

1. Record Nr.	UNINA9910349315603321
Titolo	Biomimetic and Biohybrid Systems : 8th International Conference, Living Machines 2019, Nara, Japan, July 9–12, 2019, Proceedings // edited by Uriel Martinez-Hernandez, Vasiliki Vouloutsis, Anna Mura, Michael Mangan, Minoru Asada, Tony J. Prescott, Paul F.M.J. Verschure
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-24741-4
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XVIII, 384 p. 191 illus., 160 illus. in color.)
Collana	Lecture Notes in Artificial Intelligence ; ; 11556
Disciplina	660.6 006.3
Soggetti	Artificial intelligence Computer organization User interfaces (Computer systems) Optical data processing Operating systems (Computers) Logic design Artificial Intelligence Computer Systems Organization and Communication Networks User Interfaces and Human Computer Interaction Image Processing and Computer Vision Operating Systems Logic Design
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Full papers -- Feed-forward selection of cerebellar models for calibration of robot sound source localization -- Determination of Artificial Muscle Placement for Biomimetic Humanoid Robot Legs -- Speedy Whegs Climbs Obstacles Slowly and Runs at 44 km/hour -- Automatic Calibration of Artificial Neural Networks for Zebrafish Collective Behaviours using a Quality Diversity Algorithm -- Affective visuomotor interaction: a functional model for socially competent robot

grasping -- Measuring the Effectiveness of Biomimetic Robots as Therapeutic Tools: Translating the Felt Security Scale from English to Japanese -- MiniBee: a Miniature MAV for the Biomimetic Embodiment of Insect Brain Models -- Bio-inspired Stochastic Growth and Initialization for Artificial Neural Networks -- Characterization of biomimetic peristaltic pumping system based on flexible silicone soft robotic actuators as an alternative for technical pumps -- Adaptive biomimetic actuator systems reacting to various stimuli by and combining two biological snap-trap mechanics -- Rose-inspired micro-device with variable stiffness for remotely controlled release of objects in robotics -- DysphoniaBot: a Robotic Simulator of Vocal Fold Disorders -- Drosophibot: A Fruit Fly Inspired Bio-Robot -- Crab-like Hexapod Feet for Amphibious Walking in Sand and Waves -- Highly-integrated muscle-spindles for pneumatic artificial muscles made from conductive fabrics -- Insect behavior as high-sensitive olfactory sensor for robotic odor tracking -- Foveated image processing for faster object detection and recognition in embedded systems using deep convolutional neural networks -- Design, optimization and characterization of bio-hybrid actuators based on 3D-bioprinted skeletal muscle tissue -- Chemotaxis Based Exploration of Swarm Robots in Unbounded Environments -- Design of a Canine Inspired Quadruped Robot as a Platform for Synthetic Neural Network Control -- Heads or Tails? Cranio-Caudal Mass Distribution for Robust Locomotion with Soft Biorobotic Appendages -- Tuning a robot servomotor to exhibit muscle-like dynamics -- Manufacturing Artificial Wings Based on the Manduca sexta Hawkmoth -- Robots That Imagine -- Can Hippocampal Replay be Utilised for Robotic Mnemonics -- A Robust and Efficient Cooler Design Inspired by Leaf Venation -- Bayesian Optimization of a Quadruped Robot During 3-Dimensional Locomotion.

Sommario/riassunto

This book constitutes the proceedings of the 8th International Conference on Biomimetic and Biohybrid Systems, Living Machines 2019, held in Nara, Japan, in July 2019. The 26 full and 16 short papers presented in this volume were carefully reviewed and selected from 45 submissions. They deal with research on novel life-like technologies inspired by the scientific investigation of biological systems, biomimetics, and research that seeks to interface biological and artificial systems to create biohybrid systems. .
