 1999 , 127, 43-53	2.3	39
39	Dynamic use of tactile afferent signals in control of dexterous manipulation. <i>Advances in Experimental Medicine and Biology</i> , 2002 , 508, 397-410	3.6	39
38	A Rapid Tactile-Motor Reflex Automatically Guides Reaching toward Handheld Objects. <i>Current Biology</i> , 2016 , 26, 788-92	6.3	37
37	Receptive field sensitivity profile of mechanosensitive units innervating the glabrous skin of the human hand. <i>Brain Research</i> , 1976 , 104, 330-4	3.7	37
36	Humans can integrate force feedback to toes in their sensorimotor control of a robotic hand. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2009 , 17, 560-7	4.8	33
35	Fast and accurate edge orientation processing during object manipulation. <i>ELife</i> , 2018 , 7,	8.9	33
34	Temporal profile and amplitude of human masseter muscle activity is adapted to food properties during individual chewing cycles. <i>Journal of Oral Rehabilitation</i> , 2014 , 41, 367-73	3.4	32
33	Zones of bimanual and unimanual preference within human primary sensorimotor cortex during object manipulation. <i>NeuroImage</i> , 2007 , 36 Suppl 2, T2-T15	7.9	29
32	EMG changes in human thenar motor units with force potentiation and fatigue. <i>Journal of Neurophysiology</i> , 2006 , 95, 1518-26	3.2	27
31	Control of forces applied by individual fingers engaged in restraint of an active object. <i>Journal of Neurophysiology</i> , 1997 , 78, 117-28	3.2	26
30	Gaze behavior when reaching to remembered targets. <i>Journal of Neurophysiology</i> , 2008 , 100, 1533-43	3.2	26
29	Engagement of gaze in capturing targets for future sequential manual actions. <i>Journal of Neurophysiology</i> , 2002 , 88, 1716-25	3.2	24
28	Predictions specify reactive control of individual digits in manipulation. <i>Journal of Neuroscience</i> , 2002 , 22, 600-10	6.6	24
27	BOLD responses to tactile stimuli in visual and auditory cortex depend on the frequency content of stimulation. <i>Journal of Cognitive Neuroscience</i> , 2012 , 24, 2120-34	3.1	23

26	Rapid Visuomotor Corrective Responses during Transport of Hand-Held Objects Incorporate Novel Object Dynamics. <i>Journal of Neuroscience</i> , 2015 , 35, 10572-80	6.6	21
25	Incidence of F waves in single human thenar motor units. <i>Muscle and Nerve</i> , 2002 , 25, 77-82	3.4	21
24	Gaze behavior when learning to link sequential action phases in a manual task. <i>Journal of Vision</i> , 2014 , 14,	0.4	18
23	A bio-inspired predictive sensory-motor coordination scheme for robot reaching and preshaping. <i>Autonomous Robots</i> , 2008 , 25, 85-101	3	17
22	Loads applied tangential to a fingertip during an object restraint task can trigger short-latency as well as long-latency EMG responses in hand muscles. <i>Experimental Brain Research</i> , 2003 , 152, 143-9	2.3	17
21	Tactile Afferent Units with Small and Well Demarcated Receptive Fields in the Glabrous Skin Area of the Human Hand 1979 , 129-152		17
20	Adaptation of lift forces in object manipulation through action observation. <i>Experimental Brain Research</i> , 2013 , 228, 221-34	2.3	16
19	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	5.8	16
18	Electrical signs of cortical involvement in the automatic control of grip force. <i>NeuroReport</i> , 1994 , 5, 2229-32	1.32	15
17	Skill learning involves optimizing the linking of action phases. <i>Journal of Neurophysiology</i> , 2013 , 110, 1291-300	3.2	14
16	Sensory control of object manipulation	141-160	14
15	Quantifying neurotransmission reliability through metrics-based information analysis. <i>Neural Computation</i> , 2011 , 23, 852-81	2.9	12
14	Precision grip function after free toe transfer in children with hypoplastic digits. <i>Journal of Plastic, Reconstructive and Aesthetic Surgery</i> , 2007 , 60, 13-23	1.7	10
13	Biomimetic Tactile Sensor for Control of Grip 2007 ,		10
12	Waiting for a hand: saccadic reaction time increases in proportion to hand reaction time when reaching under a visuomotor reversal. <i>Frontiers in Human Neuroscience</i> , 2013 , 7, 319	3.3	9
11	Selection of prime actor in humans during bimanual object manipulation. <i>Journal of Neuroscience</i> , 2010 , 30, 10448-59	6.6	9
10	Predictive mechanisms and object representations used in object manipulation	161-177	9
9	Reactive control of precision grip does not depend on fast transcortical reflex pathways in X-linked Kallmann subjects. <i>Journal of Physiology</i> , 2000 , 527 Pt 3, 641-52	3.9	8

8	Representing multiple object weights: competing priors and sensorimotor memories. <i>Journal of Neurophysiology</i> , 2016 , 116, 1615-1625	3.2	6
7	Human Touch Receptors Are Sensitive to Spatial Details on the Scale of Single Fingerprint Ridges. <i>Journal of Neuroscience</i> , 2021 , 41, 3622-3634	6.6	6
6	Disinhibition of Human Primary Somatosensory Cortex After Median Nerve Transection and Reinnervation. <i>Frontiers in Human Neuroscience</i> , 2020 , 14, 166	3.3	3
5	Structural changes in hand related cortical areas after median nerve injury and repair. <i>Scientific Reports</i> , 2018 , 8, 4485	4.9	2
4	Gaze Interface: Utilizing Human Predictive Gaze Movements for Controlling a HBS 2008 ,		2
3	Isometric Coding of Spiking Haptic Signals by Peripheral Somatosensory Neurons. <i>Lecture Notes in Computer Science</i> , 2011 , 528-536	0.9	2
2	Fast and accurate edge orientation processing during object manipulation		1
1	Sensory and Mnemonic Factors in the Neural Control of Finger Tip Forces in Manipulative Tasks. <i>Journal of Sport and Exercise Psychology</i> , 1997 , 19, S2	1.5	