Bin Fang

List of Publications by Year
in descending order

95 papers	1,885 citations	361388 20 h-index	414395 32 g-index
97 all docs	97 docs citations	97 times ranked	1457 citing authors

#	ARTICLE	IF	CITATIONS
1	PointNetGPD: Detecting Grasp Configurations from Point Sets. , 2019, , .		177
2	A hybrid deep architecture for robotic grasp detection. , 2017, , .		118
3	Reusing Discriminators for Encoding: Towards Unsupervised Image-to-Image Translation. , 2020, , .		107
4	3D human gesture capturing and recognition by the IMMU-based data glove. Neurocomputing, 2018, 277, 198-207.	5.9	87
5	Robotic Room-Level Localization Using Multiple Sets of Sonar Measurements. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 2-13.	4.7	77
6	Survey of imitation learning for robotic manipulation. International Journal of Intelligent Robotics and Applications, 2019, 3, 362-369.	2.8	71
7	Weakly Paired Multimodal Fusion for Object Recognition. IEEE Transactions on Automation Science and Engineering, 2018, 15, 784-795.	5.2	57
8	Deep Reinforcement Learning for Robotic Pushing and Picking in Cluttered Environment. , 2019, , .		47
9	A soft gripper with programmable effective length, tactile and curvature sensory feedback. Smart Materials and Structures, 2020, 29, 035006.	3.5	46
10	Structured Output-Associated Dictionary Learning for Haptic Understanding. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2017, 47, 1564-1574.	9.3	45
11	Multimodal Measurements Fusion for Surface Material Categorization. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 246-256.	4.7	45
12	Vision-based Teleoperation of Shadow Dexterous Hand using End-to-End Deep Neural Network. , 2019, , .		45
13	Multimode Grasping Soft Gripper Achieved by Layer Jamming Structure and Tendon-Driven Mechanism. Soft Robotics, 2022, 9, 233-249.	8.0	41
14	A novel data glove using inertial and magnetic sensors for motion capture and robotic arm-hand teleoperation. Industrial Robot, 2017, 44, 155-165.	2.1	36
15	A robotic hand-arm teleoperation system using human arm/hand with a novel data glove. , 2015, , .		35
16	An Optimal Calibration Method for a MEMS Inertial Measurement Unit. International Journal of Advanced Robotic Systems, 2014, 11, 14.	2.1	34
17	Machine learning-based multi-modal information perception for soft robotic hands. Tsinghua Science and Technology, 2020, 25, 255-269.	6.1	31
18	Design and Workspace Analysis of a Parallel Ankle Rehabilitation Robot (PARR). Journal of Healthcare Engineering, 2019, 2019, 1-10.	1.9	30

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19	Cough Recognition Based on Mel-Spectrogram and Convolutional Neural Network. Frontiers in Robotics and AI, 2021, 8, 580080.	3.2	30
20	A Review of Smart Materials for the Boost of Soft Actuators, Soft Sensors, and Robotics Applications. Chinese Journal of Mechanical Engineering (English Edition), 2022, 35, .	3.7	30
21	A Dual-Modal Vision-Based Tactile Sensor for Robotic Hand Grasping. , 2018, , .		29
22	Robotic teleoperation systems using a wearable multimodal fusion device. International Journal of Advanced Robotic Systems, 2017, 14, 172988141771705.	2.1	27
23	Skill learning for human-robot interaction using wearable device. Tsinghua Science and Technology, 2019, 24, 654-662.	6.1	27
24	Gait Neural Network for Human-Exoskeleton Interaction. Frontiers in Neurorobotics, 2020, 14, 58.	2.8	26
25	Surface Material Retrieval Using Weakly Paired Cross-Modal Learning. IEEE Transactions on Automation Science and Engineering, 2019, 16, 781-791.	5.2	25
26	Cross-Modal Zero-Shot-Learning for Tactile Object Recognition. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 2466-2474.	9.3	25
27	Reinforcement Learning from Imperfect Demonstrations under Soft Expert Guidance. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 5109-5116.	4.9	25
28	Learning to Grasp Familiar Objects Based on Experience and Objects' Shape Affordance. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, 49, 2710-2723.	9.3	20
29	Kernel Regularized Nonlinear Dictionary Learning for Sparse Coding. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, 49, 766-775.	9.3	20
30	Two‐step optimal filter design for the low‐cost attitude and heading reference systems. IET Science, Measurement and Technology, 2013, 7, 240-248.	1.6	19
31	Development of a Wearable Device for Motion Capturing Based on Magnetic and Inertial Measurement Units. Scientific Programming, 2017, 2017, 1-11.	0.7	19
32	Autoencoder-based transfer learning in brain–computer interface for rehabilitation robot. International Journal of Advanced Robotic Systems, 2019, 16, 172988141984086.	2.1	19
33	Wearable sensing devices for upper limbs: A systematic review. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2021, 235, 117-130.	1.8	19
34	Multimodal grasp data set: A novel visual–tactile data set for robotic manipulation. International Journal of Advanced Robotic Systems, 2019, 16, 172988141882157.	2.1	18
35	Filter Bank Convolutional Neural Network for Short Time-Window Steady-State Visual Evoked Potential Classification. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 2615-2624.	4.9	18
36	Tactile-Based Fabric Defect Detection Using Convolutional Neural Network With Attention Mechanism. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-9.	4.7	18

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37	A review on sensory perception for dexterous robotic manipulation. International Journal of Advanced Robotic Systems, 2022, 19, 172988062210959.	2.1	18
38	Dynamic Gesture Recognition Using Inertial Sensors-based Data Gloves. , 2019, , .		17
39	An Interactive Perception Method for Warehouse Automation in Smart Cities. IEEE Transactions on Industrial Informatics, 2021, 17, 830-838.	11.3	16
40	Optimal control scheme for pneumatic soft actuator under comparison of proportional and PWM-solenoid valves. Photonic Network Communications, 2019, 37, 153-163.	2.7	15
41	Smart Bracelet System for Temperature Monitoring and Movement Tracking Analysis. Journal of Healthcare Engineering, 2021, 2021, 1-11.	1.9	14
42	A novel mode controllable hybrid valve pressure control method for soft robotic gripper. International Journal of Advanced Robotic Systems, 2018, 15, 172988141880214.	2.1	13
43	A cross-modal tactile sensor design for measuring robotic grasping forces. Industrial Robot, 2019, 46, 337-344.	2.1	13
44	Toward Image-to-Tactile Cross-Modal Perception for Visually Impaired People. IEEE Transactions on Automation Science and Engineering, 2021, 18, 521-529.	5.2	13
45	Autonomous robot navigation using Retinex algorithm for multiscale image adaptability in low-light environment. Intelligent Service Robotics, 2019, 12, 359-369.	2.6	12
46	Layer jammingâ€‘based soft robotic hand with variable stiffness for compliant and effective grasping. Cognitive Computation and Systems, 2020, 2, 44-49.	1.4	12
47	A glove-based system for object recognition via visual-tactile fusion. Science China Information Sciences, 2019, 62, 1.	4.3	11
48	A novel multi-modal tactile sensor design using thermochromic material. Science China Information Sciences, 2019, 62, 1.	4.3	10
49	Implementation of remotely operated vehicle for direct inspection of reactor pressure vessel and other water-filled infrastructure. Journal of Nuclear Science and Technology, 2016, 53, 1086-1096.	1.3	9
50	Predict Robot Grasp Outcomes based on Multi-Modal Information. , 2018, , .		9
51	Vision-based posture-consistent teleoperation of robotic arm using multi-stage deep neural network. Robotics and Autonomous Systems, 2020, 131, 103592.	5.1	9
52	Underwater Matching Correction Navigation Based on Geometric Features Using Sonar Point Cloud Data. Scientific Programming, 2017, 2017, 1-10.	0.7	8
53	Wearable Technology for Robotic Manipulation and Learning. , 2020, , .		8
54	Visual Affordance Guided Tactile Material Recognition for Waste Recycling. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2656-2664.	5.2	8

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55	Active Affordance Exploration for Robot Grasping. Lecture Notes in Computer Science, 2019, , 426-438.	1.3	8
56	Soft Robotic Finger Embedded with Visual Sensor for Bending Perception. Robotica, 2021, 39, 378-390.	1.9	7
57	Fabric defect detection using tactile information. , 2021, , .		7
58	Generalization of Robot Force-Relevant Skills Through Adapting Compliant Profiles. IEEE Robotics and Automation Letters, 2022, 7, 1055-1062.	5.1	7
59	A novel data glove for fingers motion capture using inertial and magnetic measurement units. , 2016, , .		6
60	Lifelong Learning for Heterogeneous Multi-Modal Tasks. , 2019, , .		6
61	Vision-Based Tactile Perception for Soft Robotic Hand. , 2019, , .		6
62	A Survey of the Development of Wearable Devices. , 2020, , .		6
63	Multimode fusion perception for transparent glass recognition. Industrial Robot, 2022, 49, 625-633.	2.1	6
64	Non-destructive Fruit Firmness Evaluation Using Vision-Based Tactile Information. , 2022, , .		6
65	Learning to detect slip for stable grasping. , 2017, , .		5
66	Attention-based Transfer Learning for Brain-computer Interface. , 2019, , .		5
67	Singularity Analysis of the H4 Parallel Mechanisms with Isomorphic Sub-chains. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2010, 46, 42.	0.5	5
68	Vertical motion control of underwater robot based on hydrodynamics and kinematics analysis. , 2017, , .		4
69	Multi-label tactile property analysis. , 2017, , .		4
70	A Tendon-Driven Dexterous Hand Design with Tactile Sensor Array for Grasping and Manipulation. , 2019, , .		4
71	A petal-array capacitive tactile sensor with micro-pin for robotic fingertip sensing. , 2020, , .		4
72	Cross-Individual Gesture Recognition Based on Long Short-Term Memory Networks. Scientific Programming, 2021, 2021, 1-11.	0.7	4

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73	Robotic skills learning based on dynamical movement primitives using a wearable device. , 2017, , .		3
74	Personal-specific gait recognition based on latent orthogonal feature space. Cognitive Computation and Systems, 2021, 3, 61-69.	1.4	3
75	A Novel Humanoid Soft Hand with Variable Stiffness and Multi-modal Perception *. , 2021, , .		3
76	Tactile sequence based object categorization: A Bag of features modeled by Linear Dynamic System with Symmetric Transition Matrix. , 2016, , .		2
77	A novel wearable tactile sensor array designed for fingertip motion recognition. , 2017, , .		2
78	Interactive video summarization with human intentions. Multimedia Tools and Applications, 2019, 78, 1737-1755.	3.9	2
79	Learning from Wearable-Based Teleoperation Demonstration. , 2020, , 127-144.		2
80	Haptic Glove for Object Recognition and Hand Motion Detection. , 2020, , .		2
81	Research on Fault Diagnosis Method of Rolling Bearing Based on Feature Optimization and Self-Adaptive SVM. Mathematical Problems in Engineering, 2022, 2022, 1-20.	1.1	2
82	Mechanical design and analysis of a novel dexterous hand based on grasping manipulation. , 2017, , .		1
83	Pose Analysis of Humanoid Robot Imitation Process Based on Improved MLP Network. , 2019, , .		1
84	Tension Sensor with Soft Optical Fiber for Tendon-Driven Robotic Hand. , 2020, , .		1
85	Wearable Sensors. , 2020, , 33-63.		1
86	Visual-Tactile Fusion for Robotic Stable Grasping. , 0, , .		1
87	Attitude Estimation of Rigid Bodies Using MEMS Inertial Sensors. , 2011, , .		0
88	A novel method for hand pose estimation based on inertial and magnetic sensors. , 2014, , .		0
89	Multimodal Continual Learning Using Online Dictionary Updating. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 171-178.	3.8	0
90	Editorial: Integrated Multi-modal and Sensorimotor Coordination for Enhanced Human-Robot Interaction. Frontiers in Neurorobotics, 2021, 15, 673659.	2.8	0

#	Article	IF	Citations
91	Applications of Developed Wearable Devices. , 2020, , 89-123.		0
92	Wearable Design and Computing. , 2020, , 65-87.		0
93	Learning from Visual-Based Teleoperation Demonstration. , 2020, , 145-172.		0
94	Learning from Wearable-Based Indirect Demonstration. , 2020, , 173-203.		0
95	A Novel Interface Device Developed based on MRT for Prosthetic Hand. , 2020, , .		0