

Auke Ijspeert

List of Publications by Year in descending order

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Version: 2024-02-01

274
papers

15,614
citations

31902

53
h-index

23472

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283
all docs

283
docs citations

283
times ranked

7885
citing authors

#	ARTICLE	IF	CITATIONS
1	Benefits and Potential of a Neuromuscular Controller for Exoskeleton-Assisted Walking. <i>Biosystems and Biorobotics</i> , 2022, , 281-285.	0.2	3
2	Combining Reflexes and External Sensory Information in a Neuromusculoskeletal Model to Control a Quadruped Robot. <i>IEEE Transactions on Cybernetics</i> , 2022, 52, 7981-7994.	6.2	10
3	Stability and manoeuvrability in animal movement: lessons from biology, modelling and robotics. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2022, 289, 20212492.	1.2	6
4	Investigation of neural and biomechanical impairments leading to pathological toe and heel gaits using neuromusculoskeletal modelling. <i>Journal of Physiology</i> , 2022, 600, 2691-2712.	1.3	10
5	NeuroMechFly, a neuromechanical model of adult <i>Drosophila melanogaster</i> . <i>Nature Methods</i> , 2022, 19, 620-627.	9.0	32
6	Control of Aquatic and Terrestrial Gaits in Salamander. , 2022, , 982-989.		0
7	Symbion Exoskeleton: Design, Control, and Evaluation of a Modular Exoskeleton for Incomplete and Complete Spinal Cord Injured Individuals. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2021, 29, 330-339.	2.7	52
8	AQuRo: A Cat-like Adaptive Quadruped Robot With Novel Bio-Inspired Capabilities. <i>Frontiers in Robotics and AI</i> , 2021, 8, 562524.	2.0	14
9	Wearable Sensor-Based Real-Time Gait Detection: A Systematic Review. <i>Sensors</i> , 2021, 21, 2727.	2.1	110
10	Sensory modulation of gait characteristics in human locomotion: A neuromusculoskeletal modeling study. <i>PLoS Computational Biology</i> , 2021, 17, e1008594.	1.5	16
11	Spontaneous Gait Transitions of Sprawling Quadruped Locomotion by Sensory-Driven Body-Limb Coordination Mechanisms. <i>Frontiers in Neurorobotics</i> , 2021, 15, 645731.	1.6	7
12	Review of control strategies for lower-limb exoskeletons to assist gait. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2021, 18, 119.	2.4	111
13	Emergence of robust self-organized undulatory swimming based on local hydrodynamic force sensing. <i>Science Robotics</i> , 2021, 6, .	9.9	67
14	A spiking central pattern generator for the control of a simulated lamprey robot running on SpiNNaker and Loihi neuromorphic boards. <i>Neuromorphic Computing and Engineering</i> , 2021, 1, 014005.	2.8	17
15	Slow-fast Dynamics of Strongly Coupled Adaptive Frequency Oscillators. <i>SIAM Journal on Applied Dynamical Systems</i> , 2021, 20, 1985-2012.	0.7	3
16	A Whole-Body Musculoskeletal Model of the Mouse. <i>IEEE Access</i> , 2021, 9, 163861-163881.	2.6	9
17	Coupling-dependent convergence behavior of phase oscillators with tegotae-control. , 2021, , .		0
18	Towards rich motion skills with the lightweight quadruped robot Serval. <i>Adaptive Behavior</i> , 2020, 28, 129-150.	1.1	13

#	ARTICLE	IF	CITATIONS
19	Amphibious and Sprawling Locomotion: From Biology to Robotics and Back. Annual Review of Control, Robotics, and Autonomous Systems, 2020, 3, 173-193.	7.5	42
20	Walking with Salamanders: From Molecules to Biorobotics. Trends in Neurosciences, 2020, 43, 916-930.	4.2	54
21	Spatiotemporal Maps of Proprioceptive Inputs to the Cervical Spinal Cord During Three-Dimensional Reaching and Grasping. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1668-1677.	2.7	8
22	Bioinspired Postural Controllers for a Locked-Ankle Exoskeleton Targeting Complete SCI Users. Frontiers in Robotics and AI, 2020, 7, 553828.	2.0	3
23	Reproducing Five Motor Behaviors in a Salamander Robot With Virtual Muscles and a Distributed CPG Controller Regulated by Drive Signals and Proprioceptive Feedback. Frontiers in Neurobotics, 2020, 14, 604426.	1.6	21
24	A Muscle-Reflex Model of Forelimb and Hindlimb of Felidae Family of Animal with Dynamic Pattern Formation Stimuli. , 2020, , .		6
25	Exploring the Contribution of Proprioceptive Reflexes to Balance Control in Perturbed Standing. Frontiers in Bioengineering and Biotechnology, 2020, 8, 866.	2.0	12
26	Kubits: Solid-State Self-Reconfiguration With Programmable Magnets. IEEE Robotics and Automation Letters, 2020, 5, 6443-6450.	3.3	11
27	Trajectory Planning of a Bio-inspired Walker in 3D Cluttered Environments using Internal Models. , 2020, , .		0
28	A Neuro-Inspired Computational Model for a Visually Guided Robotic Lamprey Using Frame and Event Based Cameras. IEEE Robotics and Automation Letters, 2020, 5, 2395-2402.	3.3	9
29	Roombots extended: Challenges in the next generation of self-reconfigurable modular robots and their application in adaptive and assistive furniture. Robotics and Autonomous Systems, 2020, 127, 103467.	3.0	37
30	Design and development of the efficient anguilliform swimming robot“MAR”. Bioinspiration and Biomimetics, 2020, 15, 035001.	1.5	15
31	Neuromuscular Controller Embedded in a Powered Ankle Exoskeleton: Effects on Gait, Clinical Features and Subjective Perspective of Incomplete Spinal Cord Injured Subjects. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1157-1167.	2.7	34
32	Sprawling Quadruped Robot Driven by Decentralized Control With Cross-Coupled Sensory Feedback Between Legs and Trunk. Frontiers in Neurobotics, 2020, 14, 607455.	1.6	11
33	Adaptive control for hindlimb locomotion in a simulated mouse through temporal cerebellar learning. , 2020, , .		0
34	Emergent adaptive gait generation through Hebbian sensor-motor maps by morphological probing. , 2020, , .		2
35	A Neural Primitive model with Sensorimotor Coordination for Dynamic Quadruped Locomotion with Malfunction Compensation. , 2020, , .		6
36	Gait training with Achilles ankle exoskeleton in chronic incomplete spinal cord injury subjects. Journal of Biological Regulators and Homeostatic Agents, 2020, 34, 147-164. Technology in Medicine.	0.7	2

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37	An Optimal Planning Framework to Deploy Self-Reconfigurable Modular Robots. IEEE Robotics and Automation Letters, 2019, 4, 4278-4285.	3.3	15
38	The current state and future outlook of rescue robotics. Journal of Field Robotics, 2019, 36, 1171-1191.	3.2	182
39	Haptic Feedback Perception and Learning With Cable-Driven Guidance in Exosuit Teleoperation of a Simulated Drone. IEEE Transactions on Haptics, 2019, 12, 375-385.	1.8	13
40	From standing balance to walking: A single control structure for a continuum of gaits. International Journal of Robotics Research, 2019, 38, 1695-1716.	5.8	2
41	Decentralized control with cross-coupled sensory feedback between body and limbs in sprawling locomotion. Bioinspiration and Biomimetics, 2019, 14, 066010.	1.5	27
42	Scalable Closed-Form Trajectories for Periodic and Non-Periodic Human-Like Walking. , 2019, , .		0
43	Online Gait Transitions and Disturbance Recovery for Legged Robots via the Feasible Impulse Set. IEEE Robotics and Automation Letters, 2019, 4, 1611-1618.	3.3	24
44	Minimalist Design of a 3-Axis Passive Compliant Foot for Sprawling Posture Robots. , 2019, , .		3
45	Bipedal walking and push recovery with a stepping strategy based on time-projection control. International Journal of Robotics Research, 2019, 38, 587-611.	5.8	13
46	Control theory in biology and medicine. Biological Cybernetics, 2019, 113, 1-6.	0.6	16
47	Mechanics of very slow human walking. Scientific Reports, 2019, 9, 18079.	1.6	35
48	Decoding the essential interplay between central and peripheral control in adaptive locomotion of amphibious centipedes. Scientific Reports, 2019, 9, 18288.	1.6	39
49	Benchmarking Agility For Multilegged Terrestrial Robots. IEEE Transactions on Robotics, 2019, 35, 529-535.	7.3	12
50	Reverse-engineering the locomotion of a stem amniote. Nature, 2019, 565, 351-355.	13.7	165
51	Neuromuscular model achieving speed control and steering with a 3D bipedal walker. Autonomous Robots, 2019, 43, 1537-1554.	3.2	11
52	CPG-Based Control of Humanoid Robot Locomotion. , 2019, , 1099-1133.		1
53	Walking Assistance of Subjects with Spinal Cord Injury with an Ankle Exoskeleton and Neuromuscular Controller. Biosystems and Biorobotics, 2019, , 304-308.	0.2	0
54	Bio-inspired controller achieving forward speed modulation with a 3D bipedal walker. International Journal of Robotics Research, 2018, 37, 168-196.	5.8	38

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55	Decoding the Neural Mechanisms Underlying Locomotion Using Mathematical Models and Bio-inspired Robots: From Lamprey to Human Locomotion. Springer Proceedings in Advanced Robotics, 2018, , 177-186.	0.9	7
56	Fast Multi-Contact Whole-Body Motion Planning with Limb Dynamics. , 2018, , .		5
57	Stiffness Variability in Jamming of Compliant Granules and a Case Study Application in Climbing Vertical Shafts. , 2018, , .		7
58	Playdough to Roombots: Towards a Novel Tangible User Interface for Self-reconfigurable Modular Robots. , 2018, , .		1
59	Augmented Neuromuscular Gait Controller Enables Real-time Tracking of Bipedal Running Speed. , 2018, , .		1
60	Compliant universal grippers as adaptive feet in legged robots. Advanced Robotics, 2018, 32, 825-836.	1.1	15
61	Oncilla Robot: A Versatile Open-Source Quadruped Research Robot With Compliant Pantograph Legs. Frontiers in Robotics and AI, 2018, 5, 67.	2.0	34
62	Undulatory Swimming Locomotion Driven by CPG with Multimodal Local Sensory Feedback. Lecture Notes in Computer Science, 2018, , 1-5.	1.0	1
63	A simple model of mechanical effects to estimate metabolic cost of human walking. Scientific Reports, 2018, 8, 10998.	1.6	29
64	Effects of passive and active joint compliance in quadrupedal locomotion. Advanced Robotics, 2018, 32, 809-824.	1.1	6
65	Accelerated Sensorimotor Learning of Compliant Movement Primitives. IEEE Transactions on Robotics, 2018, 34, 1636-1642.	7.3	24
66	Towards Rich Motion Skills with the Lightweight Quadruped Robot Serval - A Design, Control and Experimental Study. Lecture Notes in Computer Science, 2018, , 41-55.	1.0	9
67	Human Intention Detection as a Multiclass Classification Problem: Application in Physical Human-Robot Interaction While Walking. IEEE Robotics and Automation Letters, 2018, 3, 4171-4178.	3.3	26
68	Haptic Guidance with a Soft Exoskeleton Reduces Error in Drone Teleoperation. Lecture Notes in Computer Science, 2018, , 404-415.	1.0	7
69	Quadruped locomotion. , 2018, , .		3
70	Spinal joint compliance and actuation in a simulated bounding quadruped robot. Autonomous Robots, 2017, 41, 437-452.	3.2	46
71	Climbing favours the tripod gait over alternative faster insect gaits. Nature Communications, 2017, 8, 14494.	5.8	86
72	Environmental monitoring using autonomous vehicles: a survey of recent searching techniques. Current Opinion in Biotechnology, 2017, 45, 76-84.	3.3	119

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73	JammJoint: A Variable Stiffness Device Based on Granular Jamming for Wearable Joint Support. IEEE Robotics and Automation Letters, 2017, 2, 849-855.	3.3	80
74	Spine Controller for a Sprawling Posture Robot. IEEE Robotics and Automation Letters, 2017, 2, 1195-1202.	3.3	32
75	3LP: A linear 3D-walking model including torso and swing dynamics. International Journal of Robotics Research, 2017, 36, 436-455.	5.8	28
76	The Human Central Pattern Generator for Locomotion: Does It Exist and Contribute to Walking?. Neuroscientist, 2017, 23, 649-663.	2.6	130
77	Bio-inspired control of joint torque and knee stiffness in a robotic lower limb exoskeleton using a central pattern generator. , 2017, 2017, 1387-1394.		16
78	A multidirectional gravity-assist algorithm that enhances locomotor control in patients with stroke or spinal cord injury. Science Translational Medicine, 2017, 9, .	5.8	42
79	Adaptive Natural Oscillator to exploit natural dynamics for energy efficiency. Robotics and Autonomous Systems, 2017, 97, 51-60.	3.0	19
80	Combining a 3D Reflex Based Neuromuscular Model with a State Estimator Based on Central Pattern Generators. Biosystems and Biorobotics, 2017, , 633-637.	0.2	1
81	A Versatile Neuromuscular Exoskeleton Controller for Gait Assistance: A Preliminary Study on Spinal Cord Injury Patients. Biosystems and Biorobotics, 2017, , 163-167.	0.2	3
82	CPG network to generate the swimming motion of the crawl stroke. Mechanical Engineering Journal, 2017, 4, 16-00279-16-00279.	0.2	1
83	Challenges in visual and inertial information gathering for a sprawling posture robot. , 2017, , .		4
84	Model predictive control based framework for CoM control of a quadruped robot. , 2017, , .		15
85	Active stabilization of a stiff quadruped robot using local feedback. , 2017, , .		4
86	Self-reconfigurable modular robot interface using virtual reality: Arrangement of furniture made out of roombots modules. , 2017, , .		2
87	A simple body-limb coordination model that mimics primitive tetrapod walking. , 2017, , .		5
88	An Adaptive Neuromuscular Controller for Assistive Lower-Limb Exoskeletons: A Preliminary Study on Subjects with Spinal Cord Injury. Frontiers in Neurorobotics, 2017, 11, 30.	1.6	58
89	Hammering Does Not Fit Fitts' Law. Frontiers in Computational Neuroscience, 2017, 11, 45.	1.2	3
90	Control of Motion and Compliance. , 2017, , 135-346.		3

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91	CPC-Based Control of Humanoid Robot Locomotion. , 2017, , 1-35.		8
92	Interactive locomotion: Investigation and modeling of physically-paired humans while walking. PLoS ONE, 2017, 12, e0179989.	1.1	12
93	Symmetric virtual constraints for periodic walking of legged robots. , 2016, , .		7
94	Optimal search strategies for pollutant source localization. , 2016, , .		12
95	Designing a virtual whole body tactile sensor suit for a simulated humanoid robot using inverse dynamics. , 2016, , .		2
96	Envirobot: A bio-inspired environmental monitoring platform. , 2016, , .		17
97	On designing an active tail for legged robots: simplifying control via decoupling of control objectives. Industrial Robot, 2016, 43, 338-346.	1.2	19
98	Bioinspired Motor Control for Articulated Robots [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2016, 23, 20-21.	2.2	0
99	Bio-inspired balance controller for a humanoid robot. , 2016, , .		6
100	Friction and damping of a compliant foot based on granular jamming for legged robots. , 2016, , .		23
101	Biologically Inspired Robotics. Springer Handbooks, 2016, , 2015-2034.	0.3	22
102	Effects of a neuromuscular controller on a powered ankle exoskeleton during human walking. , 2016, , .		19
103	Interfacing a salamander brain with a salamander-like robot: Control of speed and direction with calcium signals from brainstem reticulospinal neurons. , 2016, , .		8
104	Natural user interface for lighting control: Case study on desktop lighting using modular robots. , 2016, , .		3
105	From cineradiography to biorobots: an approach for designing robots to emulate and study animal locomotion. Journal of the Royal Society Interface, 2016, 13, 20151089.	1.5	97
106	Autonomous Learning of Internal Dynamic Models for Reaching Tasks. Advances in Intelligent Systems and Computing, 2016, , 439-447.	0.5	1
107	Bio-inspired walking for humanoid robots using feet with human-like compliance and neuromuscular control. , 2015, , .		11
108	Practical considerations in using inverse dynamics on a humanoid robot: Torque tracking, sensor fusion and Cartesian control laws. , 2015, , .		13

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109	Compliant snake robot locomotion on horizontal pipes. , 2015, , .		13
110	Where to place cameras on a snake robot: Focus on camera trajectory and motion blur. , 2015, , .		12
111	Kinematic and Gait Similarities between Crawling Human Infants and Other Quadruped Mammals. Frontiers in Neurology, 2015, 6, 17.	1.1	32
112	Comparing the effect of different spine and leg designs for a small bounding quadruped robot. , 2015, , .		60
113	Inverse kinematics and reflex based controller for body-limb coordination of a salamander-like robot walking on uneven terrain. , 2015, , .		25
114	Bio-inspired learning and database expansion of Compliant Movement Primitives. , 2015, , .		4
115	A general whole-body compliance framework for humanoid robots. , 2015, , .		2
116	Biped gait controller for large speed variations, combining reflexes and a central pattern generator in a neuromuscular model. , 2015, , .		46
117	Role of compliance on the locomotion of a reconfigurable modular snake robot. , 2015, , .		11
118	Experimental validation of a bio-inspired controller for dynamic walking with a humanoid robot. , 2015, , .		8
119	Real-time full body motion imitation on the COMAN humanoid robot. Robotica, 2015, 33, 1049-1061.	1.3	18
120	Flexibility of the axial central pattern generator network for locomotion in the salamander. Journal of Neurophysiology, 2015, 113, 1921-1940.	0.9	38
121	ON DESIGNING AN ACTIVE TAIL FOR BODY-PITCH CONTROL IN LEGGED ROBOTS VIA DECOUPLING OF CONTROL OBJECTIVES. , 2015, , .		2
122	Kinematic primitives for walking and trotting gaits of a quadruped robot with compliant legs. Frontiers in Computational Neuroscience, 2014, 8, 27.	1.2	25
123	The contribution of a central pattern generator in a reflex-based neuromuscular model. Frontiers in Human Neuroscience, 2014, 8, 371.	1.0	115
124	Improved Lighthill fish swimming model for bio-inspired robots: Modeling, computational aspects and experimental comparisons. International Journal of Robotics Research, 2014, 33, 1322-1341.	5.8	105
125	Learning coupling terms for obstacle avoidance. , 2014, , .		30
126	Rich periodic motor skills on humanoid robots: Riding the pedal racer. , 2014, , .		7

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127	Natural user interface for Roombots. , 2014, , .		5
128	Versatile and robust 3D walking with a simulated humanoid robot (Atlas): A model predictive control approach. , 2014, , .		40
129	Control of Aquatic and Terrestrial Gaits in Salamander. , 2014, , 1-9.		2
130	Natural dynamics modification for energy efficiency: A data-driven parallel compliance design method. , 2014, , .		18
131	Roombots: A hardware perspective on 3D self-reconfiguration and locomotion with a homogeneous modular robot. Robotics and Autonomous Systems, 2014, 62, 1016-1033.	3.0	97
132	Engineering intelligent electronic systems based on computational neuroscience [scanning the issue]. Proceedings of the IEEE, 2014, 102, 646-651.	16.4	13
133	Coupling Movement Primitives: Interaction With the Environment and Bimanual Tasks. IEEE Transactions on Robotics, 2014, 30, 816-830.	7.3	155
134	Robotics and Neuroscience. Current Biology, 2014, 24, R910-R920.	1.8	64
135	Biorobotics: Using robots to emulate and investigate agile locomotion. Science, 2014, 346, 196-203.	6.0	367
136	Meta Morphic Particle Swarm Optimization. Studies in Computational Intelligence, 2014, , 231-244.	0.7	1
137	Salamandra Robotica II: An Amphibious Robot to Study Salamander-Like Swimming and Walking Gaits. IEEE Transactions on Robotics, 2013, 29, 308-320.	7.3	213
138	Decoding the mechanisms of gait generation in salamanders by combining neurobiology, modeling and robotics. Biological Cybernetics, 2013, 107, 545-564.	0.6	35
139	Where are we in understanding salamander locomotion: biological and robotic perspectives on kinematics. Biological Cybernetics, 2013, 107, 529-544.	0.6	61
140	Horse-like walking, trotting, and galloping derived from kinematic Motion Primitives (kMPs) and their application to walk/trot transitions in a compliant quadruped robot. Biological Cybernetics, 2013, 107, 309-320.	0.6	49
141	Piecewise linear spine for speedâ€“energy efficiency trade-off in quadruped robots. Robotics and Autonomous Systems, 2013, 61, 1350-1359.	3.0	36
142	A Salamander's Flexible Spinal Network for Locomotion, Modeled at Two Levels of Abstraction. Integrative and Comparative Biology, 2013, 53, 269-282.	0.9	35
143	A general family of morphed nonlinear phase oscillators with arbitrary limit cycle shape. Physica D: Nonlinear Phenomena, 2013, 263, 41-56.	1.3	42
144	Gait optimization for roombots modular robots — Matching simulation and reality. , 2013, , .		11

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145	Foreword for the special issue on Lamprey and Salamander Robots and the Central Nervous System. <i>Biological Cybernetics</i> , 2013, 107, 495-496.	0.6	4
146	Learning robot gait stability using neural networks as sensory feedback function for Central Pattern Generators. , 2013, , .		45
147	Real-Time Estimate of Velocity and Acceleration of Quasi-Periodic Signals Using Adaptive Oscillators. <i>IEEE Transactions on Robotics</i> , 2013, 29, 783-791.	7.3	56
148	Dynamical Movement Primitives: Learning Attractor Models for Motor Behaviors. <i>Neural Computation</i> , 2013, 25, 328-373.	1.3	1,128
149	From lamprey to salamander: an exploratory modeling study on the architecture of the spinal locomotor networks in the salamander. <i>Biological Cybernetics</i> , 2013, 107, 565-587.	0.6	38
150	An experimental study on the role of compliant elements on the locomotion of the self-reconfigurable modular robots Roombots. , 2013, , .		6
151	Collaborative manipulation and transport of passive pieces using the self-reconfigurable modular robots roombots. , 2013, , .		8
152	Towards dynamic trot gait locomotion: Design, control, and experiments with Cheetah-cub, a compliant quadruped robot. <i>International Journal of Robotics Research</i> , 2013, 32, 932-950.	5.8	386
153	Exploiting natural dynamics in biped locomotion using variable impedance control. , 2013, , .		3
154	Survey and Introduction to the Focused Section on Bio-Inspired Mechatronics. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013, 18, 409-418.	3.7	35
155	Modulation of motor primitives using force feedback: Interaction with the environment and bimanual tasks. , 2013, , .		14
156	Modular control of limit cycle locomotion over unperceived rough terrain. , 2013, , .		31
157	Benefits of an active spine supported bounding locomotion with a small compliant quadruped robot. , 2013, , .		69
158	Central Pattern Generators augmented with virtual model control for quadruped rough terrain locomotion. , 2013, , .		35
159	Compliant and adaptive control of a planar monopod hopper in rough terrain. , 2013, , .		5
160	Model-based and model-free approaches for postural control of a compliant humanoid robot using optical flow. , 2013, , .		2
161	Motor Control Adaptation to Changes in Robot Body Dynamics for a Compliant Quadruped Robot. <i>Lecture Notes in Computer Science</i> , 2013, , 434-437.	1.0	2
162	Estimation of relative position and coordination of mobile underwater robotic platforms through electric sensing. , 2012, , .		11

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163	Locomotion studies and modeling of the long-tailed lizard <i>Takydromus sexlineatus</i> . , 2012, , .		1
164	Design and evaluation of a graphical iPad application for arranging adaptive furniture. , 2012, , .		8
165	Indirect, Non-Adaptive Control of a Class of Nonlinear Uncertain Systems With Applications to Motion Control of Swimming Robots. , 2012, , .		1
166	Action-Perception Trade-Offs for Anguilliform Swimming Robotic Platforms with an Electric Sense. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 178-183.	0.4	2
167	The role of feedback in morphological computation with compliant bodies. <i>Biological Cybernetics</i> , 2012, 106, 595-613.	0.6	73
168	Predictive gaze stabilization during periodic locomotion based on Adaptive Frequency Oscillators. , 2012, , .		8
169	Real-time estimate of period derivatives using adaptive oscillators: Application to impedance-based walking assistance. , 2012, , .		14
170	Assistance using adaptive oscillators: Robustness to errors in the identification of the limb parameters. , 2011, 2011, 5975351.		10
171	Oscillator-based walking assistance: A model-free approach. , 2011, 2011, 5975352.		34
172	Multi-physics model of an electric fish-like robot: Numerical aspects and application to obstacle avoidance. , 2011, , .		19
173	On-line frequency adaptation and movement imitation for rhythmic robotic tasks. <i>International Journal of Robotics Research</i> , 2011, 30, 1775-1788.	5.8	72
174	Sensing Pressure Distribution on a Lower-Limb Exoskeleton Physical Human-Machine Interface. <i>Sensors</i> , 2011, 11, 207-227.	2.1	96
175	Sensory feedback plays a significant role in generating walking gait and in gait transition in salamanders: a simulation study. <i>Frontiers in Neurorobotics</i> , 2011, 5, 3.	1.6	63
176	Flexible Assistive Robots Through AFO-Based Intention Detection. <i>Procedia Computer Science</i> , 2011, 7, 323-324.	1.2	0
177	Co-evolution of Morphology and Control of a Wearable Robot for Human Locomotion Assistance Exploiting Variable Impedance Actuators. <i>Procedia Computer Science</i> , 2011, 7, 223-225.	1.2	2
178	Locomotion Gait Optimization For Modular Robots; Coevolving Morphology and Control. <i>Procedia Computer Science</i> , 2011, 7, 320-322.	1.2	3
179	Humanâ€“Robot Synchrony: Flexible Assistance Using Adaptive Oscillators. <i>IEEE Transactions on Biomedical Engineering</i> , 2011, 58, 1001-1012.	2.5	129
180	Biologically inspired kinematic synergies enable linear balance control of a humanoid robot. <i>Biological Cybernetics</i> , 2011, 104, 235-249.	0.6	23

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181	Towards a theoretical foundation for morphological computation with compliant bodies. <i>Biological Cybernetics</i> , 2011, 105, 355-370.	0.6	221
182	Toward simple control for complex, autonomous robotic applications: combining discrete and rhythmic motor primitives. <i>Autonomous Robots</i> , 2011, 31, 155-181.	3.2	51
183	Oscillator-based assistance of cyclical movements: model-based and model-free approaches. <i>Medical and Biological Engineering and Computing</i> , 2011, 49, 1173-1185.	1.6	159
184	Modeling axial spinal segments of the salamander central pattern generator for locomotion. <i>BMC Neuroscience</i> , 2011, 12, .	0.8	1
185	Effects of muscle dynamics and proprioceptive feedback on the kinematics and CPG activity of salamander stepping. <i>BMC Neuroscience</i> , 2011, 12, .	0.8	3
186	Nonlinear motion control of CPG-based movement with applications to a class of swimming robots. , 2011, , .		8
187	Co-evolution of morphology and control of virtual legged robots for a steering task. , 2011, , .		6
188	Analogy between Juggling and Hopping: Active Object Manipulation Approach. <i>Advanced Robotics</i> , 2011, 25, 1793-1816.	1.1	5
189	Multi-physics model of an electric fish-like robot: Numerical aspects and application to obstacle avoidance. , 2011, , .		0
190	Modeling discrete and rhythmic movements through motor primitives: a review. <i>Biological Cybernetics</i> , 2010, 103, 319-338.	0.6	69
191	Guest editorial: special issue on control of "locomotion" from animals to robots. <i>Autonomous Robots</i> , 2010, 28, 245-246.	3.2	0
192	Roombots: Reconfigurable Robots for Adaptive Furniture. <i>IEEE Computational Intelligence Magazine</i> , 2010, 5, 20-32.	3.4	185
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