

Lei Ren

List of Publications by Year in descending order

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52
papers

1,061
citations

471509

17
h-index

434195

31
g-index

52
all docs

52
docs citations

52
times ranked

1354
citing authors

#	ARTICLE	IF	CITATIONS
1	Bioinspired soft actuators with highly ordered skeletal muscle structures. <i>Bio-Design and Manufacturing</i> , 2022, 5, 174-188.	7.7	16
2	Tension vector and structure matrix associated force sensitivity of a 6-DOF cable-driven parallel robot. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2022, 236, 100-114.	2.1	5
3	Biomechanical Analysis of the Effect of the Finger Extensor Mechanism on Hand Grasping Performance. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2022, 30, 360-368.	4.9	3
4	A fluid-driven soft robotic fish inspired by fish muscle architecture. <i>Bioinspiration and Biomimetics</i> , 2022, 17, 026009.	2.9	6
5	Alterations in plantar vessel blood flow in patients with mild diabetic peripheral neuropathy. <i>BMJ Open Diabetes Research and Care</i> , 2022, 10, e002492.	2.8	2
6	Noninvasive in vivo study on the morphology and mechanical properties of palmar aponeurosis. <i>Journal of Biomechanics</i> , 2022, 135, 111027.	2.1	0
7	Reproduction of the Mechanical Behavior of Ligament and Tendon for Artificial Joint Using Bioinspired 3D Braided Fibers. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2022, 30, 1172-1180.	4.9	1
8	Early diagnosis of diabetic peripheral neuropathy based on infrared thermal imaging technology. <i>Diabetes/Metabolism Research and Reviews</i> , 2021, 37, e3429.	4.0	10
9	Association Between Pain in Knee Osteoarthritis and Mechanical Properties of Soft Tissue Around Knee Joint. <i>IEEE Access</i> , 2021, 9, 14599-14607.	4.2	2
10	Gyroscope Sensor Based In Vivo Finger Axes of Rotation Identification Using Screw Displacement. <i>Applied Bionics and Biomechanics</i> , 2021, 2021, 1-10.	1.1	0
11	Low-Cost Multisensor Integrated System for Online Walking Gait Detection. <i>Journal of Sensors</i> , 2021, 2021, 1-15.	1.1	4
12	A Sarrus-like overconstrained eight-bar linkage and its associated Fulleroid-like platonic deployable mechanisms. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2020, 234, 241-262.	2.1	19
13	Recent progress in 4D printing of stimuli-responsive polymeric materials. <i>Science China Technological Sciences</i> , 2020, 63, 532-544.	4.0	61
14	Subject-Specific Finite Element Modelling of the Human Hand Complex: Muscle-Driven Simulations and Experimental Validation. <i>Annals of Biomedical Engineering</i> , 2020, 48, 1181-1195.	2.5	18
15	Bionic intelligent soft actuators: high-strength gradient intelligent hydrogels with diverse controllable deformations and movements. <i>Journal of Materials Chemistry B</i> , 2020, 8, 9362-9373.	5.8	17
16	Subject-specific Finite Element Modelling of the Human Shoulder Complex Part 1: Model Construction and Quasi-static Abduction Simulation. <i>Journal of Bionic Engineering</i> , 2020, 17, 1224-1238.	5.0	5
17	Textile-Based Capacitive Sensor for Physical Rehabilitation <i>via</i> Surface Topological Modification. <i>ACS Nano</i> , 2020, 14, 8191-8201.	14.6	71
18	In vivo assessment of material properties of muscles and connective tissues around the knee joint based on shear wave elastography. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 109, 103829.	3.1	11

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19	Biologically Inspired Design and Development of a Variable Stiffness Powered Ankle-Foot Prosthesis. <i>Journal of Mechanisms and Robotics</i> , 2019, 11, .	2.2	14
20	Programming Multistage Shape Memory and Variable Recovery Force with 4D Printing Parameters. <i>Advanced Materials Technologies</i> , 2019, 4, 1900535.	5.8	27
21	Biomechanical comparison of screw-based zones of a spatial subchondral support plate for proximal humerus fractures. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2019, 233, 372-382.	1.8	1
22	Biomimetic Shape-Color Double-Responsive 4D Printing. <i>Advanced Materials Technologies</i> , 2019, 4, 1900293.	5.8	73
23	The art of a hydraulic joint in a spider's leg: modelling, computational fluid dynamics (CFD) simulation, and bio-inspired design. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2019, 205, 491-504.	1.6	18
24	Noninvasive in Vivo Study of the Morphology and Mechanical Properties of Plantar Fascia Based on Ultrasound. <i>IEEE Access</i> , 2019, 7, 53641-53649.	4.2	9
25	Analysis of Spiders' Joint Kinematics and Driving Modes under Different Ground Conditions. <i>Applied Bionics and Biomechanics</i> , 2019, 2019, 1-9.	1.1	4
26	Intent Prediction of Multi-axial Ankle Motion Using Limited EMG Signals. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 335.	4.1	15
27	Validation of a Low-Cost Electromyography (EMG) System via a Commercial and Accurate EMG Device: Pilot Study. <i>Sensors</i> , 2019, 19, 5214.	3.8	34
28	Effect of screw thread length on stiffness of proximal humerus locking plate constructs: A finite element study. <i>Medical Engineering and Physics</i> , 2019, 63, 79-87.	1.7	6
29	3D printing of structural gradient soft actuators by variation of bioinspired architectures. <i>Journal of Materials Science</i> , 2019, 54, 6542-6551.	3.7	24
30	Parametric Design Optimisation of Proximal Humerus Plates Based on Finite Element Method. <i>Annals of Biomedical Engineering</i> , 2019, 47, 601-614.	2.5	17
31	Non-invasive Quantitative Assessment of Muscle Force Based on Ultrasonic Shear Wave Elastography. <i>Ultrasound in Medicine and Biology</i> , 2019, 45, 440-451.	1.5	29
32	Biomechanical analysis of plate systems for proximal humerus fractures: a systematic literature review. <i>BioMedical Engineering OnLine</i> , 2018, 17, 47.	2.7	38
33	Hybrid blade and locking plate fixation for proximal humerus fractures: a comparative biomechanical analysis. <i>BioMedical Engineering OnLine</i> , 2018, 17, 10.	2.7	5
34	Study on temperature and near-infrared driving characteristics of hydrogel actuator fabricated via molding and 3D printing. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 78, 395-403.	3.1	23
35	Subject-specific finite element modelling of the human foot complex during walking: sensitivity analysis of material properties, boundary and loading conditions. <i>Biomechanics and Modeling in Mechanobiology</i> , 2018, 17, 559-576.	2.8	55
36	Dynamic Modelling and Simulation of a Deployable Quadrotor. , 2018, , .		3

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37	Biomechanical comparison of screw-based zoning of PHILOS and Fx proximal humerus plates. BMC Musculoskeletal Disorders, 2018, 19, 253.	1.9	7
38	Estimating the material properties of heel pad sub-layers using inverse Finite Element Analysis. Medical Engineering and Physics, 2017, 40, 11-19.	1.7	17
39	Finite element models of the human shoulder complex: a review of their clinical implications and modelling techniques. International Journal for Numerical Methods in Biomedical Engineering, 2017, 33, e02777.	2.1	40
40	Position Tracking During Human Walking Using an Integrated Wearable Sensing System. Sensors, 2017, 17, 2866.	3.8	26
41	A fast inverse dynamics model of walking for use in optimisation studies. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 1201-1209.	1.6	2
42	Three-Dimensional Kinematics of the Human Metatarsophalangeal Joint during Level Walking. Frontiers in Bioengineering and Biotechnology, 2014, 2, 73.	4.1	11
43	Biomechanical Analysis of Force Distribution in Human Finger Extensor Mechanisms. BioMed Research International, 2014, 2014, 1-9.	1.9	14
44	Biomechanics of Musculoskeletal System and Its Biomimetic Implications: A Review. Journal of Bionic Engineering, 2014, 11, 159-175.	5.0	22
45	Biomechanical Analysis of the Human Finger Extensor Mechanism during Isometric Pressing. PLoS ONE, 2014, 9, e94533.	2.5	23
46	Mathematical Modelling of Biomechanical Interactions between Backpack and Bearer during Load Carriage. Journal of Applied Mathematics, 2013, 2013, 1-12.	0.9	2
47	Dynamic stability of passive bipedal walking on rough terrain: A preliminary simulation study. Journal of Bionic Engineering, 2012, 9, 423-433.	5.0	13
48	A customized model for 3D human segmental kinematic coupling analysis by optoelectronic stereophotogrammetry. Science China Technological Sciences, 2010, 53, 2947-2953.	4.0	4
49	A Coupling Analysis of the Biomechanical Functions of Human Foot Complex during Locomotion. Journal of Bionic Engineering, 2010, 7, S150-S157.	5.0	14
50	The Influence of Intrinsic Muscle Properties on Musculoskeletal System Stability: A Modelling Study. Journal of Bionic Engineering, 2010, 7, S158-S165.	5.0	2
51	The human ankle-foot complex as a multi-configurable mechanism during the stance phase of walking. Journal of Bionic Engineering, 2010, 7, 211-218.	5.0	16
52	Whole body inverse dynamics over a complete gait cycle based only on measured kinematics. Journal of Biomechanics, 2008, 41, 2750-2759.	2.1	202