Dai Owaki

List of Publications by Year
in descending order

59 papers	814 citations	840776 11 h-index	552781 26 g-index
62 all docs	62 docs citations	62 times ranked	438 citing authors

#	Article	IF	Citations
1	Simple robot suggests physical interlimb communication is essential for quadruped walking. Journal of the Royal Society Interface, 2013, 10, 20120669.	3.4	170
2	A Quadruped Robot Exhibiting Spontaneous Gait Transitions from Walking to Trotting to Galloping. Scientific Reports, 2017, 7, 277.	3.3	163
3	A Minimal Model Describing Hexapedal Interlimb Coordination: The Tegotae-Based Approach. Frontiers in Neurorobotics, 2017, 11, 29.	2.8	66
4	Decentralized control mechanism underlying interlimb coordination of millipedes. Bioinspiration and Biomimetics, 2017, 12, 036007.	2.9	47
5	Decentralized control scheme for myriapod robot inspired by adaptive and resilient centipede locomotion. PLoS ONE, 2017, 12, e0171421.	2.5	39
6	A 2-D Passive-Dynamic-Running Biped With Elastic Elements. IEEE Transactions on Robotics, 2011, 27, 156-162.	10.3	29
7	Hereditary sensory and autonomic neuropathy types 4 and 5: Review and proposal of a new rehabilitation method. Neuroscience Research, 2016, 104, 105-111.	1.9	24
8	A two-dimensional passive dynamic running biped with knees. , 2010, , .		18
9	Listen to body's message: Quadruped robot that fully exploits physical interaction between legs. , 2012, , .		16
10	Ankleâ€"foot orthosis with dorsiflexion resistance using spring-cam mechanism increases knee flexion in the swing phase during walking in stroke patients with hemiplegia. Gait and Posture, 2020, 81, 27-32.	1.4	16
11	Spontaneous gait transition to high-speed galloping by reconciliation between body support and propulsion. Advanced Robotics, 2018, 32, 794-808.	1.8	15
12	Quantitative Gait Assessment With Feature-Rich Diversity Using Two IMU Sensors. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 639-648.	3.2	13
13	Tegotae-Based Control Produces Adaptive Inter- and Intra-limb Coordination in Bipedal Walking. Frontiers in Neurorobotics, 2021, 15, 629595.	2.8	13
14	Recent Advances in Quantitative Gait Analysis Using Wearable Sensors: A Review. IEEE Sensors Journal, 2021, 21, 26470-26487.	4.7	13
15	Enhancing Stability of a Passive Dynamic Running Biped by Exploiting a Nonlinear Spring. , 2006, , .		12
16	Leg amputation modifies coordinated activation of the middle leg muscles in the cricket Gryllus bimaculatus. Scientific Reports, 2021, 11, 1327.	3.3	10
17	On the embodiment that enables passive dynamic bipedal running. , 2008, , .		9
18	Implicit Control Law Embedded in Control System Solves Problem of Adaptive Function!?. Journal of the Robotics Society of Japan, 2010, 28, 491-502.	0.1	9

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19	Short-Term Effect of Prosthesis Transforming Sensory Modalities on Walking in Stroke Patients with Hemiparesis. Neural Plasticity, 2016, 2016, 1-9.	2.2	8
20	Understanding the common principle underlying passive dynamic walking and running. , 2009, , .		7
21	Quadruped Gait Transition from Walk to Pace to Rotary Gallop by Exploiting Head Movement. Lecture Notes in Computer Science, 2016, , 532-539.	1.3	7
22	A Survey of Sim-to-Real Transfer Techniques Applied to Reinforcement Learning for Bioinspired Robots. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 3444-3459.	11.3	7
23	Regulation of quasi-joint stiffness by combination of activation of ankle muscles in midstances during gait in patients with hemiparesis. Gait and Posture, 2018, 62, 378-383.	1.4	6
24	A Comparative Study of Adaptive Interlimb Coordination Mechanisms for Self-Organized Robot Locomotion. Frontiers in Robotics and AI, 2021, 8, 638684.	3.2	6
25	Centipede Type Robot i-CentiPot: From Machine to Creatures. Journal of Robotics and Mechatronics, 2019, 31, 723-726.	1.0	6
26	Dual structure of Mobiligence—Implicit Control and Explicit Control—. , 2010, , .		5
27	A CPG-based decentralized control of a quadruped robot inspired by true slime mold. , 2010, , .		5
28	A simple body-limb coordination model that mimics primitive tetrapod walking. , 2017, , .		5
29	Adaptive and Energy-Efficient Optimal Control in CPGs Through Tegotae-Based Feedback. Frontiers in Robotics and AI, 2021, 8, 632804.	3.2	5
30	Seamless Temporal Gait Evaluation during Walking and Running Using Two IMU Sensors. , 2021, 2021, 6835-6840.		5
31	Mechanical Dynamics That Enables Stable Passive Dynamic Bipedal Running â€“ Enhancing Self-Stability by Exploiting Nonlinearity in the Leg Elasticity â€“. Journal of Robotics and Mechatronics, 2007, 19, 374-380.	1.0	4
32	A Simple Measure for Evaluating Gait Patterns during Multi-Legged Locomotion. SICE Journal of Control Measurement and System Integration, 2014, 7, 214-218.	0.7	4
33	Spiking Neural Network Discovers Energy-Efficient Hexapod Motion in Deep Reinforcement Learning. IEEE Access, 2021, 9, 150345-150354.	4.2	4
34	Classification of Ankle Joint Stiffness during Walking to Determine the Use of Ankle Foot Orthosis after Stroke. Brain Sciences, 2021, 11, 1512.	2.3	4
35	Motion Hacking â€“ <i>Understanding by Controlling Animals</i> â€“. Journal of Robotics and Mechatronics, 2022, 34, 301-303.	1.0	4
36	Gait transition between passive dynamic walking and running by changing the body elasticity. , 2008, , .		3

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37	Stabilization mechanism underlying passive dynamic running. Advanced Robotics, 2013, 27, 1399-1407.	1.8	3
38	Myriapod robot i-CentiPot via passive dynamics â€" Emergence of various locomotions for foot movement. , 2017, , .		3
39	Modeling and Control of a Hybrid Wheeled Legged Robot: Disturbance Analysis. , 2020, , .		3
40	Individual deformability compensation of soft hydraulic actuators through iterative learning-based neural network. Bioinspiration and Biomimetics, 2021, 16, 056016.	2.9	3
41	Two-Week Rehabilitation with Auditory Biofeedback Prosthesis Reduces Whole Body Angular Momentum Range during Walking in Stroke Patients with Hemiplegia: A Randomized Controlled Trial. Brain Sciences, 2021, 11, 1461.	2.3	3
42	Prediction of Whole-Body Velocity and Direction From Local Leg Joint Movements in Insect Walking via LSTM Neural Networks. IEEE Robotics and Automation Letters, 2022, 7, 9389-9396.	5.1	3
43	Adaptive bipedal walking through sensory-motor coordination yielded from soft deformable feet. , 2012, , .		2
44	Auditory foot: A novel auditory feedback system regarding kinesthesia. , 2015, , .		2
45	â€œTEGOTAEâ€•Based Control of Bipedal Walking. Lecture Notes in Computer Science, 2016, , 472-479.	1.3	2
46	Wearable Vibration Sensor for Measuring the Wing Flapping of Insects. Sensors, 2021, 21, 593.	3.8	2
47	Leg Stiffness Control Based on â€œTEGOTAEâ€•for Quadruped Locomotion. Lecture Notes in Computer Science, 2016, , 79-84.	1.3	2
48	Deep Reinforcement Learning with Gait Mode Specification for Quadrupedal Trot-Gallop Energetic Analysis. , 2021, 2021, 4583-4587.		2
49	An Oscillator Model That Enables Motion Stabilization and Motion Exploration by Exploiting Multi-Rhythmicity. Advanced Robotics, 2011, 25, 1139-1158.	1.8	1
50	Reconsidering inter- and intra-limb coordination mechanisms in quadruped locomotion. , 2012, , .		1
51	Decentralized Control Scheme for Myriapod Locomotion That Exploits Local Force Feedback. Lecture Notes in Computer Science, 2016, , 449-453.	1.3	1
52	Toward Elucidating the Control Mechanism in Legged Locomotion. The Brain & Neural Networks, 2017, 24, 162-171.	0.1	1
53	Motion Hacking. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2020, 2020, 2A1-K06.	0.0	1
54	Auditory biofeedback during walking reduces foot contact pressure in a patient with congenital insensitivity to pain. , 2016, , .		0

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55	Decentralized Control Scheme for Centipede Locomotion Based on Local Reflexes. Lecture Notes in Computer Science, 2016, , 545-547.	1.3	0
56	A Multi-rhythmic Oscillator Model that Can Integrate Motion Stabilization with Motion Exploration. Transactions of the Society of Instrument and Control Engineers, 2010, 46, 562-571.	0.2	0
57	An Ankle Foot Orthosis with Stiffness Change Using Spring-cam Mechanism. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2017, 2017, 2P1-P11.	0.0	0
58	Quadruped Robots Exhibiting Gait Transitions in Animals. Journal of the Robotics Society of Japan, 2019, 37, 126-131.	0.1	0
59	Editorial: Biological and Robotic Inter-Limb Coordination. Frontiers in Robotics and AI, 2022, 9, 875493.	3.2	0