Simon F Giszter

List of Publications by Year
in descending order

44 papers	2,116 citations	236925 25 h-index	265206 42 g-index
44 all docs	44 docs citations	44 times ranked	1541 citing authors

#	Article	IF	Citations
1	A Neural Basis for Motor Primitives in the Spinal Cord. Journal of Neuroscience, 2010, 30, 1322-1336.	3.6	236
2	Vector field approximation: a computational paradigm for motor control and learning. Biological Cybernetics, 1992, 67, 491-500.	1.3	180
3	Modular Premotor Drives and Unit Bursts as Primitives for Frog Motor Behaviors. Journal of Neuroscience, 2004, 24, 5269-5282.	3.6	175
4	Motor primitivesâ€"new data and future questions. Current Opinion in Neurobiology, 2015, 33, 156-165.	4.2	167
5	Rapid Correction of Aimed Movements by Summation of Force-Field Primitives. Journal of Neuroscience, 2000, 20, 409-426.	3.6	141
6	Fetal Transplants Alter the Development of Function after Spinal Cord Transection in Newborn Rats. Journal of Neuroscience, 1997, 17, 4856-4872.	3.6	100
7	Direct Agonists for Serotonin Receptors Enhance Locomotor Function in Rats that Received Neural Transplants after Neonatal Spinal Transection. Journal of Neuroscience, 1999, 19, 6213-6224.	3.6	86
8	Individual Premotor Drive Pulses, Not Time-Varying Synergies, Are the Units of Adjustment for Limb Trajectories Constructed in Spinal Cord. Journal of Neuroscience, 2008, 28, 2409-2425.	3.6	85
9	Trunk control during standing reach: A dynamical system analysis of movement strategies in patients with mechanical low back pain. Gait and Posture, 2009, 29, 370-376.	1.4	84
10	Primitives, premotor drives, and pattern generation: a combined computational and neuroethological perspective. Progress in Brain Research, 2007, 165, 323-346.	1.4	79
11	A Simple Experimentally Based Model Using Proprioceptive Regulation of Motor Primitives Captures Adjusted Trajectory Formation in Spinal Frogs. Journal of Neurophysiology, 2010, 103, 573-590.	1.8	62
12	Afferent Roles in Hindlimb Wipe-Reflex Trajectories: Free-Limb Kinematics and Motor Patterns. Journal of Neurophysiology, 2000, 83, 1480-1501.	1.8	55
13	Motor primitives and synergies in the spinal cord and after injuryâ€"the current state of play. Annals of the New York Academy of Sciences, 2013, 1279, 114-126.	3.8	50
14	Motor primitives are determined in early development and are then robustly conserved into adulthood. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 12025-12034.	7.1	47
15	Fetal Transplants Rescue Axial Muscle Representations in M1 Cortex of Neonatally Transected Rats That Develop Weight Support. Journal of Neurophysiology, 1998, 80, 3021-3030.	1.8	42
16	Spinal Cord Injury: Present and Future Therapeutic Devices and Prostheses. Neurotherapeutics, 2008, 5, 147-162.	4.4	39
17	Adaptation to a Cortex-Controlled Robot Attached at the Pelvis and Engaged during Locomotion in Rats. Journal of Neuroscience, 2011, 31, 3110-3128.	3.6	37
18	Multiple Types of Movement-Related Information Encoded in Hindlimb/Trunk Cortex in Rats and Potentially Available for Brainâ€"Machine Interface Controls. IEEE Transactions on Biomedical Engineering, 2009, 56, 2712-2716.	4.2	36

#	Article	IF	Citations
19	Braided multi-electrode probes: mechanical compliance characteristics and recordings from spinal cords. Journal of Neural Engineering, 2013, 10, 045001.	3.5	34
20	Spinal cord modularity: evolution, development, and optimization and the possible relevance to low back pain in man. Experimental Brain Research, 2010, 200, 283-306.	1.5	32
21	Conserved temporal dynamics and vector superposition of primitives in frog wiping reflexes during spontaneous extensor deletions. Neurocomputing, 2000, 32-33, 775-783.	5.9	29
22	Plasticity and alterations of trunk motor cortex following spinal cord injury and non-stepping robot and treadmill training. Experimental Neurology, 2014, 256, 57-69.	4.1	29
23	Motor Strategies Used by Rats Spinalized at Birth to Maintain Stance in Response to Imposed Perturbations. Journal of Neurophysiology, 2007, 97, 2663-2675.	1.8	27
24	Enhancing neural activity to drive respiratory plasticity following cervical spinal cord injury. Experimental Neurology, 2017, 287, 276-287.	4.1	27
25	Trunk Sensorimotor Cortex Is Essential for Autonomous Weight-Supported Locomotion in Adult Rats Spinalized as P1/P2 Neonates. Journal of Neurophysiology, 2008, 100, 839-851.	1.8	26
26	How spinalized rats can walk: biomechanics, cortex, and hindlimb muscle scalingâ€"implications for rehabilitation. Annals of the New York Academy of Sciences, 2010, 1198, 279-293.	3.8	26
27	Coordination strategies for limb forces during weight-bearing locomotion in normal rats, and in rats spinalized as neonates. Experimental Brain Research, 2008, 190, 53-69.	1.5	25
28	Trunk Robot Rehabilitation Training with Active Stepping Reorganizes and Enriches Trunk Motor Cortex Representations in Spinal Transected Rats. Journal of Neuroscience, 2015, 35, 7174-7189.	3.6	25
29	Neurobiological and neurorobotic approaches to control architectures for a humanoid motor system. Robotics and Autonomous Systems, 2001, 37, 219-235.	5.1	21
30	Robot Application of Elastic Fields to the Pelvis of the Spinal Transected Rat: a Tool for Detailed Assessment and Rehabilitation. , 2006, 2006, 3684-7.		16
31	Distinguishing synchronous and time-varying synergies using point process interval statistics: motor primitives in frog and rat. Frontiers in Computational Neuroscience, 2013, 7, 52.	2.1	16
32	Trunk Postural Muscle Timing Is Not Compromised In Low Back Pain Patients Clinically Diagnosed With Movement Coordination Impairments. Motor Control, 2017, 21, 133-157.	0.6	14
33	Towards a Definition of Recovery of Function. Journal of Neurotrauma, 2004, 21, 405-413.	3.4	13
34	Spinal primitives and intra-spinal micro-stimulation (ISMS) based prostheses: a neurobiological perspective on the â€œknown unknownsâ€•in ISMS and future prospects. Frontiers in Neuroscience, 2015, 9, 72.	2.8	12
35	Modeling of dynamic controls in the frog wiping reflex: Force-field level controls. Neurocomputing, 2001, 38-40, 1239-1247.	5.9	11
36	Pattern Generators and Cortical Maps in Locomotion of Spinal Injured Ratsa. Annals of the New York Academy of Sciences, 1998, 860, 554-555.	3.8	7

#	ARTICLE	IF	CITATIONS
37	A pelvic implant orthosis in rodents, for spinal cord injury rehabilitation, and for brain machine interface research: Construction, surgical implantation and validation. Journal of Neuroscience Methods, 2014, 222, 199-206.	2.5	7
38	Adaptation to elastic loads and BMI robot controls during rat locomotion examined with point-process GLMs. Frontiers in Systems Neuroscience, 2015, 9, 62.	2.5	5
39	Teaching Adult Rats Spinalized as Neonates to Walk Using Trunk Robotic Rehabilitation: Elements of Success, Failure, and Dependence. Journal of Neuroscience, 2016, 36, 8341-8355.	3.6	5
40	Highly Flexible Precisely Braided Multielectrode Probes and Combinatorics for Future Neuroprostheses. Frontiers in Neuroscience, 2019, 13, 613.	2.8	5
41	Modularity in the intact and spinal cat: methods, issues and questions for the future. Journal of Physiology, 2019, 597, 13-13.	2.9	1
42	Robot Application of Elastic Fields to the Pelvis of the Spinal Transected Rat: a Tool for Detailed Assessment and Rehabilitation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	1
43	Biomimetic control for redundant and high degree of freedom limb systems: neurobiological modularity. Smart Structures and Systems, 2011, 7, 169-184.	1.9	1
44	Stimulating the cervical spinal cord â€“ combining clinical, classical and basic motor perspectives on epidural stimulation. Journal of Physiology, 2021, 599, 3431-3432.	2.9	0