

# Tao Liu

## List of Publications by Year in descending order

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64  
papers

2,178  
citations

346980

22  
h-index

263392

45  
g-index

64  
all docs

64  
docs citations

64  
times ranked

3030  
citing authors

#	ARTICLE	IF	CITATIONS
1	Soft Actuators and Robotic Devices for Rehabilitation and Assistance. <i>Advanced Intelligent Systems</i> , 2022, 4, 2100140.	3.3	44
2	A Review on the Rehabilitation Exoskeletons for the Lower Limbs of the Elderly and the Disabled. <i>Electronics (Switzerland)</i> , 2022, 11, 388.	1.8	28
3	Machine Learning-Enabled Noncontact Sleep Structure Prediction. <i>Advanced Intelligent Systems</i> , 2022, 4, .	3.3	6
4	A Contactless On-Bed Radar System for Human Respiration Monitoring. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-10.	2.4	6
5	Fine Texture Detection Based on a Solid-Liquid Composite Flexible Tactile Sensor Array. <i>Micromachines</i> , 2022, 13, 440.	1.4	1
6	The electrical response and self-sensing of the fully flexible PVC gel actuator based on flexible electrodes. <i>Sensors and Actuators A: Physical</i> , 2022, 340, 113554.	2.0	3
7	Measurement, Evaluation, and Control of Active Intelligent Gait Training Systems—Analysis of the Current State of the Art. <i>Electronics (Switzerland)</i> , 2022, 11, 1633.	1.8	4
8	An Electronic Skin Strain Sensor for Adaptive Angle Calculation. <i>IEEE Sensors Journal</i> , 2022, 22, 12629-12636.	2.4	4
9	A Wearable Prefrontal Cortex Oxygen Saturation Measurement System Based on Near Infrared Spectroscopy. <i>Electronics (Switzerland)</i> , 2022, 11, 1971.	1.8	1
10	Editorial for the Special Issue on Physical Diagnosis and Rehabilitation Technologies. <i>Electronics (Switzerland)</i> , 2022, 11, 2247.	1.8	0
11	IMU-Based Gait Normalcy Index Calculation for Clinical Evaluation of Impaired Gait. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2021, 25, 3-12.	3.9	34
12	Doppler Shift Mitigation in Acoustic Positioning Based on Pedestrian Dead Reckoning for Smartphone. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021, 70, 1-11.	2.4	16
13	Reconstructing Walking Dynamics From Two Shank-Mounted Inertial Measurement Units. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021, 26, 3040-3050.	3.7	12
14	Why highly compliant poles are not energetically beneficial during running: Evidence from an optimization-based biped model. <i>Journal of Biomechanics</i> , 2021, 117, 110264.	0.9	0
15	Design of a wireless and fully flexible insole using a highly sensitive pressure sensor for gait event detection. <i>Measurement Science and Technology</i> , 2021, 32, 105109.	1.4	12
16	Analysis of the main soft tissue stress associated with flexible flatfoot deformity: a finite element study. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021, 20, 2169-2177.	1.4	7
17	Effect of soft inflatable orthosis on the medial longitudinal arch in patients with flexible flatfoot deformity. <i>Clinical Biomechanics</i> , 2021, 88, 105418.	0.5	0
18	Resistive and capacitive strain sensors based on customized compliant electrode: Comparison and their wearable applications. <i>Sensors and Actuators A: Physical</i> , 2021, 326, 112720.	2.0	47

#	ARTICLE	IF	CITATIONS
19	Design of a three-dimensional capacitor-based six-axis force sensor for human-robot interaction. <i>Sensors and Actuators A: Physical</i> , 2021, 331, 112939.	2.0	16
20	Early Fluid Resuscitation of Burn Patients Based on High-precision Weighing System. <i>IEEE Sensors Journal</i> , 2021, , 1-1.	2.4	0
21	Recent Development of Unpowered Exoskeletons for Lower Extremity: A Survey. <i>IEEE Access</i> , 2021, 9, 138042-138056.	2.6	8
22	Real-Time Human Lower Limbs Motion Estimation and Feedback for Potential Applications in Robotic Gait Aid and Training. , 2021, , .		2
23	A Flexible Turning and Sensing System for Pressure Ulcers Prevention. <i>Electronics (Switzerland)</i> , 2021, 10, 2971.	1.8	3
24	Stability and Control of a Riderâ€™Bicycle System: Analysis and Experiments. <i>IEEE Transactions on Automation Science and Engineering</i> , 2020, 17, 348-360.	3.4	21
25	Lower-Body Walking Motion Estimation Using Only Two Shank-Mounted Inertial Measurement Units (IMUs). , 2020, , .		6
26	Pilot Study of a Hover Backpack with Tunable Air Damper for Decoupling Load and Human. , 2020, , .		7
27	Modeling Angle-Based Pointing Tasks in Augmented Reality Interfaces. <i>IEEE Access</i> , 2020, 8, 192597-192607.	2.6	2
28	The Study of Two Novel Speech-Based Selection Techniques in Voice-User Interfaces. <i>IEEE Access</i> , 2020, 8, 217024-217032.	2.6	2
29	Two Shank-Mounted IMUs-Based Gait Analysis and Classification for Neurological Disease Patients. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 1970-1976.	3.3	48
30	Accurate foot clearance estimation during level and uneven ground walking using inertial sensors. <i>Measurement Science and Technology</i> , 2020, 31, 055106.	1.4	10
31	How to Carry Loads Economically: Analysis Based on a Predictive Biped Model. <i>Journal of Biomechanical Engineering</i> , 2020, 142, .	0.6	12
32	Real-Time Intended Knee Joint Motion Prediction by Deep-Recurrent Neural Networks. <i>IEEE Sensors Journal</i> , 2019, 19, 11503-11509.	2.4	60
33	A Wearable Sensing and Training System: Towards Gait Rehabilitation for Elderly Patients With Knee Osteoarthritis. <i>IEEE Sensors Journal</i> , 2019, 19, 5936-5945.	2.4	23
34	A compliant electrode developed by plasticized polyvinyl chloride filled with multi-walled carbon nanotubes for sensing and actuating. <i>Sensors and Actuators A: Physical</i> , 2019, 296, 383-391.	2.0	10
35	Precise Target Selection Techniques in Handheld Augmented Reality Interfaces. <i>IEEE Access</i> , 2019, 7, 17663-17674.	2.6	13
36	Understanding the mechanics and balance control of the carrying pole through modeling and simulation. <i>PLoS ONE</i> , 2019, 14, e0218072.	1.1	4

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37	A Textile Sensor for Long Durations of Human Motion Capture. <i>Sensors</i> , 2019, 19, 2369.	2.1	16
38	An actuated dissipative spring-mass walking model: Predicting human-like ground reaction forces and the effects of model parameters. <i>Journal of Biomechanics</i> , 2019, 90, 58-64.	0.9	17
39	Inertial Sensor-Based Gait Analysis for Evaluating the Effects of Acupuncture Treatment in Parkinson's Disease. , 2019, , .		2
40	Inertial Sensor-Based Slip Detection in Human Walking. <i>IEEE Transactions on Automation Science and Engineering</i> , 2019, 16, 1399-1411.	3.4	33
41	Estimation of Step Length and Gait Asymmetry Using Wearable Inertial Sensors. <i>IEEE Sensors Journal</i> , 2018, 18, 3844-3851.	2.4	45
42	Wearable Sensor System for Detecting Gait Parameters of Abnormal Gaits: A Feasibility Study. <i>IEEE Sensors Journal</i> , 2018, 18, 4234-4241.	2.4	45
43	Shoe-Floor Interactions in Human Walking With Slips: Modeling and Experiments. <i>Journal of Biomechanical Engineering</i> , 2018, 140, .	0.6	11
44	Gait Adaptable Human-Robot Interaction System and its Application to a Robotic Walker. , 2018, , .		2
45	Artificial muscles for wearable assistance and rehabilitation. <i>Frontiers of Information Technology and Electronic Engineering</i> , 2018, 19, 1303-1315.	1.5	20
46	Gait Event Detection of a Lower Extremity Exoskeleton Robot by an Intelligent IMU. <i>IEEE Sensors Journal</i> , 2018, 18, 9728-9735.	2.4	57
47	Improving the accuracy of wearable sensor orientation using a two-step complementary filter with state machine-based adaptive strategy. <i>Measurement Science and Technology</i> , 2018, 29, 115104.	1.4	32
48	How Magnetic Disturbance Influences the Attitude and Heading in Magnetic and Inertial Sensor-Based Orientation Estimation. <i>Sensors</i> , 2018, 18, 76.	2.1	63
49	Evaluation on Step Counting Performance of Wristband Activity Monitors in Daily Living Environment. <i>IEEE Access</i> , 2017, 5, 13020-13027.	2.6	16
50	Design of a Robotic Knee Assistive Device (ROKAD) for Slip-Induced Fall Prevention during Walking. <i>IFAC-PapersOnLine</i> , 2017, 50, 9802-9807.	0.5	6
51	An Adaptive Orientation Estimation Method for Magnetic and Inertial Sensors in the Presence of Magnetic Disturbances. <i>Sensors</i> , 2017, 17, 1161.	2.1	34
52	A Pulmonary Rehabilitation Training Robot for Chronic Obstructive Pulmonary Disease Patient. <i>Lecture Notes in Electrical Engineering</i> , 2017, , 251-262.	0.3	0
53	A Novel Tactile Sensor with Electromagnetic Induction and Its Application on Stick-Slip Interaction Detection. <i>Sensors</i> , 2016, 16, 430.	2.1	25
54	An integrated system of detecting end-effector motion states and wafer stick-slip on a wafer transfer robot. , 2016, , .		1

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55	A wearable sensor system for lower-limb rehabilitation evaluation using the GRF and CoP distributions. Measurement Science and Technology, 2016, 27, 025701.	1.4	8
56	A simple model for predicting walking energetics with elastically-suspended backpack. Journal of Biomechanics, 2016, 49, 4150-4153.	0.9	30
57	Wearable Sensor Systems for Infants. Sensors, 2015, 15, 3721-3749.	2.1	143
58	Slip detection and prediction in human walking using only wearable inertial measurement units (IMUs). , 2015, , .		4
59	A robotic bipedal model for human walking with slips. , 2015, , .		23
60	A Mobile Force Plate and Three-Dimensional Motion Analysis System for Three-Dimensional Gait Assessment. IEEE Sensors Journal, 2012, 12, 1461-1467.	2.4	48
61	Gait Analysis Using Wearable Sensors. Sensors, 2012, 12, 2255-2283.	2.1	861
62	A wearable force plate system for the continuous measurement of triaxial ground reaction force in biomechanical applications. Measurement Science and Technology, 2010, 21, 085804.	1.4	40
63	Novel approach to ambulatory assessment of human segmental orientation on a wearable sensor system. Journal of Biomechanics, 2009, 42, 2747-2752.	0.9	81
64	A Small and Low-Cost 3-D Tactile Sensor for a Wearable Force Plate. IEEE Sensors Journal, 2009, 9, 1103-1110.	2.4	43