Karen A Moxon

List of Publications by Year
in descending order

83 papers	5,457 citations	126907 33 h-index	88630 70 g-index
89 all docs	89 docs citations	89 times ranked	5199 citing authors

#	Article	IF	Citations
1	Real-time control of a robot arm using simultaneously recorded neurons in the motor cortex. Nature Neuroscience, 1999, 2, 664-670.	14.8	979
2	Schizophrenia, Sensory Gating, and Nicotinic Receptors. Schizophrenia Bulletin, 1998, 24, 189-202.	4.3	653
3	Rhythm-specific pharmacological modulation of subthalamic activity in Parkinson's disease. Experimental Neurology, 2004, 189, 369-379.	4.1	450
4	Rat navigation guided by remote control. Nature, 2002, 417, 37-38.	27.8	315
5	300-Hz subthalamic oscillations in Parkinson's disease. Brain, 2003, 126, 2153-2163.	7.6	226
6	Ceramic-Based Multisite Microelectrodes for Electrochemical Recordings. Analytical Chemistry, 2000, 72, 187-192.	6.5	177
7	Clearance of Exogenous Dopamine in Rat Dorsal Striatum and Nucleus Accumbens: Role of Metabolism and Effects of Locally Applied Uptake Inhibitors. Journal of Neurochemistry, 1993, 61, 2269-2278.	3.9	156
8	Spinal Cord Injury Immediately Changes the State of the Brain. Journal of Neuroscience, 2010, 30, 7528-7537.	3.6	136
9	Ceramic-Based Multisite Electrode Arrays for Chronic Single-Neuron Recording. IEEE Transactions on Biomedical Engineering, 2004, 51, 647-656.	4.2	120
10	Nanostructured Surface Modification of Ceramic-Based Microelectrodes to Enhance Biocompatibility for a Direct Brain-Machine Interface. IEEE Transactions on Biomedical Engineering, 2004, 51, 881-889.	4.2	118
11	PSTH-based classification of sensory stimuli using ensembles of single neurons. Journal of Neuroscience Methods, 2004, 135, 107-120.	2.5	118
12	Responses of Trigeminal Ganglion Neurons during Natural Whisking Behaviors in the Awake Rat. Neuron, 2007, 53, 117-133.	8.1	115
13	Neuronal synchrony and the transition to spontaneous seizures. Experimental Neurology, 2013, 248, 72-84.	4.1	103
14	Brain-Machine Interfaces beyond Neuroprosthetics. Neuron, 2015, 86, 55-67.	8.1	102
15	Cortical reorganization after spinal cord injury: Always for good?. Neuroscience, 2014, 283, 78-94.	2.3	100
16	Multiple single units and population responses during inhibitory gating of hippocampal auditory response in freely-moving rats. Brain Research, 1999, 825, 75-85.	2.2	82
17	Lowâ€voltage fast seizures in humans begin with increased interneuron firing. Annals of Neurology, 2018, 84, 588-600.	5.3	81
18	Two multichannel integrated circuits for neural recording and signal processing. IEEE Transactions on Biomedical Engineering, 2003, 50, 255-258.	4.2	69

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19	Sensory gating in the human hippocampal and rhinal regions: Regional differences. Hippocampus, 2008, 18, 310-316.	1.9	69
20	Biomimetic Brain Machine Interfaces for the Control of Movement. Journal of Neuroscience, 2007, 27, 11842-11846.	3.6	67
21	Role of Spike Timing in the Forelimb Somatosensory Cortex of the Rat. Journal of Neuroscience, 2004, 24, 7266-7271.	3.6	65
22	Bioactive properties of nanostructured porous silicon for enhancing electrode to neuron interfaces. Journal of Biomaterials Science, Polymer Edition, 2007, 18, 1263-1281.	3.5	60
23	Influence of norepinephrine on somatosensory neuronal responses in the rat thalamus: A combined modeling and in vivo multi-channel, multi-neuron recording study. Brain Research, 2007, 1147, 105-123.	2.2	51
24	Computational Role of Large Receptive Fields in the Primary Somatosensory Cortex. Journal of Neurophysiology, 2008, 100, 268-280.	1.8	48
25	Dopaminergic modulation of the P50 auditory-evoked potential in a computer model of the CA3 region of the hippocampus: its relationship to sensory gating in schizophrenia. Biological Cybernetics, 2003, 88, 265-275.	1.3	47
26	Exercise Induces Cortical Plasticity after Neonatal Spinal Cord Injury in the Rat. Journal of Neuroscience, 2009, 29, 7549-7557.	3.6	45
27	Inhibitory control of sensory gating in a computer model of the CA3 region of the hippocampus. Biological Cybernetics, 2003, 88, 247-264.	1.3	43
28	Relationship Between Physiological Response Type (RA and SA) and Vibrissal Receptive Field of Neurons Within the Rat Trigeminal Ganglion. Journal of Neurophysiology, 2006, 95, 3129-3145.	1.8	43
29	Structure of the Excitatory Receptive Fields of Infragranular Forelimb Neurons in the Rat Primary Somatosensory Cortex Responding To Touch. Cerebral Cortex, 2006, 16, 791-810.	2.9	43
30	Distinct temporal activity patterns in the rat M1 and red nucleus during skilled versus unskilled limb movement. Behavioural Brain Research, 2004, 150, 93-107.	2.2	41
31	Trial-to-trial variability in the responses of neurons carries information about stimulus location in the rat whisker thalamus. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14956-14961.	7.1	40
32	Passive Exercise of the Hind Limbs after Complete Thoracic Transection of the Spinal Cord Promotes Cortical Reorganization. PLoS ONE, 2013, 8, e54350.	2.5	38
33	Responses of infragranular neurons in the rat primary somatosensory cortex to forepaw and hindpaw tactile stimuli. Neuroscience, 2008, 156, 1083-1092.	2.3	37
34	Head-mounted microendoscopic calcium imaging in dorsal premotor cortex of behaving rhesus macaque. Cell Reports, 2021, 35, 109239.	6.4	35
35	Decoding Hindlimb Movement for a Brain Machine Interface after a Complete Spinal Transection. PLoS ONE, 2012, 7, e52173.	2.5	33
36	Interneurons and principal cell firing in human limbic areas at focal seizure onset. Neurobiology of Disease, 2019, 124, 183-188.	4.4	33

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37	Correcting the Bias of Spike Field Coherence Estimators Due to a Finite Number of Spikes. Journal of Neurophysiology, 2010, 104, 548-558.	1.8	32
38	Cortex-dependent recovery of unassisted hindlimb locomotion after complete spinal cord injury in adult rats. ELife, 2017, 6, .	6.0	32
39	Functional role of exercise-induced cortical organization of sensorimotor cortex after spinal transection. Journal of Neurophysiology, 2011, 106, 2662-2674.	1.8	31
40	Role of CA3 theta-modulated interneurons during the transition to spontaneous seizures. Experimental Neurology, 2016, 283, 341-352.	4.1	29
41	Role of the 5-HT2C receptor in improving weight-supported stepping in adult rats spinalized as neonates. Brain Research, 2006, 1112, 159-168.	2.2	28
42	Serotonergic pharmacotherapy promotes cortical reorganization after spinal cord injury. Experimental Neurology, 2013, 241, 84-94.	4.1	27
43	Dissociating Movement from Movement Timing in the Rat Primary Motor Cortex. Journal of Neuroscience, 2014, 34, 15576-15586.	3.6	27
44	Serotonin receptor and dendritic plasticity in the spinal cord mediated by chronic serotonergic pharmacotherapy combined with exercise following complete SCI in the adult rat. Experimental Neurology, 2018, 304, 132-142.	4.1	24
45	Neurobiological and neurorobotic approaches to control architectures for a humanoid motor system. Robotics and Autonomous Systems, 2001, 37, 219-235.	5.1	21
46	Sensory gating in intracranial recordings â€" The role of phase locking. NeuroImage, 2009, 44, 1041-1049.	4.2	20
47	Therapy induces widespread reorganization of motor cortex after complete spinal transection that supports motor recovery. Experimental Neurology, 2016, 279, 1-12.	4.1	17
48	From adagio to allegretto: The changing tempo of theta frequencies in epilepsy and its relation to interneuron function. Neurobiology of Disease, 2019, 129, 169-181.	4.4	17
49	Restoration of Hindlimb Movements after Complete Spinal Cord Injury Using Brain-Controlled Functional Electrical Stimulation. Frontiers in Neuroscience, 2017, 11, 715.	2.8	16
50	Increased neuronal synchrony prepares mesial temporal networks for seizures of neocortical origin. Epilepsia, 2018, 59, 636-649.	5.1	15
51	Adaptation of Thalamic Neurons Provides Information about the Spatiotemporal Context of Stimulus History. Journal of Neuroscience, 2017, 37, 10012-10021.	3.6	14
52	Continuous infusion of an agonist of the tumor necrosis factor receptor 2 in the spinal cord improves recovery after traumatic contusive injury. CNS Neuroscience and Therapeutics, 2019, 25, 884-893.	3.9	14
53	Partial 5-HT receptor agonist activity by the 5-HT receptor antagonist SB 206,553 is revealed in rats spinalized as neonates. Experimental Neurology, 2005, 191, 361-365.	4.1	13
54	Long-Term Recordings of Multiple, Single-Neurons for Clinical Applications: The Emerging Role of the Bioactive Microelectrode. Materials, 2009, 2, 1762-1794.	2.9	13

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55	Encoding of temporal intervals in the rat hindlimb sensorimotor cortex. Frontiers in Systems Neuroscience, 2012, 6, 67.	2.5	13
56	Interactive Effects Between Exercise and Serotonergic Pharmacotherapy on Cortical Reorganization After Spinal Cord Injury. Neurorehabilitation and Neural Repair, 2016, 30, 479-489.	2.9	13
57	Enhanced co-registration methods to improve intracranial electrode contact localization. NeuroImage: Clinical, 2018, 20, 398-406.	2.7	12
58	Mutual Information Expansion for Studying the Role of Correlations in Population Codes: How Important Are Autocorrelations?. Neural Computation, 2008, 20, 2662-2695.	2.2	11
59	Spike count, spike timing and temporal information in the cortex of awake, freely moving rats. Journal of Neural Engineering, 2014, 11, 046022.	3.5	11
60	Changes in network dynamics during status epilepticus. Experimental Neurology, 2012, 234, 454-465.	4.1	8
61	General Poisson Exact Breakdown of the Mutual Information to Study the Role of Correlations in Populations of Neurons. Neural Computation, 2010, 22, 1445-1467.	2.2	7
62	A rodent brain-machine interface paradigm to study the impact of paraplegia on BMI performance. Journal of Neuroscience Methods, 2018, 306, 103-114.	2.5	7
63	Skilled hindlimb reaching task in rats as a platform for a brain-machine interface to restore motor function after complete spinal cord injury. , 2011, 2011, 6315-8.		6
64	Role of cortical reorganization on the effect of 5-HT pharmacotherapy for spinal cord injury. Experimental Neurology, 2013, 240, 17-27.	4.1	6
65	Designing a Brain-Machine Interface for Neuroprosthetic Control. Frontiers in Neuroscience, 2000, , .	0.0	6
66	Hindlimb Somatosensory Information Influences Trunk Sensory and Motor Cortices to Support Trunk Stabilization. Cerebral Cortex, 2021, 31, 5165-5187.	2.9	4
67	Multichannel Electrode Design. Frontiers in Neuroscience, 1998, , .	0.0	4
68	Behaviorally Modulated Filter Model for the Thalamic Reticular Nucleus. , 2006, 2006, 595-8.		3
69	Natural Whisking. Focus on â€œVariability in Velocity Profiles During Free-Air Whisking Behavior of Unrestrained Ratsâ€. Journal of Neurophysiology, 2008, 100, 551-553.	1.8	3
70	Role of neuronal plasticity after spinal cord injury for neurorobotic control. , 2011, , .		3
71	Controlled Unilateral Isometric Force Generated by Epidural Spinal Cord Stimulation in the Rat Hindlimb. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 549-556.	4.9	3
72	Modelling atâ€level allodynia after midâ€thoracic contusion in the rat. European Journal of Pain, 2021, 25, 801-816.	2.8	3

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73	Effect of spinal cord injury on neural encoding of spontaneous postural perturbations in the hindlimb sensorimotor cortex. Journal of Neurophysiology, 2021, 126, 1555-1567.	1.8	2
74	Neurorobotics. , 2005, , 123-155.		1
75	Towards a method to study neurorobotic control in a rat model of spinal cord injury. , 2006, Suppl, 6753-6.		1
76	Decoding Sensory Stimuli from Populations of Neurons: Methods for Long-Term Longitudinal Studies. , 0, , 481-494.		1
77	DIFFERENTIAL GATING OF SOMATOSENSORY INPUT DURING ACTIVE AND PASSIVE STIMULATION. , 2002, , .		0
78	SENSORY GATING IN A COMPUTER MODEL OF THE HIPPOCAMPUS. , 2002, , .		0
79	Multi-site Analysis of Dopamine Uptake in the Somatosensory cortex. , 2006, Suppl, 6681-4.		0
80	Closed-loop seizure prediction and prevention in rats with kainate-induced seizures. , 2011, , .		0
81	Decoding Neuropathic Pain in the Central Nervous System Through the Peri-Stimulus Histogram Method. , 2013, , .		0
82	Neurorobotics: Opening Novel Lines of Communication Between Populations of Single Neurons and External Devices. , 2013, , 153-221.		0
83	Behaviorally Modulated Filter Model for the Thalamic Reticular Nucleus. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0