Koh Hosoda

List of Publications by Year
in descending order

160 papers	3,063 citations	361413 20 h-index	206112 48 g-index
169 all docs	169 docs citations	169 times ranked	2154 citing authors

#	Article	IF	Citations
1	Cognitive Developmental Robotics: A Survey. IEEE Transactions on Autonomous Mental Development, 2009, 1, 12-34.	1.6	472
2	Purposive behavior acquisition for a real robot by vision-based reinforcement learning. Machine Learning, 1996, 23, 279-303.	5.4	207
3	Anthropomorphic robotic soft fingertip with randomly distributed receptors. Robotics and Autonomous Systems, 2006, 54, 104-109.	5.1	205
4	A constructive model for the development of joint attention. Connection Science, 2003, 15, 211-229.	3.0	182
5	Designing minimal and scalable insect-inspired multi-locomotion millirobots. Nature, 2019, 571, 381-386.	27.8	154
6	Pneumatic-driven jumping robot with anthropomorphic muscular skeleton structure. Autonomous Robots, 2010, 28, 307-316.	4.8	134
7	Biped robot design powered by antagonistic pneumatic actuators for multi-modal locomotion. Robotics and Autonomous Systems, 2008, 56, 46-53.	5.1	127
8	Cooperative behavior acquisition for mobile robots in dynamically changing real worlds via vision-based reinforcement learning and development. Artificial Intelligence, 1999, 110, 275-292.	5.8	120
9	Learning for joint attention helped by functional development. Advanced Robotics, 2006, 20, 1165-1181.	1.8	69
10	Controlling the Walking Period of a Pneumatic Muscle Walker. International Journal of Robotics Research, 2006, 25, 861-866.	8.5	63
11	Modeling of Flexible Manipulators Using Virtual Rigid Links and Passive Joints. International Journal of Robotics Research, 1996, 15, 290-299.	8.5	61
12	Development of a tendon-driven robotic finger for an anthropomorphic robotic hand. International Journal of Robotics Research, 2014, 33, 677-693.	8.5	56
13	Simulator platform that enables social interaction simulation — SIGVerse: SocioIntelliGenesis simulator. , 2010, , .		47
14	Three-dimensional innate mobility of the human foot bones under axial loading using biplane X-ray fluoroscopy. Royal Society Open Science, 2017, 4, 171086.	2.4	39
15	3D bipedal robot with tunable leg compliance mechanism for multi-modal locomotion. , 2008, , .		37
16	Direct assessment of 3D foot bone kinematics using biplanar Xâ€ray fluoroscopy and an automatic model registration method. Journal of Foot and Ankle Research, 2015, 8, 21.	1.9	36
17	Detection and prevention of slip using sensors with different properties embedded in elastic artificial skin on the basis of previous experience. Robotics and Autonomous Systems, 2014, 62, 46-52.	5.1	35
18	Development of whole-body humanoid “pneumat-BS” with pneumatic musculoskeletal system. , 2011, , .		34

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19	Noise-modulated neural networks as an application of stochastic resonance. Neurocomputing, 2018, 277, 29-37.	5.9	32
20	Humanlike ankle-foot complex for a biped robot. , 2012, , .		31
21	Modeling and control of a three degree of freedom manipulator with two flexible links. , 1993, , 531-545.		30
22	Designing Synergistic Walking of a Whole-Body Humanoid Driven by Pneumatic Artificial Muscles: An Empirical Study. Advanced Robotics, 2008, 22, 1107-1123.	1.8	29
23	3D limit cycle walking of musculoskeletal humanoid robot with flat feet. , 2009, , .		29
24	Anthropomorphic Muscularâ€“Skeletal Robotic Upper Limb for Understanding Embodied Intelligence. Advanced Robotics, 2012, 26, 729-744.	1.8	28
25	Reinforcement learning of humanoid rhythmic walking parameters based on visual information. Advanced Robotics, 2004, 18, 677-697.	1.8	23
26	Haptic discrimination of material properties by a robotic hand. , 2007, , .		23
27	Robust material discrimination by a soft anthropomorphic finger with tactile and thermal sense. , 2008, , .		23
28	Motor development of an pneumatic musculoskeletal infant robot. , 2011, , .		23
29	Humanlike shoulder complex for musculoskeletal robot arms. , 2012, , .		23
30	Electric-Pneumatic Actuator: A New Muscle for Locomotion. Actuators, 2017, 6, 30.	2.3	23
31	Object Category Acquisition by Dynamic Touch. Advanced Robotics, 2008, 22, 1143-1154.	1.8	21
32	Pneupard: A biomimetic musculoskeletal approach for a feline-inspired quadruped robot. , 2013, , .		21
33	Anthropomorphic musculoskeletal 10 degrees-of-freedom robot arm driven by pneumatic artificial muscles. Advanced Robotics, 2018, 32, 865-878.	1.8	21
34	Acquisition of joint attention through natural interaction utilizing motion cues. Advanced Robotics, 2007, 21, 983-999.	1.8	20
35	Acquisition of multi-modal expression of slip through pick-up experiences. Advanced Robotics, 2007, 21, 601-617.	1.8	20
36	Soft Inductive Tactile Sensor Using Flow-Channel Enclosing Liquid Metal. IEEE Robotics and Automation Letters, 2020, 5, 4028-4034.	5.1	20

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37	Action-based sensor space segmentation for soccer robot learning. Applied Artificial Intelligence, 1998, 12, 149-164.	3.2	19
38	Development of a minimalistic pneumatic quadruped robot for fast locomotion. , 2012, , .		18
39	Shoulder complex linkage mechanism for humanlike musculoskeletal robot arms. Bioinspiration and Biomimetics, 2015, 10, 066009.	2.9	18
40	Bouncing monopod with bio-mimetic muscular-skeleton system. , 2008, , .		16
41	Very Wide Sensing Range and Hysteresis Behaviors of Tactile Sensor Developed by Embedding Soft Ionic Gels in Soft Silicone Elastomers. ECS Journal of Solid State Science and Technology, 2020, 9, 061024.	1.8	16
42	Dynamic measurement of surface strain distribution on the foot during walking. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 69, 249-256.	3.1	15
43	Detection and prevention of slip using sensors with different properties embedded in elastic artificial skin on the basis of previous experience. , 2011, , .		13
44	Advantages of flexible musculoskeletal robot structure in sensory acquisition. Artificial Life and Robotics, 2012, 17, 63-69.	1.2	13
45	Robotic investigation on effect of stretch reflex and crossed inhibitory response on bipedal hopping. Journal of the Royal Society Interface, 2018, 15, 20180024.	3.4	13
46	Fast and Stable Learning of Quasi-Passive Dynamic Walking by an Unstable Biped Robot based on Off-Policy Natural Actor-Critic. , 2006, , .		12
47	Synergistic 3D limit cycle walking of an anthropomorphic biped robot. , 2007, , .		12
48	Semi-automatic behavior analysis using robot/insect mixed society and video tracking. Journal of Neuroscience Methods, 2010, 191, 138-144.	2.5	12
49	Multisensory-motor integration in olfactory navigation of silkmoth, Bombyx mori, using virtual reality system. ELife, 2021, 10, .	6.0	12
50	Design and Control of 2D Biped that can Walk and Run with Pneumatic Artificial Muscles. , 2006, , .		11
51	Stretch reflex improves rolling stability during hopping of a decerebrate biped system. Bioinspiration and Biomimetics, 2015, 10, 016008.	2.9	11
52	Using the foot windlass mechanism for jumping higher: A study on bipedal robot jumping. Robotics and Autonomous Systems, 2018, 110, 85-91.	5.1	11
53	Learning Interactive Behaviors for Musculoskeletal Robots Using Bayesian Interaction Primitives. , 2019, , .		11
54	Behavior Change of Crickets in a Robot-Mixed Society. Journal of Robotics and Mechatronics, 2010, 22, 526-531.	1.0	11

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55	Unique association between self-occlusion and double-touching towards binding vision and touch. Neurocomputing, 2007, 70, 2234-2244.	5.9	10
56	Actuation in Legged Locomotion. , 2017, , 563-622.		10
57	Comparative radiographic analysis of three-dimensional innate mobility of the foot bones under axial loading of humans and African great apes. Royal Society Open Science, 2021, 8, 211344.	2.4	10
58	Robust haptic recognition by anthropomorphic bionic hand through dynamic interaction. , 2010, , .		9
59	Realization of three-dimensional walking of a cheetah-modeled bio-inspired quadruped robot. , 2014, , .		9
60	Constructive understanding and reproduction of functions of gluteus medius by using a musculoskeletal walking robot. Advanced Robotics, 2018, 32, 202-214.	1.8	9
61	Dynamic Turning of a Soft Quadruped Robot by Changing Phase Difference. Frontiers in Robotics and AI, 2021, 8, 629523.	3.2	9
62	Muscle roles on directional change during hopping of a biomimetic feline hindlimb. , 2012, , .		8
63	Roll motion control by stretch reflex in a continuously jumping musculoskeletal biped robot. , 2012, , .		8
64	Direct teaching method for musculoskeletal robots driven by pneumatic artificial muscles. , 2012, , .		8
65	A System for Automated Interaction with the Cricket Utilizing a Micro Mobile Robot. Journal of Robotics and Mechatronics, 2013, 25, 333-339.	1.0	8
66	Brainless Running: A Quasi-quadruped Robot with Decentralized Spinal Reflexes by Solely Mechanical Devices. , 2020, , .		8
67	Robot Finger Design for Developmental Tactile Interaction. Lecture Notes in Computer Science, 2004, , 219-230.	1.3	7
68	Discovery of an Earliest-Stage â€œMystery Circleâ€•and Development of the Structure Constructed by Pufferfish, Torquigener albomaculosus (Pisces: Tetraodontidae). Fishes, 2017, 2, 14.	1.7	7
69	Using conductive fabrics as inflation sensors for pneumatic artificial muscles. Advanced Robotics, 2021, 35, 995-1011.	1.8	7
70	Soft capacitive tactile sensor using displacement of airâ€“water interface. Sensors and Actuators A: Physical, 2021, 332, 113133.	4.1	7
71	Terrain Negotiation of a Compliant Biped Robot Driven by Antagonistic Artificial Muscles. Journal of Robotics and Mechatronics, 2007, 19, 423-428.	1.0	7
72	Bioinspired Legged Robot Design via Blended Physical and Virtual Impedance Control. Journal of Intelligent and Robotic Systems: Theory and Applications, 2022, 105, 1.	3.4	7

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73	Acquisition of Multi-Modal Expression of Slip through Pick-Up Experiences. , 2006, , .		6
74	Active interaction utilizing micro mobile robot and on-line data gathering for experiments in cricket pheromone behavior. Robotics and Autonomous Systems, 2013, 61, 1529-1538.	5.1	6
75	Image-Based Pose Estimation for Analyzing Cricket-Robot Interaction Behavior. Journal of Signal Processing, 2014, 18, 135-141.	0.3	6
76	Development of an embedded sensor system for pneumatic artificial muscle proprioceptors. Artificial Life and Robotics, 2016, 21, 486-492.	1.2	6
77	Toward Living Tactile Sensors. Lecture Notes in Computer Science, 2013, , 409-411.	1.3	6
78	Bipedal walking with oblique mid-foot joint in foot. , 2015, , .		5
79	Designing Noncircular Pulleys to Realize Target Motion Between Two Joints. IEEE/ASME Transactions on Mechatronics, 2017, 22, 487-497.	5.8	5
80	Legged Robots with Bioinspired Morphology. , 2017, , 457-561.		5
81	State Space Construction for Cooperative Behavior Acquisition in the Environments Including Multiple Learning Robots.. Journal of the Robotics Society of Japan, 2002, 20, 281-289.	0.1	5
82	Controlled interaction with the cricket based on on-line pose estimation of mobile robot. , 2013, , .		4
83	Experimental study on robotic interactions to the cricket. , 2014, , .		4
84	Quadrupedal locomotion based on a muscular activation pattern with stretch-reflex. , 2014, , .		4
85	Understanding function of gluteus medius in human walking from constructivist approach. , 2015, , .		4
86	Aligning collagen fibers by cyclic mechanical stretch for efficiently muscle cell actuator. , 2016, , .		4
87	Free moment induced by oblique transverse tarsal joint: investigation by constructive approach. Royal Society Open Science, 2021, 8, 201947.	2.4	4
88	What Morphology Brings to Learning, What Learning Brings to Morphology. Journal of the Robotics Society of Japan, 2004, 22, 186-189.	0.1	4
89	Controlling walking behavior of passive dynamic walker utilizing passive joint compliance. , 2007, , .		3
90	External rotation as morphological bootstrapping for emergence of biped walking. , 2010, , .		3

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91	Development of a cricket interaction system utilizing mobile robot for behavioral data collection. , 2012, , .		3
92	Minimalistic behavioral rule derived from bacterial chemotaxis in a stochastic resonance setup. Physical Review E, 2012, 85, 021905.	2.1	3
93	Muscle Tissue Actuator Driven with Light-gated Ion Channels Channelrhodopsin. Procedia CIRP, 2013, 5, 169-174.	1.9	3
94	Roll-Over Shapes of Musculoskeletal Biped Walker. Automatisierungstechnik, 2013, 61, 4-14.	0.8	3
95	Surface EMG based posture control of shoulder complex linkage mechanism. , 2015, , .		3
96	Muscular-skeletal humanoid robot for body image construction. , 2016, , .		3
97	Development of Pneumatic Quadrupedal Robot Performing Multiple Gaits by Simple Motor Commands. , 2018, , .		3
98	Acquisition of Joint Attention by a Developmental Learning Model based on Interactions between a Robot and a Caregiver.. Transactions of the Japanese Society for Artificial Intelligence, 2003, 18, 122-130.	0.1	3
99	Real-time Visual Tracking for Cricket - Micro Robot Interaction Experiment. IEICE Proceeding Series, 2014, 1, 122-125.	0.0	3
100	Three-Dimensional Innate Mobility of the Human Foot on Coronally-Wedged Surfaces Using a Biplane X-Ray Fluoroscopy. Frontiers in Bioengineering and Biotechnology, 2022, 10, 800572.	4.1	3
101	Emergence of Joint Attention through Bootstrap Learning based on the Mechanisms of Visual Attention and Learning with Self-evaluation. Transactions of the Japanese Society for Artificial Intelligence, 2004, 19, 10-19.	0.1	2
102	Improving hopping stability of a biped by muscular stretch reflex. , 2014, , .		2
103	Tendon routing resolving inverse kinematics for variable stiffness joint. , 2014, , .		2
104	Visualizing Wakes in Swimming Locomotion of Xenopus-Noid by Using PIV. Lecture Notes in Computer Science, 2015, , 97-100.	1.3	2
105	Swimming frog cyborg which generates efficient hydrodynamic propulsion with webbed foot. , 2017, , .		2
106	A New Concept of Pneumatic Tactile Sensor using Pressure Wave Propagation in a Soft Chamber. , 2018, , .		2
107	Self-organization of a Joint of Cardiomyocyte-Driven Robot. Lecture Notes in Computer Science, 2014, , 402-404.	1.3	2
108	Swimming Locomotion of Xenopus Laevis Robot. Lecture Notes in Computer Science, 2014, , 420-422.	1.3	2

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109	Bevel-geared mechanical foot: a bioinspired robotic foot compensating yaw moment of bipedal walking. Advanced Robotics, 2022, 36, 631-640.	1.8	2
110	Towards Computational Developmental Model based on Synthetic Approaches. , 2009, , .		1
111	Robust haptic recognition by anthropomorphic robot hand. , 0, , 11-22.		1
112	Design of An anthropomorphic tendon-driven robotic finger. , 2012, , .		1
113	Stable reflex-based walking of forelimbs of a bio-inspired quadruped robot-modeled cheetah. , 2013, , .		1
114	Active behavior of musculoskeletal robot arms driven by pneumatic artificial muscles to effectively receive human's direct teaching. , 2014, , .		1
115	Implementation of long lifetime dissected-muscle actuator for frog cyborg. , 2017, , .		1
116	Micro-robot Driven by Cardiac Cells That Cooperatively Beating. , 2018, , .		1
117	Towards the Exploitation of External Constraints with Robots Actuated by Pneumatic Artificial Muscles. , 2018, , .		1
118	Segregation and Flow of Modules in a Robot Swarm Utilising the Brazil Nut Effect. , 2019, , .		1
119	Local Online Motor Babbling: Learning Motor Abundance of a Musculoskeletal Robot Arm*. , 2019, , .		1
120	Reconstructing State-Space from Movie Using Convolutional Autoencoder for Robot Control. Advances in Intelligent Systems and Computing, 2019, , 480-489.	0.6	1
121	Real-Time Odor Discrimination Using Single Antenna of Insect. , 2020, 4, 1-4.		1
122	Neural Model Extraction for Model-Based Control of a Neural Network Forward Model. SN Computer Science, 2021, 2, 1.	3.6	1
123	Remodeling Muscle Cells by Inducing Mechanical Stimulus. Lecture Notes in Computer Science, 2015, , 227-230.	1.3	1
124	Cell Patterning Method by Vibratory Stimuli. Lecture Notes in Computer Science, 2017, , 626-630.	1.3	1
125	Dynamic Trajectory Tracking Control of Flexible Manipulator by Macro-Micro Manipulator System.. Journal of the Robotics Society of Japan, 1994, 12, 299-303.	0.1	1
126	History, Current Situation, and Future of Soft Robotics. Journal of the Robotics Society of Japan, 2019, 37, 7-11.	0.1	1

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127	Design of a Robotic Foot with Midtarsal Joint Locking Mechanism. , 2022, , .		1
128	Trajectory Control of Cartesian-Type Robotic Mechanisms with Flexible Joints.. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 1997, 63, 2801-2807.	0.2	0
129	Towards Imitation Learning from a Viewpoint of an Internal Observer. Lecture Notes in Computer Science, 2004, , 278-283.	1.3	0
130	Redundant sensor system for stochastic resonance tuning without input signal knowledge. , 2012, , .		0
131	Control of real-world complex robots using a biologically inspired algorithm. Artificial Life and Robotics, 2012, 17, 42-46.	1.2	0
132	Exploring muscular contribution during stepping of biomimetic feline hindlimbs. , 2013, , .		0
133	Minimalistic decentralized control using stochastic resonance inspired from a skeletal muscle. , 2013, , .		0
134	An extended inverted pendulum model giving minimal interpretation of vertical ground reaction force while a human walks. , 2014, , .		0
135	Spurious correlation as an approximation of the mutual information between redundant outputs and an unknown input. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 3611-3616.	3.3	0
136	Measurement of 3D foot deformation durring waking using digital image correlation method. Biomechanisms, 2016, 23, 31-41.	0.1	0
137	Stochastic resonance induced continuous activation functions in a neural network consisting of threshold elements. , 2016, , .		0
138	Compliant Body as a Source of Intelligence. , 2016, , 1-23.		0
139	Anthropomorphic Finger Mechanism with a Nonelastic Branching Tendon. Advances in Intelligent Systems and Computing, 2016, , 1159-1171.	0.6	0
140	Three-dimensional measurement of the human cadaver foot bone kinematics under axial loading condition using biplane X-ray fluoroscopy. Footwear Science, 2017, 9, S148-S150.	2.1	0
141	Optimal Feedback Control Based on Analytical Linear Models Extracted from Neural Networks Trained for Nonlinear Systems. , 2018, , .		0
142	Preface: special issue on adaptive motion of animals and machines. Advanced Robotics, 2018, 32, 793-793.	1.8	0
143	Common Dimensional Autoencoder for Identifying Agonist-Antagonist Muscle Pairs in Musculoskeletal Robots. Advances in Intelligent Systems and Computing, 2019, , 325-333.	0.6	0
144	Modular Robot that Modeled Cell Membrane Dynamics of a Cellular Slime Mold. Advances in Intelligent Systems and Computing, 2019, , 302-313.	0.6	0

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145	Intra-swarm migration of size-variable robotic modules utilizing the Brazil nut effect. Advanced Robotics, 2020, 34, 1122-1136.	1.8	0
146	Attempts to Develop Artificial Muscles. Studies in Computational Intelligence, 2021, , 81-87.	0.9	0
147	To Learn or To Be Taught? Design Issues Towards Cognitive Robotics. , 2000, , 221-228.		0
148	Motion Repertory for a Legged Robot from a Reflective Walk.. Journal of the Robotics Society of Japan, 2001, 19, 855-862.	0.1	0
149	Manipulation by a Multi-Fingered Hand Based on Integration of Visual Servoing and Internal Force Servoing.. Journal of the Robotics Society of Japan, 2001, 19, 646-651.	0.1	0
150	1P1-E16 Vowel Acquisition based on the Phoneme and Lip Shape information from a Caregiver.. The Proceedings of JSME Annual Conference on Robotics and Mechatronics (Robomec), 2006, 2006, _1P1-E16_1-_1P1-E16_4.	0.0	0
151	Trajectory Control Strategy for Anthropomorphic Robotic Finger. Lecture Notes in Computer Science, 2014, , 284-295.	1.3	0
152	Control of Flexible Manipulators using Macro-Micro Manipulator System.. Journal of the Robotics Society of Japan, 1994, 12, 207-212.	0.1	0
153	Mutual Entrainment of Cardiac-Oscillators Through Mechanical Interaction. Lecture Notes in Computer Science, 2016, , 467-471.	1.3	0
154	Higher Jumping of a Biped Musculoskeletal Robot with Foot Windlass Mechanism. Advances in Intelligent Systems and Computing, 2017, , 343-356.	0.6	0
155	Development of a Masterâ€“Slave Finger Exoskeleton Driven by Pneumatic Artificial Muscles. Advances in Intelligent Systems and Computing, 2017, , 77-89.	0.6	0
156	Soft Robotics and Embodied Intelligence. Journal of Japan Society for Fuzzy Theory and Intelligent Informatics, 2017, 29, 160-172.	0.0	0
157	Observation of Calcium Wave on Physical Stimulus for Realizing Cell Tactile Sensor. Lecture Notes in Computer Science, 2018, , 255-262.	1.3	0
158	Human Foot Mechanism as Embodiment. Journal of the Robotics Society of Japan, 2020, 38, 914-919.	0.1	0
159	Soft Tactile Sensor Detecting Air-Water Interface. , 2020, , .		0
160	Development of the high strength retractable skin and the closed type crawler vehicle. , 2011, , .		0