

# 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	Whole body inverse dynamics over a complete gait cycle based only on measured kinematics. <i>Journal of Biomechanics</i> , 2008, 41, 2750-2759.	2.1	202
2	Biomimetic Shape-Color Double-Responsive 4D Printing. <i>Advanced Materials Technologies</i> , 2019, 4, 1900293.	5.8	73
3	Textile-Based Capacitive Sensor for Physical Rehabilitation via Surface Topological Modification. <i>ACS Nano</i> , 2020, 14, 8191-8201.	14.6	71
4	Recent progress in 4D printing of stimuli-responsive polymeric materials. <i>Science China Technological Sciences</i> , 2020, 63, 532-544.	4.0	61
5	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
6	Finite element models of the human shoulder complex: a review of their clinical implications and modelling techniques. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2017, 33, e02777.	2.1	40
7	Biomechanical analysis of plate systems for proximal humerus fractures: a systematic literature review. <i>BioMedical Engineering OnLine</i> , 2018, 17, 47.	2.7	38
8	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
9	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
10	Programming Multistage Shape Memory and Variable Recovery Force with 4D Printing Parameters. <i>Advanced Materials Technologies</i> , 2019, 4, 1900535.	5.8	27
11	Position Tracking During Human Walking Using an Integrated Wearable Sensing System. <i>Sensors</i> , 2017, 17, 2866.	3.8	26
12	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
13	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
14	Biomechanical Analysis of the Human Finger Extensor Mechanism during Isometric Pressing. <i>PLoS ONE</i> , 2014, 9, e94533.	2.5	23
15	Biomechanics of Musculoskeletal System and Its Biomimetic Implications: A Review. <i>Journal of Bionic Engineering</i> , 2014, 11, 159-175.	5.0	22
16	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
17	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
18	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

#	ARTICLE	IF	CITATIONS
19	Estimating the material properties of heel pad sub-layers using inverse Finite Element Analysis. <i>Medical Engineering and Physics</i> , 2017, 40, 11-19.	1.7	17
20	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
21	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
22	The human ankle-foot complex as a multi-configurable mechanism during the stance phase of walking. <i>Journal of Bionic Engineering</i> , 2010, 7, 211-218.	5.0	16
23	Bioinspired soft actuators with highly ordered skeletal muscle structures. <i>Bio-Design and Manufacturing</i> , 2022, 5, 174-188.	7.7	16
24	Intent Prediction of Multi-axial Ankle Motion Using Limited EMG Signals. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 335.	4.1	15
25	A Coupling Analysis of the Biomechanical Functions of Human Foot Complex during Locomotion. <i>Journal of Bionic Engineering</i> , 2010, 7, S150-S157.	5.0	14
26	Biomechanical Analysis of Force Distribution in Human Finger Extensor Mechanisms. <i>BioMed Research International</i> , 2014, 2014, 1-9.	1.9	14
27	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
28	Dynamic stability of passive bipedal walking on rough terrain: A preliminary simulation study. <i>Journal of Bionic Engineering</i> , 2012, 9, 423-433.	5.0	13
29	Three-Dimensional Kinematics of the Human Metatarsophalangeal Joint during Level Walking. <i>Frontiers in Bioengineering and Biotechnology</i> , 2014, 2, 73.	4.1	11
30	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
31	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
32	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
33	Biomechanical comparison of screw-based zoning of PHILOS and Fx proximal humerus plates. <i>BMC Musculoskeletal Disorders</i> , 2018, 19, 253.	1.9	7
34	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
35	A fluid-driven soft robotic fish inspired by fish muscle architecture. <i>Bioinspiration and Biomimetics</i> , 2022, 17, 026009.	2.9	6
36	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

#	ARTICLE	IF	CITATIONS
37	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
38	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
39	A customized model for 3D human segmental kinematic coupling analysis by optoelectronic stereophotogrammetry. <i>Science China Technological Sciences</i> , 2010, 53, 2947-2953.	4.0	4
40	Analysis of Spiders's Joint Kinematics and Driving Modes under Different Ground Conditions. <i>Applied Bionics and Biomechanics</i> , 2019, 2019, 1-9.	1.1	4
41	Low-Cost Multisensor Integrated System for Online Walking Gait Detection. <i>Journal of Sensors</i> , 2021, 2021, 1-15.	1.1	4
42	Dynamic Modelling and Simulation of a Deployable Quadrotor. , 2018, , .		3
43	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
44	The Influence of Intrinsic Muscle Properties on Musculoskeletal System Stability: A Modelling Study. <i>Journal of Bionic Engineering</i> , 2010, 7, S158-S165.	5.0	2
45	Mathematical Modelling of Biomechanical Interactions between Backpack and Bearer during Load Carriage. <i>Journal of Applied Mathematics</i> , 2013, 2013, 1-12.	0.9	2
46	A fast inverse dynamics model of walking for use in optimisation studies. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016, 19, 1201-1209.	1.6	2
47	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
48	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
49	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
50	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
51	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
52	Noninvasive in vivo study on the morphology and mechanical properties of palmar aponeurosis. <i>Journal of Biomechanics</i> , 2022, 135, 111027.	2.1	0