Jaw-Lin Wang

List of Publications by Year
in descending order

121 papers	2,790 citations	218677 26 h-index	206112 48 g-index
124 all docs	124 docs citations	124 times ranked	3241 citing authors

#	Article	IF	Citations
1	Increase of pullout strength of spinal pedicle screws with conical core: Biomechanical tests and finite element analyses. Journal of Orthopaedic Research, 2005, 23, 788-794.	2.3	161
2	Antibacterial activity and biocompatibility of a chitosanâ€“Î³-poly(glutamic acid) polyelectrolyte complex hydrogel. Carbohydrate Research, 2010, 345, 1774-1780.	2.3	140
3	Evaluation of chitosan/Î³-poly(glutamic acid) polyelectrolyte complex for wound dressing materials. Carbohydrate Polymers, 2011, 84, 812-819.	10.2	136
4	Internal Morphology of Human Cervical Pedicles. Spine, 2000, 25, 1197-1205.	2.0	118
5	Magnetic nanoparticle labeling of mesenchymal stem cells without transfection agent: Cellular behavior and capability of detection with clinical 1.5 T magnetic resonance at the single cell level. Magnetic Resonance in Medicine, 2007, 58, 717-724.	3.0	110
6	The postural stability control and gait pattern of idiopathic scoliosis adolescents. Clinical Biomechanics, 1998, 13, S52-S58.	1.2	106
7	Viscoelastic Finite-Element Analysis of a Lumbar Motion Segment in Combined Compression and Sagittal Flexion. Spine, 2000, 25, 310-318.	2.0	100
8	Increasing Bending Strength and Pullout Strength in Conical Pedicle Screws: Biomechanical Tests and Finite Element Analyses. Journal of Spinal Disorders and Techniques, 2008, 21, 130-138.	1.9	90
9	Macrophage physiological function after superparamagnetic iron oxide labeling. NMR in Biomedicine, 2008, 21, 820-829.	2.8	84
10	The Cortical Shell Architecture of Human Cervical Vertebral Bodies. Spine, 2001, 26, 2478-2484.	2.0	71
11	Cervical spine curvature during simulated whiplash. Clinical Biomechanics, 2004, 19, 1-9.	1.2	71
12	Loosening at the Screwâ€“Vertebra Junction in Multilevel Anterior Cervical Plate Constructs. Spine, 1999, 24, 2383.	2.0	67
13	Stabilizing Potential of Anterior Cervical Plates in Multilevel Corpectomies. Spine, 1999, 24, 2219.	2.0	63
14	Normal Systolic and Diastolic Functions of the Left Ventricle and Left Atrium by Cine Magnetic Resonance Imaging. Journal of Cardiovascular Magnetic Resonance, 2003, 4, 443-457.	3.3	57
15	Development of a System for In Vitro Neck Muscle Force Replication in Whole Cervical Spine Experiments. Spine, 2001, 26, 2214-2219.	2.0	55
16	Quantification of the pulse wave velocity of the descending aorta using axial velocity profiles from phase-contrast magnetic resonance imaging. Magnetic Resonance in Medicine, 2006, 56, 876-883.	3.0	55
17	Direct Labeling of hMSC with SPIO: the Long-Term Influence on Toxicity, Chondrogenic Differentiation Capacity, and Intracellular Distribution. Molecular Imaging and Biology, 2011, 13, 443-451.	2.6	55
18	Position accuracy and electromyographic responses during head reposition in young adults with chronic neck pain. Journal of Electromyography and Kinesiology, 2010, 20, 1014-1020.	1.7	54

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19	Prophylactic Vertebroplasty May Reduce the Risk of Adjacent Intact Vertebra From Fatigue Injury. Spine, 2009, 34, 356-364.	2.0	49
20	Mechanism of Cellular Uptake and Impact of Ferucarbotran on Macrophage Physiology. PLoS ONE, 2011, 6, e25524.	2.5	45
21	Mechanical tests and finite element models for bone holding power of tibial locking screws. Clinical Biomechanics, 2004, 19, 738-745.	1.2	44
22	Biofidelic whole cervical spine model with muscle force replication for whiplash simulation. European Spine Journal, 2005, 14, 346-355.	2.2	43
23	Co-contraction of cervical muscles during sagittal and coronal neck motions at different movement speeds. European Journal of Applied Physiology, 2008, 103, 647-654.	2.5	39
24	The Leakage Pathway and Effect of Needle Gauge on Degree of Disc Injury Post Anular Puncture. Spine, 2007, 32, 1809-1815.	2.0	36
25	The Role of Bone Graft Force in Stabilizing the Multilevel Anterior Cervical Spine Plate System. Spine, 2000, 25, 1649-1654.	2.0	34
26	Development and validation of a geometrically personalized finite element model of the lower ligamentous cervical spine for clinical applications. Computers in Biology and Medicine, 2019, 109, 22-32.	7.0	33
27	Predicting procedure successful rate and 1-year patency after endovascular recanalization for chronic carotid artery occlusion by CT angiography. International Journal of Cardiology, 2016, 221, 772-776.	1.7	31
28	Effect of pedicle screw diameter on screw fixation efficacy in human osteoporotic thoracic vertebrae. Journal of Biomechanics, 2018, 70, 196-203.	2.1	29
29	Reweighting of the sensory inputs for postural control in patients with cervical spondylotic myelopathy after surgery. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 96.	4.6	25
30	Multiobjective optimization of tibial locking screw design using a genetic algorithm: Evaluation of mechanical performance. Journal of Orthopaedic Research, 2006, 24, 908-916.	2.3	24
31	Increasing bending strength of tibial locking screws: Mechanical tests and finite element analyses. Clinical Biomechanics, 2007, 22, 59-66.	1.2	24
32	A meta-model analysis of a finite element simulation for defining poroelastic properties of intervertebral discs. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2013, 227, 672-682.	1.8	23
33	Comparison of Cervical Kinematics, Pain, and Functional Disability Between Single- and Two-level Anterior Cervical Discectomy and Fusion. Spine, 2016, 41, E915-E922.	2.0	23
34	Radiographic Parameters for Evaluating the Neurological Spaces in Experimental Thoracolumbar Burst Fractures. Journal of Spinal Disorders, 2000, 13, 404-411.	1.1	22
35	Mechanical Strength, Fatigue Life, and Failure Analysis of Two Prototypes and Five Conventional Tibial Locking Screws. Journal of Orthopaedic Trauma, 2002, 16, 701-708.	1.4	21
36	Calculation of Dynamic Spinal Ligament Deformation. Traffic Injury Prevention, 2006, 7, 81-87.	1.4	21

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37	Rheology of Intervertebral Disc. Spine, 2010, 35, E743-E752.	2.0	21
38	Immunological impact of magnetic nanoparticles (Ferucarbotran) on murine peritoneal macrophages. Journal of Nanoparticle Research, 2010, 12, 151-160.	1.9	21
39	Biomechanical Analysis Between PEEK and Titanium Screw-rods Spinal Construct Subjected to Fatigue Loading. Journal of Spinal Disorders and Techniques, 2015, 28, E121-E125.	1.9	21
40	Biomechanical response of intact, degenerated and repaired intervertebral discs under impact loading â€“ Ex-vivo and In-Silico investigation. Journal of Biomechanics, 2018, 70, 26-32.	2.1	19
41	The dynamic response of motion segment in cyclic axial compressive loading. Clinical Biomechanics, 1998, 13, S16-S25.	1.2	18
42	Intervertebral Neck Injury Criterion for Simulated Frontal Impacts. Traffic Injury Prevention, 2005, 6, 175-184.	1.4	18
43	The implantation of non-cell-based materials to prevent the recurrent disc herniation: an in vivo porcine model using quantitative discomanometry examination. European Spine Journal, 2007, 16, 1021-1027.	2.2	18
44	Rest Cannot Always Recover the Dynamic Properties of Fatigue-Loaded Intervertebral Disc. Spine, 2008, 33, 1863-1869.	2.0	18
45	Spinal Traction Promotes Molecular Transportation in a Simulated Degenerative Intervertebral Disc Model. Spine, 2014, 39, E550-E556.	2.0	18
46	Labeling of human mesenchymal stem cell: Comparison between paramagnetic and superparamagnetic agents. Journal of Applied Physics, 2009, 105, .	2.5	17
47	A role for substance P and acid-sensing ion channel 1a in prolotherapy with dextrose-mediated analgesia in a mouse model of chronic muscle pain. Pain, 2022, 163, e622-e633.	4.2	17
48	ASIC1a is required for neuronal activation via low-intensity ultrasound stimulation in mouse brain. ELife, 2021, 10, .	6.0	17
49	Radiography Cannot Examine Disc Injuries Secondary to Burst Fracture. Spine, 2002, 27, 235-240.	2.0	16
50	Mechanism of fractures of adjacent and augmented vertebrae following simulated vertebroplasty. Journal of Biomechanics, 2012, 45, 1372-1378.	2.1	16
51	Exercise training for non-operative and post-operative patient with cervical radiculopathy: a literature review. Journal of Physical Therapy Science, 2015, 27, 3011-3018.	0.6	16
52	Responsiveness of the Chinese Versions of the Japanese Orthopaedic Association Cervical Myelopathy Evaluation Questionnaire and Neck Disability Index in Postoperative Patients With Cervical Spondylotic Myelopathy. Spine, 2015, 40, 1315-1321.	2.0	15
53	The Effects of Pedicle Screw Adjustments on Neural Spaces in Burst Fracture Surgery. Spine, 2000, 25, 1637-1643.	2.0	14
54	Intervertebral Neck Injury Criterion for Prediction of Multiplanar Cervical Spine Injury Due to Side Impacts. Traffic Injury Prevention, 2005, 6, 387-397.	1.4	14

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55	Intervertebral disc needle puncture injury can be repaired using a gelatinâ€“poly (Î³-glutamic acid) hydrogel: an in vitro bovine biomechanical validation. European Spine Journal, 2018, 27, 2631-2638.	2.2	14
56	Piezoelectric stimulation by ultrasound facilitates chondrogenesis of mesenchymal stem cells. Journal of the Acoustical Society of America, 2020, 148, EL58-EL64.	1.1	14
57	Translation, Cross-cultural Adaptation, and Validation of a Chinese Version of the Japanese Orthopaedic Association Cervical Myelopathy Evaluation Questionnaire. Spine, 2014, 39, 963-970.	2.0	13
58	Comparison of Micrometer and Nanometer Sized Magnetic Particles for Cell Labeling. IEEE Transactions on Magnetics, 2007, 43, 2421-2423.	2.1	12
59	Biomechanical and tomographic differences in the microarchitecture and strength of trabecular and cortical bone in the early stage of male osteoporosis. PLoS ONE, 2019, 14, e0219718.	2.5	12
60	Perturbation-Based Balance Training in Postoperative Individuals With Degenerative Cervical Myelopathy. Frontiers in Bioengineering and Biotechnology, 2020, 8, 108.	4.1	12
61	Elevation of Intra-Cellular Calcium in Nucleus Pulposus Cells with Micro-Pipette-Guided Ultrasound. Ultrasound in Medicine and Biology, 2021, 47, 1775-1784.	1.5	12
62	Exogenous crosslinking recovers the functional integrity of intervertebral disc secondary to a stab injury. Journal of Biomedical Materials Research - Part A, 2010, 92A, 297-302.	4.0	11
63	Differential segmental motion contribution of single- and two-level anterior cervical discectomy and fusion. European Spine Journal, 2015, 24, 2857-2865.	2.2	11
64	A regenerative approach towards recovering the mechanical properties of degenerated intervertebral discs: Genipin and platelet-rich plasma therapies. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 127-137.	1.8	11
65	Late dialysis rate for coronary artery bypass grafting patients with moderate-to-severe renal impairment: comparison between off-pump and conventional method. European Journal of Cardio-thoracic Surgery, 2008, 33, 364-369.	1.4	10
66	Effect of Degeneration on FluidÃ¢â‚¬â€œSolid Interaction within Intervertebral Disk Under Cyclic Loading Ã¢â‚¬â€œ A Meta-Model Analysis of Finite Element Simulations. Frontiers in Bioengineering and Biotechnology, 2015, 3, 4.	4.1	10
67	Design of an ultrasound chamber for cellular excitation and observation. Journal of the Acoustical Society of America, 2019, 145, EL547-EL553.	1.1	10
68	Changes of balance control in individuals with lumbar degenerative spine disease after lumbar surgery: a longitudinal study. Spine Journal, 2019, 19, 1210-1220.	1.3	10
69	DYNAMIC RESPONSES OF INTERVERTEBRAL DISC DURING STATIC CREEP AND DYNAMIC CYCLIC LOADING: A PARAMETRIC POROELASTIC FINITE ELEMENT ANALYSIS. Biomedical Engineering - Applications, Basis and Communications, 2013, 25, 1350013.	0.6	9
70	Search for critical loading condition of the spineâ€“A meta analysis of a nonlinear viscoelastic finite element model. Computer Methods in Biomechanics and Biomedical Engineering, 2005, 8, 323-330.	1.6	8
71	Rheological and Dynamic Integrity of Simulated Degenerated Disc and Consequences After Cross-linker Augmentation. Spine, 2013, 38, E1446-E1453.	2.0	8
72	Clinical Significance of Postdecompression Facet Joint Effusion After Minimally Invasive Decompression for Degenerative Lumbar Spinal Stenosis. Journal of Spinal Disorders and Techniques, 2014, 27, E318-E323.	1.9	8

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73	A Patient-Mount Navigated Intervention System for Spinal Diseases and Its Clinical Trial on Percutaneous Pulsed Radiofrequency Stimulation of Dorsal Root Ganglion. Spine, 2010, 35, E1126-E1132.	2.0	7
74	Intraoperative Myelography in Minimally Invasive Decompression for Degenerative Lumbar Spinal Stenosis. Journal of Spinal Disorders and Techniques, 2012, 25, E117-E124.	1.9	7
75	Gelatinâ€“Poly (Î³-Glutamic Acid) Hydrogel as a Potential Adhesive for Repair of Intervertebral Disc Annulus Fibrosus. Spine, 2021, 46, E243-E249.	2.0	7
76	Effects on microstrain and conversion of flowable resin composite using different curing modes and units. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2007, 81B, 323-329.	3.4	6
77	Pullout strength of thoracic pedicle screws improved with cortical bone ratio: a cadaveric study. Journal of Orthopaedic Science, 2014, 19, 900-906.	1.1	6
78	Upright Balance Control in Individuals with Cervical Myelopathy Following Cervical Decompression Surgery: A Prospective Cohort Study. Scientific Reports, 2020, 10, 10357.	3.3	6
79	The Biomechanical Response of the Lower Cervical Spine Post Laminectomy: Geometrically-Parametric Patient-Specific Finite Element Analyses. Journal of Medical and Biological Engineering, 2021, 41, 59-70.	1.8	6
80	Low Intensity Ultrasound Induces Epithelial Cell Adhesion Responses. Journal of Biomechanical Engineering, 2020, 142, .	1.3	6
81	Dynamic Pressure Stimulation Upregulates Collagen II and Aggrecan in Nucleus Pulposus Cells Through Calcium Signaling. Spine, 2022, 47, 1111-1119.	2.0	6
82	MAGNETIC NANOPARTICLE LABELING OF CULTURED CANCER CELL LINE WITHOUT TRANSFECTION AGENT. Biomedical Engineering - Applications, Basis and Communications, 2008, 20, 259-265.	0.6	5
83	A miniature patientâ€mount navigation system for assisting needle placement in CTâ€guided intervention. International Journal of Medical Robotics and Computer Assisted Surgery, 2011, 7, 423-430.	2.3	5
84	A Poroelastic Finite Element Model to Describe the Time-Dependent Response of Lumbar Intervertebral Disc. Journal of Medical Imaging and Health Informatics, 2011, 1, 246-251.	0.3	4
85	Material Property Identification of Artificial Degenerated Intervertebral Disc Models â€" Comparison of Inverse Poroelastic Finite Element Analysis with Biphasic Closed Form Solution. Journal of Mechanics, 2013, 29, 589-597.	1.4	4
86	Recovering the mechanical properties of denatured intervertebral discs through Platelet-Rich Plasma therapy. , 2015, 2015, 933-6.		4
87	Auditory independent low-intensity ultrasound stimulation of mouse brain is associated with neuronal ERK phosphorylation and an increase of Tbr2 marked neuroprogenitors. Biochemical and Biophysical Research Communications, 2022, 613, 113-119.	2.1	4
88	Feasibility Study of Using Viscoplastic Bone Cement for Vertebroplasty. Spine, 2010, 35, E385-E391.	2.0	3
89	Time-dependent response of intact intervertebral disc â€" In Vitro and In-Silico study on the effect of loading mode and rate. Engineering Solid Mechanics, 2015, 3, 51-58.	1.2	3
90	Suction thrombectomy after balloon maceration for dural venous sinus thrombosis. Journal of the Neurological Sciences, 2016, 365, 76-81.	0.6	3

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91	Identification of head control deficits following anterior cervical discectomy and fusion in patients with cervical spondylotic myelopathy. European Spine Journal, 2016, 25, 1855-1860.	2.2	3
92	The responses of nucleus pulposus cells to pressure and ultrasound stimulation. Journal of the Acoustical Society of America, 2020, 148, EL314-EL319.	1.1	3
93	The compensation mechanism of cervical muscle dysfunction on spinal stability â€“ an in vitro study using porcine model. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers,Series A/Chung-kuo Kung Ch'eng Hsuch K'an, 2008, 31, 605-613.	1.1	2
94	A BIOMECHANICAL VALIDATION OF A NEW FEMORAL NECK FIXATION DYNAMIC HIP SCREW FOR PROXIMAL FEMORAL FRACTURE. Biomedical Engineering - Applications, Basis and Communications, 2010, 22, 53-59.	0.6	2
95	SVD analysis of dynamic properties for fatigue loaded intervertebral disc. , 2011, , .		2
96	DISC RHEOLOGY CHANGES IN DEGENERATED DISC MODEL BY TRYPSIN AND GLYCATION. Journal of Biomechanics, 2012, 45, S619.	2.1	2
97	In Vitro Biomechanical Validation of a Self-Adaptive Ratchet Growing Rod Construct for Fusionless Scoliosis Correction. Spine, 2019, 44, E1231-E1240.	2.0	2
98	Low intensity ultrasound enhances cisplatin uptake in vitro by cochlear hair cells. JASA Express Letters, 2021, 1, .	1.1	2
99	Investigation of Low Back Pain Using System Modeling. Advanced Science Letters, 2013, 19, 1260-1264.	0.2	2
100	Piezoelectric effect stimulates the rearrangement of chondrogenic cells and alters ciliary orientation via atypical PKCÎ¶. Biochemistry and Biophysics Reports, 2022, 30, 101265.	1.3	2
101	The Load Sharing Contribution of Spinal Facet Joint During Impact Loading: A Porcine Biomechanical Model. , 2003, , 371.		1
102	Mechanism and risk factors of adjacent vertebral failure post percutaneous vertebroplasty â€“ a strain energy density approach. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers,Series A/Chung-kuo Kung Ch'eng Hsuch K'an, 2007, 30, 899-909.	1.1	1
103	On low back pain: Identification of structural changes in system parameters for fatigue loaded intervertebral disc using PCA. , 2012, , .		1
104	ASSESSMENT OF EXOGENOUS CROSSLINKING THERAPY FOR BIOCHEMICAL AND MECHANICAL INDUCED DEGENERATION. Journal of Biomechanics, 2012, 45, S617.	2.1	1
105	Preliminary study on high speed tensile properties of artificial ligament. , 0, , .		0
106	Anatomical Reduction Is Not Necessary in Treating Non-Porotic Unstable Intertrochanteric Fracture: A Biomechanical Study of Porcine Model. , 2003, , 285.		0
107	Strain energy density distribution of vertebral body of two motion segment model under combined compression and sagittal bending moment â€“ an in vitro porcine spine biomechanical study. Journal of the Chinese Institute of Engineers, Transactions of the Chinese Institute of Engineers,Series A/Chung-kuo Kung Ch'eng Hsuch K'an, 2004, 27, 929-936.	1.1	0
108	Effects of fracture severity and cement viscosity on the risk of cement leakage during percutaneous vertebroplasty. Journal of Biomechanical Science and Engineering, 2014, 9, 13-00184-13-00184.	0.3	0

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109	A Clinical and Kinematical Evaluation of Trajectory Planning Software for Posterior Atlantoaxial Transarticular Screw Fixation Surgery. Journal of Medical and Biological Engineering, 2016, 36, 62-70.	1.8	0
110	Macromolecular diffusion in intact, degraded and crosslinking-augmented intervertebral discs. Journal of Biomechanical Science and Engineering, 2017, 12, 16-00629-16-00629.	0.3	0
111	Heterogeneous influences of emotional disturbances on multi-domain quality of life after anterior cervical spine surgery: A prospective study. Clinical Neurology and Neurosurgery, 2019, 184, 105447.	1.4	0
112	The Studies of Mechanical Contribution of Pins of Wrist External Fixator Using Mechanical Model, Cadaver Model and In Vivo Patient Model. , 2003, , .		0
113	The Variation of Gross Force Response of Spinal Motion Segment During Cyclic Loading: A Porcine Biomechanical Model. , 2003, , .		0
114	How the External Impact Energy Affects the Internal Kinetics of Knee Joint: The Comparison of Porcine and Human Knee Joint. , 2003, , .		0
115	THE EFFECT OF LOADING RATE ON RHEOLOGICAL PROPERTIES OF HEALTHY INTERVERTEBRAL DISC(1C1) Tj ETQq1 1 0.784314 rgBT O Emerging Science and Technology in Biomechanics, 2007, 2007.3, S42.	0.0	0
116	THE PERMEABILITY PROPERTY OF HEALTHY INTERVERTEBRAL ENDPLATE : AN IN VITRO STUDY USING PORCINE THORACOLUMBAR SPINE(1C1 Musculo-Skeletal Biomechanics I). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2007, 2007.3, S41.	0.0	0
117	THE EFFECT OF FATIGUE LOADING ON THE VERTEBRAL STIFFNESS AND HEIGHT AFTER CEMENT AUGMENTATION(3C2 Bone & Ligament I). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2007, 2007.3, S209.	0.0	0
118	PS5-13 Effect of LIPUS stimulation on nutrition diffusion within intervertebral disc(PS5: Poster Short) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Emerging Science and Technology in Biomechanics, 2015, 2015.8, 311.	0.0	0
119	PS5-12 Effect of pedicle screw diameter on pullout failure : A cadaveric biomechanical study(PS5:) Tj ETQq1 1 0.784314 rgBT /Overlock Biomechanics Emerging Science and Technology in Biomechanics, 2015, 2015.8, 310.	0.0	0
120	PS5-14 Ultrasound Attenuation of Porcine Intervertebral Disc(PS5: Poster Short Presentation V,Poster) Tj ETQq0 0 0 rgBT /Overlock 10 T Technology in Biomechanics, 2015, 2015.8, 312.	0.0	0
121	Changes of the Head Control Ability in Patients with Cervical Spondylotic Myelopathy. IFMBE Proceedings, 2018, , 85-88.	0.3	0