Ansgar BÃ¼schges

List of Publications by Year
in descending order

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141 papers	5,874 citations	61984 43 h-index	98798 67 g-index
170 all docs	170 docs citations	170 times ranked	2662 citing authors

#	Article	IF	Citations
1	Pattern generation for stick insect walking movementsâ€"multisensory control of a locomotor program. Brain Research Reviews, 1998, 27, 65-88.	9.0	238
2	Sensory Control and Organization of Neural Networks Mediating Coordination of Multisegmental Organs for Locomotion. Journal of Neurophysiology, 2005, 93, 1127-1135.	1.8	199
3	Swing Velocity Profiles of Small Limbs Can Arise from Transient Passive Torques of the Antagonist Muscle Alone. Current Biology, 2019, 29, 1-12.e7.	3.9	193
4	Load sensing and control of posture and locomotion. Arthropod Structure and Development, 2004, 33, 273-286.	1.4	162
5	The Power of Human Protective Modifiers: PLS3 and CORO1C Unravel Impaired Endocytosis in Spinal Muscular Atrophy and Rescue SMA Phenotype. American Journal of Human Genetics, 2016, 99, 647-665.	6.2	154
6	Organizing network action for locomotion: Insights from studying insect walking. Brain Research Reviews, 2008, 57, 162-171.	9.0	144
7	Inter-leg coordination in the control of walking speed in<i>Drosophila</i>. Journal of Experimental Biology, 2013, 216, 480-91.	1.7	138
8	Dynamic simulation of insect walking. Arthropod Structure and Development, 2004, 33, 287-300.	1.4	126
9	Assessing sensory function in locomotor systems using neuro-mechanical simulations. Trends in Neurosciences, 2006, 29, 625-631.	8.6	125
10	Sensory pathways and their modulation in the control of locomotion. Current Opinion in Neurobiology, 1998, 8, 733-739.	4.2	120
11	Six-legged walking in insects: how CPGs, peripheral feedback, and descending signals generate coordinated and adaptive motor rhythms. Journal of Neurophysiology, 2018, 119, 459-475.	1.8	118
12	Sensory Feedback Induced by Front-Leg Stepping Entrains the Activity of Central Pattern Generators in Caudal Segments of the Stick Insect Walking System. Journal of Neuroscience, 2009, 29, 2972-2983.	3.6	103
13	New Moves in Motor Control. Current Biology, 2011, 21, R513-R524.	3.9	102
14	The Role of Sensory Signals From the Insect Coxa-Trochanteral Joint in Controlling Motor Activity of the Femur-Tibia Joint. Journal of Neurophysiology, 2001, 85, 594-604.	1.8	98
15	Segment Specificity of Load Signal Processing Depends on Walking Direction in the Stick Insect Leg Muscle Control System. Journal of Neuroscience, 2007, 27, 3285-3294.	3.6	98
16	Signals From Load Sensors Underlie Interjoint Coordination During Stepping Movements of the Stick Insect Leg. Journal of Neurophysiology, 2004, 92, 42-51.	1.8	96
17	Neural Control of Unloaded Leg Posture and of Leg Swing in Stick Insect, Cockroach, and Mouse Differs from That in Larger Animals. Journal of Neuroscience, 2009, 29, 4109-4119.	3.6	93
18	Role of Proprioceptive Signals From an Insect Femur-Tibia Joint in Patterning Motoneuronal Activity of an Adjacent Leg Joint. Journal of Neurophysiology, 1999, 81, 1856-1865.	1.8	80

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19	Adaptive motor behavior in insects. Current Opinion in Neurobiology, 2007, 17, 629-636.	4.2	80
20	Nonspiking Pathways in a Joint-control Loop of the Stick Insect <i>Carausius Morosus</i>. Journal of Experimental Biology, 1990, 151, 133-160.	1.7	80
21	The extensor tibiae muscle of the stick insect: biomechanical properties of an insect walking leg muscle. Journal of Experimental Biology, 2007, 210, 1092-1108.	1.7	73
22	Controlling legs for locomotionâ€"insights from robotics and neurobiology. Bioinspiration and Biomimetics, 2015, 10, 041001.	2.9	71
23	Role of local nonspiking interneurons in the generation of rhythmic motor activity in the stick insect. Journal of Neurobiology, 1995, 27, 488-512.	3.6	70
24	A Specific Population of Reticulospinal Neurons Controls the Termination of Locomotion. Cell Reports, 2016, 15, 2377-2386.	6.4	70
25	Initiation of Locomotion in Adult Zebrafish. Journal of Neuroscience, 2011, 31, 8422-8431.	3.6	68
26	Two Brain Pathways Initiate Distinct Forward Walking Programs in Drosophila. Neuron, 2020, 108, 469-485.e8.	8.1	68
27	Central pattern generating networks in insect locomotion. Developmental Neurobiology, 2020, 80, 16-30.	3.0	68
28	The comparative investigation of the stick insect and cockroach models in the study of insect locomotion. Current Opinion in Insect Science, 2015, 12, 1-10.	4.4	67
29	Pattern Generation for Walking and Searching Movements of a Stick Insect Leg. I. Coordination of Motor Activity. Journal of Neurophysiology, 2001, 85, 341-353.	1.8	66
30	Encoding of force increases and decreases by tibial campaniform sensilla in the stick insect, Carausius morosus. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2011, 197, 851-867.	1.6	66
31	Force encoding in stick insect legs delineates a reference frame for motor control. Journal of Neurophysiology, 2012, 108, 1453-1472.	1.8	63
32	Activity Patterns and Timing of Muscle Activity in the Forward Walking and Backward Walking Stick Insect<i>Carausius morosus</i>. Journal of Neurophysiology, 2010, 104, 1681-1695.	1.8	59
33	Processing of Sensory Input From the Femoral Chordotonal Organ by Spiking Interneurones of Stick Insects. Journal of Experimental Biology, 1989, 144, 81-111.	1.7	59
34	Control of reflex reversal in stick insect walking: effects of intersegmental signals, changes in direction, and optomotor-induced turning. Journal of Neurophysiology, 2012, 107, 239-249.	1.8	58
35	Interjoint Coordination in the Stick Insect Leg-Control System: The Role of Positional Signaling. Journal of Neurophysiology, 2003, 89, 1245-1255.	1.8	56
36	An improved electrode design for en passant recording from small nerves. Comparative Biochemistry and Physiology A, Comparative Physiology, 1988, 91, 769-772.	0.6	55

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37	Nonspiking pathways antagonize the resistance reflex in the thoraco-coxal joint of stick insects. Journal of Neurobiology, 1991, 22, 224-237.	3.6	55
38	Mechanosensory Feedback in Walking: From Joint Control to Locomotor Patterns. Advances in Insect Physiology, 2007, 34, 193-230.	2.7	54
39	Intersegmental Coordination: Influence of a Single Walking Leg on the Neighboring Segments in the Stick Insect Walking System. Journal of Neurophysiology, 2007, 98, 1685-1696.	1.8	51
40	Control of flexor motoneuron activity during single leg walking of the stick insect on an electronically controlled treadwheel. Journal of Neurobiology, 2003, 56, 237-251.	3.6	50
41	A Leg-Local Neural Mechanism Mediates the Decision to Search in Stick Insects. Current Biology, 2015, 25, 2012-2017.	3.9	50
42	Straight walking and turning on a slippery surface. Journal of Experimental Biology, 2009, 212, 194-209.	1.7	47
43	Neuronal Basis of Innate Olfactory Attraction to Ethanol in Drosophila. PLoS ONE, 2012, 7, e52007.	2.5	47
44	Sensorimotor pathways involved in interjoint reflex action of an insect leg. Journal of Neurobiology, 1997, 33, 891-913.	3.6	46
45	Speed-dependent interplay between local pattern-generating activity and sensory signals during walking in<i>Drosophila</i>. Journal of Experimental Biology, 2016, 219, 3781-3793.	1.7	46
46	Synaptic drive contributing to rhythmic activation of motoneurons in the deafferented stick insect walking system. European Journal of Neuroscience, 2004, 19, 1856-1862.	2.6	45
47	Desensitization of nicotinic acetylcholine receptors in central nervous system neurons of the stick insect (Carausius morosus) by imidacloprid and sulfoximine insecticides. Insect Biochemistry and Molecular Biology, 2011, 41, 872-880.	2.7	43
48	From neuron to behavior: dynamic equation-based prediction of biological processes in motor control. Biological Cybernetics, 2011, 105, 71-88.	1.3	43
49	A Brainstem Neural Substrate for Stopping Locomotion. Journal of Neuroscience, 2019, 39, 1044-1057.	3.6	43
50	Intra- and intersegmental influences among central pattern generating networks in the walking system of the stick insect. Journal of Neurophysiology, 2017, 118, 2296-2310.	1.8	42
51	Pattern Generation for Walking and Searching Movements of a Stick Insect Leg. II. Control of Motoneuronal Activity. Journal of Neurophysiology, 2001, 85, 354-361.	1.8	41
52	Deriving neural network controllers from neuro-biological data: implementation of a single-leg stick insect controller. Biological Cybernetics, 2011, 104, 95-119.	1.3	41
53	Inhibitory synaptic drive patterns motoneuronal activity in rhythmic preparations of isolated thoracic ganglia in the stick insect. Brain Research, 1998, 783, 262-271.	2.2	40
54	Nigral Glutamatergic Neurons Control the Speed of Locomotion. Journal of Neuroscience, 2017, 37, 9759-9770.	3.6	40

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55	Transcriptomic and Neuropeptidomic Analysis of the Stick Insect, <i>Carausius morosus</i>. Journal of Proteome Research, 2018, 17, 2192-2204.	3.7	40
56	Motoneurons, DUM cells, and sensory neurons in an insect thoracic ganglion: A tracing study in the stick insect <i>Carausius morosus</i>. Journal of Comparative Neurology, 2012, 520, 230-257.	1.6	39
57	Static stability predicts the continuum of interleg coordination patterns in<i>Drosophila</i>. Journal of Experimental Biology, 2018, 221, .	1.7	37
58	Distributed control of motor circuits for backward walking in Drosophila. Nature Communications, 2020, 11, 6166.	12.8	37
59	Load Signals Assist the Generation of Movement-Dependent Reflex Reversal in the Femurâ€"Tibia Joint of Stick Insects. Journal of Neurophysiology, 2006, 96, 3532-3537.	1.8	36
60	Tethered stick insect walking: A modified slippery surface setup with optomotor stimulation and electrical monitoring of tarsal contact. Journal of Neuroscience Methods, 2006, 158, 195-206.	2.5	36
61	Directional specificity and encoding of muscle forces and loads by stick insect tibial campaniform sensilla, including receptors with round cuticular caps. Arthropod Structure and Development, 2013, 42, 455-467.	1.4	36
62	Plasticity of Synaptic Connections in Sensory-Motor Pathways of the Adult Locust Flight System. Journal of Neurophysiology, 1997, 78, 1276-1284.	1.8	35
63	Cell dialysis by sharp electrodes can cause nonphysiological changes in neuron properties. Journal of Neurophysiology, 2015, 114, 1255-1271.	1.8	35
64	Lessons for circuit function from large insects: towards understanding the neural basis of motor flexibility. Current Opinion in Neurobiology, 2012, 22, 602-608.	4.2	34
65	Reorganization of sensory regulation of locust flight after partial deafferentation. Journal of Neurobiology, 1992, 23, 31-43.	3.6	33
66	Connections of the forewing tegulae in the locust flight system and their modification following partial deafferentation. Journal of Neurobiology, 1992, 23, 44-60.	3.6	33
67	Natural Neural Output That Produces Highly Variable Locomotory Movements. Journal of Neurophysiology, 2006, 96, 2072-2088.	1.8	31
68	Determining all parameters necessary to build Hill-type muscle models from experiments on single muscles. Biological Cybernetics, 2012, 106, 543-558.	1.3	31
69	Neuronal Substrates for State-Dependent Changes in Coordination between Motoneuron Pools during Fictive Locomotion in the Lamprey Spinal Cord. Journal of Neuroscience, 2008, 28, 868-879.	3.6	30
70	Premotor Interneurons in the Local Control of Stepping Motor Output for the Stick Insect Single Middle Leg. Journal of Neurophysiology, 2009, 102, 1956-1975.	1.8	29
71	Positive force feedback in development of substrate grip in the stick insect tarsus. Arthropod Structure and Development, 2014, 43, 441-455.	1.4	29
72	Hill-type muscle model parameters determined from experiments on single muscles show large animal-to-animal variation. Biological Cybernetics, 2012, 106, 559-571.	1.3	28

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73	Intracellular recordings from nonspiking interneurons in a semiintact, tethered walking insect. Journal of Neurobiology, 1991, 22, 907-921.	3.6	27
74	Premotor interneurons in generation of adaptive leg reflexes and voluntary movements in stick insects. , 1996, 31, 512-531.		27
75	Modulation of Membrane Potential in Mesothoracic Moto- and Interneurons During Stick Insect Front-Leg Walking. Journal of Neurophysiology, 2005, 94, 2772-2784.	1.8	27
76	Dominance of local sensory signals over inter-segmental effects in a motor system: experiments. Biological Cybernetics, 2011, 105, 399-411.	1.3	27
77	Single perturbations cause sustained changes in searching behavior in stick insects. Journal of Experimental Biology, 2013, 216, 1064-74.	1.7	27
78	Insect motor control: methodological advances, descending control and inter-leg coordination on the move. Current Opinion in Neurobiology, 2015, 33, 8-15.	4.2	27
79	Force feedback reinforces muscle synergies in insect legs. Arthropod Structure and Development, 2015, 44, 541-553.	1.4	27
80	Location and arrangement of campaniform sensilla in <scp><i>Drosophila melanogaster</i></scp>. Journal of Comparative Neurology, 2021, 529, 905-925.	1.6	27
81	ADAPTIVE MODIFICATIONS IN THE FLIGHT SYSTEM OF THE LOCUST AFTER THE REMOVAL OF WING PROPRIOCEPTORS. Journal of Experimental Biology, 1991, 157, 313-333.	1.7	27
82	Slow Temporal Filtering May Largely Explain the Transformation of Stick Insect (<i>Carausius) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 2007, 98, 1718-1732.	1.8	26
83	Different Motor Neuron Spike Patterns Produce Contractions With Very Similar Rises in Graded Slow Muscles. Journal of Neurophysiology, 2007, 97, 1428-1444.	1.8	25
84	Activity of neuromodulatory neurones during stepping of a single insect leg. Journal of Insect Physiology, 2008, 54, 51-61.	2.0	23
85	A Neuro-Mechanical Model of a Single Leg Joint Highlighting the Basic Physiological Role of Fast and Slow Muscle Fibres of an Insect Muscle System. PLoS ONE, 2013, 8, e78247.	2.5	22
86	Octopamine effects mimick state-dependent changes in a proprioceptive feedback system. Journal of Neurobiology, 1993, 24, 598-610.	3.6	21
87	Control of Stepping Velocity in the Stick Insect<i>Carausius morosus</i>. Journal of Neurophysiology, 2009, 102, 1180-1192.	1.8	21
88	Cholinergic Currents in Leg Motoneurons of<i>Carausius morosus</i>. Journal of Neurophysiology, 2010, 103, 2770-2782.	1.8	20
89	Phase-Dependent Presynaptic Modulation of Mechanosensory Signals in the Locust Flight System. Journal of Neurophysiology, 1999, 81, 959-962.	1.8	19
90	A Central Pattern-Generating Network Contributes to â€œReflex-Reversalâ€â€“Like Leg Motoneuron Activity in the Locust. Journal of Neurophysiology, 2001, 86, 3065-3068.	1.8	19

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91	Intersegmental transfer of sensory signals in the stick insect leg muscle control system. Journal of Neurobiology, 2006, 66, 1253-1269.	3.6	19
92	Effects of force detecting sense organs on muscle synergies are correlated with their response properties. Arthropod Structure and Development, 2017, 46, 564-578.	1.4	19
93	Using individual-muscle specific instead of across-muscle mean data halves muscle simulation error. Biological Cybernetics, 2012, 106, 573-585.	1.3	18
94	Network Modularity: Back to the Future in Motor Control. Current Biology, 2013, 23, R936-R938.	3.9	18
95	A Neuro-Mechanical Model Explaining the Physiological Role of Fast and Slow Muscle Fibres at Stop and Start of Stepping of an Insect Leg. PLoS ONE, 2013, 8, e78246.	2.5	18
96	Force dynamics and synergist muscle activation in stick insects: the effects of using joint torques as mechanical stimuli. Journal of Neurophysiology, 2018, 120, 1807-1823.	1.8	17
97	Loss of miR-210 leads to progressive retinal degeneration in<i>Drosophila melanogaster</i>. Life Science Alliance, 2019, 2, e201800149.	2.8	16
98	Body side-specific control of motor activity during turning in a walking animal. ELife, 2016, 5, .	6.0	16
99	Identification of the origin of force-feedback signals influencing motor neurons of the thoraco-coxal joint in an insect. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2019, 205, 253-270.	1.6	15
100	Gradients in mechanotransduction of force and body weight in insects. Arthropod Structure and Development, 2020, 58, 100970.	1.4	14
101	Introduction to spasticity and related mouse models. Experimental Neurology, 2021, 335, 113491.	4.1	14
102	Activity of fin muscles and fin motoneurons during swimming motor pattern in the lamprey. European Journal of Neuroscience, 2006, 23, 2012-2026.	2.6	13
103	The role of leg touchdown for the control of locomotor activity in the walking stick insect. Journal of Neurophysiology, 2015, 113, 2309-2320.	1.8	13
104	Oil and Hook Electrodes for en Passant Recording from Small Nerves. Methods in Neurosciences, 1991, 4, 266-278.	0.5	13
105	Simple Muscle Models Regularize Motion in a Robotic Leg with Neurally-Based Step Generation. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	12
106	Task-dependent modification of leg motor neuron synaptic input underlying changes in walking direction and walking speed. Journal of Neurophysiology, 2015, 114, 1090-1101.	1.8	12
107	Distributed processing of load and movement feedback in the premotor network controlling an insect leg joint. Journal of Neurophysiology, 2021, 125, 1800-1813.	1.8	12
108	Activity-Dependent Sensitivity of Proprioceptive Sensory Neurons in the Stick Insect Femoral Chordotonal Organ. Journal of Neurophysiology, 2002, 88, 2387-2398.	1.8	10

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109	Descending control of locomotor circuits. Current Opinion in Physiology, 2019, 8, 94-98.	1.8	10
110	Ultra high-resolution biomechanics suggest that substructures within insect mechanosensors decisively affect their sensitivity. Journal of the Royal Society Interface, 2022, 19, 20220102.	3.4	9
111	Unravelling intra- and intersegmental neuronal connectivity between central pattern generating networks in a multi-legged locomotor system. PLoS ONE, 2019, 14, e0220767.	2.5	8
112	Evaluation of force feedback in walking using joint torques as â€œnaturalisticâ€• stimuli. Journal of Neurophysiology, 2021, 126, 227-248.	1.8	8
113	Vibration signals from the FT joint can induce phase transitions in both directions in motoneuron pools of the stick insect walking system. Journal of Neurobiology, 2003, 56, 125-138.	3.6	7
114	Temporal differences between load and movement signal integration in the sensorimotor network of an insect leg. Journal of Neurophysiology, 2021, 126, 1875-1890.	1.8	7
115	The locust tegula: kinematic parameters and activity pattern during the wing stroke. Journal of Experimental Biology, 2002, 205, 1531-45.	1.7	7
116	Dynamic Synaptic Arrangement in Sensory-Motor Pathways of the Adult Locust Flight System. Die Naturwissenschaften, 1997, 84, 234-237.	1.6	6
117	Neuronal control of walking: studies on insects. E-Neuroforum, 2015, 6, 105-112.	0.1	6
118	Calcium imaging of CPG-evoked activity in efferent neurons of the stick insect. PLoS ONE, 2018, 13, e0202822.	2.5	6
119	Body side-specific changes in sensorimotor processing of movement feedback in a walking insect. Journal of Neurophysiology, 2019, 122, 2173-2186.	1.8	6
120	Hypothalamic Pomc Neurons Innervate the Spinal Cord and Modulate the Excitability of Premotor Circuits. Current Biology, 2020, 30, 4579-4593.e7.	3.9	6
121	Direction-Specific Footpaths Can Be Predicted by the Motion of a Single Point on the Body of the Fruit Fly Drosophila Melanogaster. Lecture Notes in Computer Science, 2018, , 477-489.	1.3	5
122	Correlation between ranges of leg walking angles and passive rest angles among leg types in stick insects. Current Biology, 2022, 32, 2334-2340.e3.	3.9	5
123	Neuromuscular plasticity in the locust after permanent removal of an excitatory motoneuron of the extensor tibiae muscle. , 2000, 42, 148-159.		4
124	Controlling the â€˜simpleâ€™ â€“ descending signals from the brainstem command the sign of a stretch reflex in a vertebrate spinal cord. Journal of Physiology, 2017, 595, 625-626.	2.9	4
125	From injury to full repair: nerve regeneration and functional recovery in the common octopus, <i>Octopus vulgaris</i>. Journal of Experimental Biology, 2019, 222, .	1.7	4
126	A laser-supported lowerable surface setup to study the role of ground contact during stepping. Journal of Neuroscience Methods, 2013, 215, 224-233.	2.5	3

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127	Neuromodulation Can Be Simple: Myoinhibitory Peptide, Contained in Dedicated Regulatory Pathways, Is the Only Neurally-Mediated Peptide Modulator of Stick Insect Leg Muscle. Journal of Neuroscience, 2021, 41, 2911-2929.	3.6	3
128	Fiber-type distribution in insect leg muscles parallels similarities and differences in the functional role of insect walking legs. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2017, 203, 773-790.	1.6	2
129	Proprioception: Blurring the boundaries of central andÂperipheral control. Current Biology, 2021, 31, R444-R445.	3.9	2
130	Flexibility of a Proprioceptive Feedback System Results from its â€œParliamentaryâ€•(Distributed) Organization. Studies in Cognitive Systems, 2000, , 267-286.	0.1	2
131	Hans-Joachim PflÃ¼ger: scientist, citizen, cosmopolitan. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2022, 208, 457-461.	1.6	2
132	Thorax-Segment- and Leg-Segment-Specific Motor Control for Adaptive Behavior. Frontiers in Physiology, 2022, 13, .	2.8	2
133	Ursachen der Katalepsie von Stabheuschrecken. E-Neuroforum, 1997, 3, 15-23.	0.1	1
134	Connecting the <i>micro</i> with the <i>macro</i> level in motor control: unravelling general sensory influences on leg stepping. Journal of Physiology, 2019, 597, 2971-2972.	2.9	1
135	Optical inactivation of a proprioceptor in an insect by non-genetic tools. Journal of Neuroscience Methods, 2021, 363, 109322.	2.5	1
136	Hans-Joachim PflÃ¼gerÂâ€“ scientist, citizen, cosmopolitan. Neuroforum, 2022, 28, 117-121.	0.3	1
137	Existence of a Long-Range Caudo-Rostral Sensory Influence in Terrestrial Locomotion. Journal of Neuroscience, 2022, 42, 4841-4851.	3.6	1
138	Editorial. BioSystems, 2017, 161, 1-2.	2.0	0
139	Nachruf auf Prof. Dr. Dr. h. c. mult. Franz Huber. Neuroforum, 2018, 24, 141-144.	0.3	0
140	Drosophila neuroscience: Unravelling the circuits ofÂsensory-motor control in the fly. Current Biology, 2021, 31, R394-R396.	3.9	0
141	Network Architecture Producing Swing to Stance Transitions in an Insect Walking System. Frontiers in Insect Science, 2022, 2, .	2.1	0