

# Koh Hosoda

## List of Publications by Year in descending order

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160  
papers

3,063  
citations

361413

20  
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206112

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169  
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169  
docs citations

169  
times ranked

2154  
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-Dimensional Innate Mobility of the Human Foot on Coronally-Wedged Surfaces Using a Biplane X-Ray Fluoroscopy. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 800572.	4.1	3
2	Bevel-gear mechanical foot: a bioinspired robotic foot compensating yaw moment of bipedal walking. <i>Advanced Robotics</i> , 2022, 36, 631-640.	1.8	2
3	Design of a Robotic Foot with Midtarsal Joint Locking Mechanism. , 2022, , .		1
4	Bioinspired Legged Robot Design via Blended Physical and Virtual Impedance Control. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2022, 105, 1.	3.4	7
5	Neural Model Extraction for Model-Based Control of a Neural Network Forward Model. <i>SN Computer Science</i> , 2021, 2, 1.	3.6	1
6	Attempts to Develop Artificial Muscles. <i>Studies in Computational Intelligence</i> , 2021, , 81-87.	0.9	0
7	Free moment induced by oblique transverse tarsal joint: investigation by constructive approach. <i>Royal Society Open Science</i> , 2021, 8, 201947.	2.4	4
8	Dynamic Turning of a Soft Quadruped Robot by Changing Phase Difference. <i>Frontiers in Robotics and AI</i> , 2021, 8, 629523.	3.2	9
9	Using conductive fabrics as inflation sensors for pneumatic artificial muscles. <i>Advanced Robotics</i> , 2021, 35, 995-1011.	1.8	7
10	Soft capacitive tactile sensor using displacement of air-water interface. <i>Sensors and Actuators A: Physical</i> , 2021, 332, 113133.	4.1	7
11	Multisensory-motor integration in olfactory navigation of silkworm, <i>Bombyx mori</i> , using virtual reality system. <i>ELife</i> , 2021, 10, .	6.0	12
12	Comparative radiographic analysis of three-dimensional innate mobility of the foot bones under axial loading of humans and African great apes. <i>Royal Society Open Science</i> , 2021, 8, 211344.	2.4	10
13	Intra-swarm migration of size-variable robotic modules utilizing the Brazil nut effect. <i>Advanced Robotics</i> , 2020, 34, 1122-1136.	1.8	0
14	Real-Time Odor Discrimination Using Single Antenna of Insect. , 2020, 4, 1-4.		1
15	Soft Inductive Tactile Sensor Using Flow-Channel Enclosing Liquid Metal. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 4028-4034.	5.1	20
16	Very Wide Sensing Range and Hysteresis Behaviors of Tactile Sensor Developed by Embedding Soft Ionic Gels in Soft Silicone Elastomers. <i>ECS Journal of Solid State Science and Technology</i> , 2020, 9, 061024.	1.8	16
17	Human Foot Mechanism as Embodiment. <i>Journal of the Robotics Society of Japan</i> , 2020, 38, 914-919.	0.1	0
18	Brainless Running: A Quasi-quadruped Robot with Decentralized Spinal Reflexes by Solely Mechanical Devices. , 2020, , .		8

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19	Soft Tactile Sensor Detecting Air-Water Interface. , 2020, , .		0
20	Designing minimal and scalable insect-inspired multi-locomotion millirobots. Nature, 2019, 571, 381-386.	27.8	154
21	Common Dimensional Autoencoder for Identifying Agonist-Antagonist Muscle Pairs in Musculoskeletal Robots. Advances in Intelligent Systems and Computing, 2019, , 325-333.	0.6	0
22	Segregation and Flow of Modules in a Robot Swarm Utilising the Brazil Nut Effect. , 2019, , .		1
23	Local Online Motor Babbling: Learning Motor Abundance of a Musculoskeletal Robot Arm*. , 2019, , .		1
24	Learning Interactive Behaviors for Musculoskeletal Robots Using Bayesian Interaction Primitives. , 2019, , .		11
25	Modular Robot that Modeled Cell Membrane Dynamics of a Cellular Slime Mold. Advances in Intelligent Systems and Computing, 2019, , 302-313.	0.6	0
26	Reconstructing State-Space from Movie Using Convolutional Autoencoder for Robot Control. Advances in Intelligent Systems and Computing, 2019, , 480-489.	0.6	1
27	History, Current Situation, and Future of Soft Robotics. Journal of the Robotics Society of Japan, 2019, 37, 7-11.	0.1	1
28	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
29	Constructive understanding and reproduction of functions of gluteus medius by using a musculoskeletal walking robot. Advanced Robotics, 2018, 32, 202-214.	1.8	9
30	Noise-modulated neural networks as an application of stochastic resonance. Neurocomputing, 2018, 277, 29-37.	5.9	32
31	Micro-robot Driven by Cardiac Cells That Cooperatively Beating. , 2018, , .		1
32	Development of Pneumatic Quadrupedal Robot Performing Multiple Gaits by Simple Motor Commands. , 2018, , .		3
33	A New Concept of Pneumatic Tactile Sensor using Pressure Wave Propagation in a Soft Chamber. , 2018, , .		2
34	Towards the Exploitation of External Constraints with Robots Actuated by Pneumatic Artificial Muscles. , 2018, , .		1
35	Optimal Feedback Control Based on Analytical Linear Models Extracted from Neural Networks Trained for Nonlinear Systems. , 2018, , .		0
36	Preface: special issue on adaptive motion of animals and machines. Advanced Robotics, 2018, 32, 793-793.	1.8	0

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37	Using the foot windlass mechanism for jumping higher: A study on bipedal robot jumping. <i>Robotics and Autonomous Systems</i> , 2018, 110, 85-91.	5.1	11
38	Anthropomorphic musculoskeletal 10 degrees-of-freedom robot arm driven by pneumatic artificial muscles. <i>Advanced Robotics</i> , 2018, 32, 865-878.	1.8	21
39	Observation of Calcium Wave on Physical Stimulus for Realizing Cell Tactile Sensor. <i>Lecture Notes in Computer Science</i> , 2018, , 255-262.	1.3	0
40	Designing Noncircular Pulleys to Realize Target Motion Between Two Joints. <i>IEEE/ASME Transactions on Mechatronics</i> , 2017, 22, 487-497.	5.8	5
41	Three-dimensional measurement of the human cadaver foot bone kinematics under axial loading condition using biplane X-ray fluoroscopy. <i>Footwear Science</i> , 2017, 9, S148-S150.	2.1	0
42	Dynamic measurement of surface strain distribution on the foot during walking. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 69, 249-256.	3.1	15
43	Three-dimensional innate mobility of the human foot bones under axial loading using biplane X-ray fluoroscopy. <i>Royal Society Open Science</i> , 2017, 4, 171086.	2.4	39
44	Swimming frog cyborg which generates efficient hydrodynamic propulsion with webbed foot. , 2017, , .		2
45	Implementation of long lifetime dissected-muscle actuator for frog cyborg. , 2017, , .		1
46	Actuation in Legged Locomotion. , 2017, , 563-622.		10
47	Electric-Pneumatic Actuator: A New Muscle for Locomotion. <i>Actuators</i> , 2017, 6, 30.	2.3	23
48	Discovery of an Earliest-Stage “Mystery Circle” and Development of the Structure Constructed by Pufferfish, <i>Torquigener albomaculosus</i> (Pisces: Tetraodontidae). <i>Fishes</i> , 2017, 2, 14.	1.7	7
49	Legged Robots with Bioinspired Morphology. , 2017, , 457-561.		5
50	Cell Patterning Method by Vibratory Stimuli. <i>Lecture Notes in Computer Science</i> , 2017, , 626-630.	1.3	1
51	Higher Jumping of a Biped Musculoskeletal Robot with Foot Windlass Mechanism. <i>Advances in Intelligent Systems and Computing</i> , 2017, , 343-356.	0.6	0
52	Development of a Master–Slave Finger Exoskeleton Driven by Pneumatic Artificial Muscles. <i>Advances in Intelligent Systems and Computing</i> , 2017, , 77-89.	0.6	0
53	Soft Robotics and Embodied Intelligence. <i>Journal of Japan Society for Fuzzy Theory and Intelligent Informatics</i> , 2017, 29, 160-172.	0.0	0
54	Measurement of 3D foot deformation during walking using digital image correlation method. <i>Biomechanisms</i> , 2016, 23, 31-41.	0.1	0

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55	Muscular-skeletal humanoid robot for body image construction. , 2016, , .		3
56	Development of an embedded sensor system for pneumatic artificial muscle proprioceptors. Artificial Life and Robotics, 2016, 21, 486-492.	1.2	6
57	Stochastic resonance induced continuous activation functions in a neural network consisting of threshold elements. , 2016, , .		0
58	Aligning collagen fibers by cyclic mechanical stretch for efficiently muscle cell actuator. , 2016, , .		4
59	Compliant Body as a Source of Intelligence. , 2016, , 1-23.		0
60	Anthropomorphic Finger Mechanism with a Nonelastic Branching Tendon. Advances in Intelligent Systems and Computing, 2016, , 1159-1171.	0.6	0
61	Mutual Entrainment of Cardiac-Oscillators Through Mechanical Interaction. Lecture Notes in Computer Science, 2016, , 467-471.	1.3	0
62	Bipedal walking with oblique mid-foot joint in foot. , 2015, , .		5
63	Understanding function of gluteus medius in human walking from constructivist approach. , 2015, , .		4
64	Direct assessment of 3D foot bone kinematics using biplanar X-ray fluoroscopy and an automatic model registration method. Journal of Foot and Ankle Research, 2015, 8, 21.	1.9	36
65	Shoulder complex linkage mechanism for humanlike musculoskeletal robot arms. Bioinspiration and Biomimetics, 2015, 10, 066009.	2.9	18
66	Surface EMG based posture control of shoulder complex linkage mechanism. , 2015, , .		3
67	Stretch reflex improves rolling stability during hopping of a decerebrate biped system. Bioinspiration and Biomimetics, 2015, 10, 016008.	2.9	11
68	Visualizing Wakes in Swimming Locomotion of Xenopus-Noid by Using PIV. Lecture Notes in Computer Science, 2015, , 97-100.	1.3	2
69	Remodeling Muscle Cells by Inducing Mechanical Stimulus. Lecture Notes in Computer Science, 2015, , 227-230.	1.3	1
70	Image-Based Pose Estimation for Analyzing Cricket-Robot Interaction Behavior. Journal of Signal Processing, 2014, 18, 135-141.	0.3	6
71	Improving hopping stability of a biped by muscular stretch reflex. , 2014, , .		2
72	Experimental study on robotic interactions to the cricket. , 2014, , .		4

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73	Active behavior of musculoskeletal robot arms driven by pneumatic artificial muscles to effectively receive human's direct teaching. , 2014, , .		1
74	Realization of three-dimensional walking of a cheetah-modeled bio-inspired quadruped robot. , 2014, , .		9
75	Quadrupedal locomotion based on a muscular activation pattern with stretch-reflex. , 2014, , .		4
76	Tendon routing resolving inverse kinematics for variable stiffness joint. , 2014, , .		2
77	An extended inverted pendulum model giving minimal interpretation of vertical ground reaction force while a human walks. , 2014, , .		0
78	Development of a tendon-driven robotic finger for an anthropomorphic robotic hand. International Journal of Robotics Research, 2014, 33, 677-693.	8.5	56
79	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
80	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
81	Self-organization of a Joint of Cardiomyocyte-Driven Robot. Lecture Notes in Computer Science, 2014, , 402-404.	1.3	2
82	Swimming Locomotion of Xenopus Laevis Robot. Lecture Notes in Computer Science, 2014, , 420-422.	1.3	2
83	Trajectory Control Strategy for Anthropomorphic Robotic Finger. Lecture Notes in Computer Science, 2014, , 284-295.	1.3	0
84	Real-time Visual Tracking for Cricket - Micro Robot Interaction Experiment. IEICE Proceeding Series, 2014, 1, 122-125.	0.0	3
85	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
86	Exploring muscular contribution during stepping of biomimetic feline hindlimbs. , 2013, , .		0
87	Minimalistic decentralized control using stochastic resonance inspired from a skeletal muscle. , 2013, , .		0
88	Stable reflex-based walking of forelimbs of a bio-inspired quadruped robot-modeled cheetah. , 2013, , .		1
89	Muscle Tissue Actuator Driven with Light-gated Ion Channels Channelrhodopsin. Procedia CIRP, 2013, 5, 169-174.	1.9	3
90	Pneupard: A biomimetic musculoskeletal approach for a feline-inspired quadruped robot. , 2013, , .		21

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91	Controlled interaction with the cricket based on on-line pose estimation of mobile robot. , 2013, , .		4
92	Roll-Over Shapes of Musculoskeletal Biped Walker. Automatisierungstechnik, 2013, 61, 4-14.	0.8	3
93	Toward Living Tactile Sensors. Lecture Notes in Computer Science, 2013, , 409-411.	1.3	6
94	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
95	Development of a cricket interaction system utilizing mobile robot for behavioral data collection. , 2012, , .		3
96	Muscle roles on directional change during hopping of a biomimetic feline hindlimb. , 2012, , .		8
97	Redundant sensor system for stochastic resonance tuning without input signal knowledge. , 2012, , .		0
98	Humanlike shoulder complex for musculoskeletal robot arms. , 2012, , .		23
99	Minimalistic behavioral rule derived from bacterial chemotaxis in a stochastic resonance setup. Physical Review E, 2012, 85, 021905.	2.1	3
100	Roll motion control by stretch reflex in a continuously jumping musculoskeletal biped robot. , 2012, , .		8
101	Humanlike ankle-foot complex for a biped robot. , 2012, , .		31
102	Anthropomorphic Muscularâ€“Skeletal Robotic Upper Limb for Understanding Embodied Intelligence. Advanced Robotics, 2012, 26, 729-744.	1.8	28
103	Advantages of flexible musculoskeletal robot structure in sensory acquisition. Artificial Life and Robotics, 2012, 17, 63-69.	1.2	13
104	Control of real-world complex robots using a biologically inspired algorithm. Artificial Life and Robotics, 2012, 17, 42-46.	1.2	0
105	Design of An anthropomorphic tendon-driven robotic finger. , 2012, , .		1
106	Development of a minimalistic pneumatic quadruped robot for fast locomotion. , 2012, , .		18
107	Direct teaching method for musculoskeletal robots driven by pneumatic artificial muscles. , 2012, , .		8
108	Motor development of an pneumatic musculoskeletal infant robot. , 2011, , .		23

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109	Detection and prevention of slip using sensors with different properties embedded in elastic artificial skin on the basis of previous experience. , 2011, , .		13
110	Development of whole-body humanoid &#x201C;pneumat-BS&#x201D; with pneumatic musculoskeletal system. , 2011, , .		34
111	Development of the high strength retractable skin and the closed type crawler vehicle. , 2011, , .		0
112	Pneumatic-driven jumping robot with anthropomorphic muscular skeleton structure. Autonomous Robots, 2010, 28, 307-316.	4.8	134
113	Semi-automatic behavior analysis using robot/insect mixed society and video tracking. Journal of Neuroscience Methods, 2010, 191, 138-144.	2.5	12
114	Robust haptic recognition by anthropomorphic bionic hand through dynamic interaction. , 2010, , .		9
115	Simulator platform that enables social interaction simulation &#x2014; SICVerse: SociolntelliGenesis simulator. , 2010, , .		47
116	External rotation as morphological bootstrapping for emergence of biped walking. , 2010, , .		3
117	Behavior Change of Crickets in a Robot-Mixed Society. Journal of Robotics and Mechatronics, 2010, 22, 526-531.	1.0	11
118	3D limit cycle walking of musculoskeletal humanoid robot with flat feet. , 2009, , .		29
119	Cognitive Developmental Robotics: A Survey. IEEE Transactions on Autonomous Mental Development, 2009, 1, 12-34.	1.6	472
120	Towards Computational Developmental Model based on Synthetic Approaches. , 2009, , .		1
121	Biped robot design powered by antagonistic pneumatic actuators for multi-modal locomotion. Robotics and Autonomous Systems, 2008, 56, 46-53.	5.1	127
122	3D bipedal robot with tunable leg compliance mechanism for multi-modal locomotion. , 2008, , .		37
123	Robust material discrimination by a soft anthropomorphic finger with tactile and thermal sense. , 2008, , .		23
124	Bouncing monopod with bio-mimetic muscular-skeleton system. , 2008, , .		16
125	Object Category Acquisition by Dynamic Touch. Advanced Robotics, 2008, 22, 1143-1154.	1.8	21
126	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



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127	Acquisition of joint attention through natural interaction utilizing motion cues. Advanced Robotics, 2007, 21, 983-999.	1.8	20
128	Synergistic 3D limit cycle walking of an anthropomorphic biped robot. , 2007, , .		12
129	Controlling walking behavior of passive dynamic walker utilizing passive joint compliance. , 2007, , .		3
130	Acquisition of multi-modal expression of slip through pick-up experiences. Advanced Robotics, 2007, 21, 601-617.	1.8	20
131	Haptic discrimination of material properties by a robotic hand. , 2007, , .		23
132	Unique association between self-occlusion and double-touching towards binding vision and touch. Neurocomputing, 2007, 70, 2234-2244.	5.9	10
133	Terrain Negotiation of a Compliant Biped Robot Driven by Antagonistic Artificial Muscles. Journal of Robotics and Mechatronics, 2007, 19, 423-428.	1.0	7
134	Design and Control of 2D Biped that can Walk and Run with Pneumatic Artificial Muscles. , 2006, , .		11
135	Acquisition of Multi-Modal Expression of Slip through Pick-Up Experiences. , 2006, , .		6
136	Anthropomorphic robotic soft fingertip with randomly distributed receptors. Robotics and Autonomous Systems, 2006, 54, 104-109.	5.1	205
137	Controlling the Walking Period of a Pneumatic Muscle Walker. International Journal of Robotics Research, 2006, 25, 861-866.	8.5	63
138	Learning for joint attention helped by functional development. Advanced Robotics, 2006, 20, 1165-1181.	1.8	69
139	Fast and Stable Learning of Quasi-Passive Dynamic Walking by an Unstable Biped Robot based on Off-Policy Natural Actor-Critic. , 2006, , .		12
140	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
141	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
142	Reinforcement learning of humanoid rhythmic walking parameters based on visual information. Advanced Robotics, 2004, 18, 677-697.	1.8	23
143	Robot Finger Design for Developmental Tactile Interaction. Lecture Notes in Computer Science, 2004, , 219-230.	1.3	7
144	Towards Imitation Learning from a Viewpoint of an Internal Observer. Lecture Notes in Computer Science, 2004, , 278-283.	1.3	0

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145	What Morphology Brings to Learning, What Learning Brings to Morphology. Journal of the Robotics Society of Japan, 2004, 22, 186-189.	0.1	4
146	A constructive model for the development of joint attention. Connection Science, 2003, 15, 211-229.	3.0	182
147	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
148	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
149	Motion Repertory for a Legged Robot from a Reflective Walk.. Journal of the Robotics Society of Japan, 2001, 19, 855-862.	0.1	0
150	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
151	To Learn or To Be Taught? Design Issues Towards Cognitive Robotics. , 2000, , 221-228.		0
152	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
153	Action-based sensor space segmentation for soccer robot learning. Applied Artificial Intelligence, 1998, 12, 149-164.	3.2	19
154	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
155	Purposive behavior acquisition for a real robot by vision-based reinforcement learning. Machine Learning, 1996, 23, 279-303.	5.4	207
156	Modeling of Flexible Manipulators Using Virtual Rigid Links and Passive Joints. International Journal of Robotics Research, 1996, 15, 290-299.	8.5	61
157	Control of Flexible Manipulators using Macro-Micro Manipulator System.. Journal of the Robotics Society of Japan, 1994, 12, 207-212.	0.1	0
158	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
159	Modeling and control of a three degree of freedom manipulator with two flexible links. , 1993, , 531-545.		30
160	Robust haptic recognition by anthropomorphic robot hand. , 0, , 11-22.		1