

Hans-Joachim Wilke

List of Publications by Year in descending order

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Version: 2024-02-01

326
papers

18,249
citations

15001

68
h-index

20023

121
g-index

356
all docs

356
docs citations

356
times ranked

9331
citing authors

#	ARTICLE	IF	CITATIONS
1	The Modicâ€endplateâ€complex phenotype in cervical spine patients: Association with symptoms and outcomes. <i>Journal of Orthopaedic Research</i> , 2022, 40, 449-459.	1.2	6
2	Which traumatic spinal injury creates which degree of instability? A systematic quantitative review. <i>Spine Journal</i> , 2022, 22, 136-156.	0.6	7
3	Morphological patterns of the rib cage and lung in the healthy and adolescent idiopathic scoliosis. <i>Journal of Anatomy</i> , 2022, 240, 120-130.	0.9	6
4	Global and local characterization explains the different mechanisms of failure of the human ribs. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 125, 104931.	1.5	1
5	Artificial intelligence and spine imaging: limitations, regulatory issues and future direction. <i>European Spine Journal</i> , 2022, , 1.	1.0	10
6	The use of computational models in orthopedic biomechanical research. , 2022, , 681-712.		5
7	Artificial intelligence in spine care: current applications and future utility. <i>European Spine Journal</i> , 2022, 31, 2057-2081.	1.0	21
8	Endplate abnormalities, Modic changes and their relationship to alignment parameters and surgical outcomes in the cervical spine. <i>Journal of Orthopaedic Research</i> , 2022, , .	1.2	3
9	Artificial intelligence in predicting early-onset adjacent segment degeneration following anterior cervical discectomy and fusion. <i>European Spine Journal</i> , 2022, 31, 2104-2114.	1.0	9
10	Biomechanics of the spine. , 2022, , 35-46.		0
11	Even mild intervertebral disc degeneration reduces the flexibility of the thoracic spine: an experimental study on 95 human specimens. <i>Spine Journal</i> , 2022, 22, 1913-1921.	0.6	1
12	Continuous Rod Load Monitoring to Assess Spinal Fusion Statusâ€Pilot In Vivo Data in Sheep. <i>Medicina (Lithuania)</i> , 2022, 58, 899.	0.8	6
13	Cervical spine MRI phenotypes and prediction of pain, disability and adjacent segment degeneration/disease after ACDF. <i>Journal of Orthopaedic Research</i> , 2021, 39, 657-670.	1.2	13
14	Morphometry of the kangaroo spine and its comparison with human spinal data. <i>Journal of Anatomy</i> , 2021, 238, 626-642.	0.9	5
15	Intelligence-Based Spine Care Model: A New Era of Research and Clinical Decision-Making. <i>Global Spine Journal</i> , 2021, 11, 135-145.	1.2	24
16	Radiographic cervical spine degenerative findings: a study on a large population from age 18 to 97Åyears. <i>European Spine Journal</i> , 2021, 30, 431-443.	1.0	24
17	ISSLS Prize in Bioengineering Science 2021: in vivo sagittal motion of the lumbar spine in low back pain patientsâ€a radiological big data study. <i>European Spine Journal</i> , 2021, 30, 1108-1116.	1.0	8
18	Load-sharing biomechanics of lumbar fixation and fusion with pedicle subtraction osteotomy. <i>Scientific Reports</i> , 2021, 11, 3595.	1.6	17

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19	Georg Schmorl Prize of the German Spine Society (DWG) 2020: new biomechanical in vitro test method to determine subsidence risk of vertebral body replacements. <i>European Spine Journal</i> , 2021, 30, 1117-1124.	1.0	0
20	In Vitro Model for Lumbar Disc Herniation to Investigate Regenerative Tissue Repair Approaches. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2847.	1.3	2
21	A biomechanical comparison of a cement-augmented odontoid screw with a posterior-instrumented fusion in geriatric patients with an odontoid fracture type IIb. <i>European Spine Journal</i> , 2021, 30, 1566-1573.	1.0	0
22	Experimental study exploring the factors that promote rib fragility in the elderly. <i>Scientific Reports</i> , 2021, 11, 9307.	1.6	6
23	Can UVA-light-activated riboflavin-induced collagen crosslinking be transferred from ophthalmology to spine surgery? A feasibility study on bovine intervertebral disc. <i>PLoS ONE</i> , 2021, 16, e0252672.	1.1	3
24	A comprehensive tool box for large animal studies of intervertebral disc degeneration. <i>JOR Spine</i> , 2021, 4, e1162.	1.5	19
25	The impact of age, sex, disc height loss and T1 slope on the upper and lower cervical lordosis: a large-scale radiologic study. <i>European Spine Journal</i> , 2021, 30, 2434-2442.	1.0	10
26	Sagittal wedging of intervertebral discs and vertebral bodies in the cervical spine and their associations with age, sex and cervical lordosis: A large-scale morphological study. <i>Clinical Anatomy</i> , 2021, 34, 1111-1120.	1.5	2
27	Validity and interobserver agreement of a new radiographic grading system for intervertebral disc degeneration: Part III. Thoracic spine. <i>European Spine Journal</i> , 2021, , 1.	1.0	0
28	Does the neutral zone quantification method matter? Efficacy of evaluating neutral zone during destabilization and restabilization in human spine implant testing. <i>Journal of Biomechanics</i> , 2021, 129, 110756.	0.9	1
29	Can cavity-based pedicle screw augmentation decrease screw loosening? A biomechanical in vitro study. <i>European Spine Journal</i> , 2021, 30, 2283-2291.	1.0	8
30	A Deep Learning Model for the Accurate and Reliable Classification of Disc Degeneration Based on MRI Data. <i>Investigative Radiology</i> , 2021, 56, 78-85.	3.5	29
31	Temporal-spatial organ response after blast-induced experimental blunt abdominal trauma. <i>FASEB Journal</i> , 2021, 35, e22038.	0.2	6
32	The effect of posterior compression of the facet joints for initial stability and sagittal profile in the treatment of thoracolumbar fractures: a biomechanical study. <i>European Spine Journal</i> , 2021, 31, 28.	1.0	0
33	Interleukin-1 β More Than Mechanical Loading Induces a Degenerative Phenotype in Human Annulus Fibrosus Cells, Partially Impaired by Anti-Proteolytic Activity of Mesenchymal Stem Cell Secretome. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 802789.	2.0	4
34	Estimating the three-dimensional vertebral orientation from a planar radiograph: Is it feasible?. <i>Journal of Biomechanics</i> , 2020, 102, 109328.	0.9	4
35	Biomechanical in vitro comparison between anterior column realignment and pedicle subtraction osteotomy for severe sagittal imbalance correction. <i>European Spine Journal</i> , 2020, 29, 36-44.	1.0	20
36	Thoracic spinal kinematics is affected by the grade of intervertebral disc degeneration, but not by the presence of the ribs: An in vitro study. <i>Spine Journal</i> , 2020, 20, 488-498.	0.6	9

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37	In vitro analysis of thoracic spinal motion segment flexibility during stepwise reduction of all functional structures. <i>European Spine Journal</i> , 2020, 29, 179-185.	1.0	17
38	<p>The MOVE-C Cervical Artificial Disc â€œ Design, Materials, Mechanical Safety</p>. <i>Medical Devices: Evidence and Research</i> , 2020, Volume 13, 315-324.	0.4	3
39	Cervical Spine Endplate Abnormalities and Association With Pain, Disability, and Adjacent Segment Degeneration After Anterior Cervical Discectomy and Fusion. <i>Spine</i> , 2020, 45, E917-E926.	1.0	15
40	High-Intensity Zones on MRI of the Cervical Spine in Patients: Epidemiology and Association With Pain and Disability. <i>Global Spine Journal</i> , 2020, , 219256822096632.	1.2	1
41	Influences of functional structures on the kinematic behavior of the cervical spine. <i>Spine Journal</i> , 2020, 20, 2014-2024.	0.6	7
42	Thoracic Spinal Stability and Motion Behavior Are Affected by the Length of Posterior Instrumentation After Vertebral Body Replacement, but Not by the Surgical Approach Type: An in vitro Study With Entire Rib Cage Specimens. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 572.	2.0	8
43	Rib Presence, Anterior Rib Cage Integrity, and Segmental Length Affect the Stability of the Human Thoracic Spine: An in vitro Study. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 46.	2.0	10
44	In vitro Analysis of the Intradiscal Pressure of the Thoracic Spine. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 614.	2.0	13
45	In vitro comparison of personalized 3D printed versus standard expandable titanium vertebral body replacement implants in the mid-thoracic spine using entire rib cage specimens. <i>Clinical Biomechanics</i> , 2020, 78, 105070.	0.5	15
46	Infrared attenuated total reflection spectroscopic surface analysis of bovineâ€tail intervertebral discs after UV â€lightâ€activated riboflavinâ€induced collagen crossâ€linking. <i>Journal of Biophotonics</i> , 2020, 13, e202000110.	1.1	2
47	The strain distribution in the lumbar anterior longitudinal ligament is affected by the loading condition and bony features: An in vitro full-field analysis. <i>PLoS ONE</i> , 2020, 15, e0227210.	1.1	20
48	Digital Image Correlation (DIC) Assessment of the Non-Linear Response of the Anterior Longitudinal Ligament of the Spine during Flexion and Extension. <i>Materials</i> , 2020, 13, 384.	1.3	13
49	Nucleus replacement could get a new chance with annulus closure. <i>European Spine Journal</i> , 2020, 29, 1733-1741.	1.0	10
50	The Impact of Modic Changes on Preoperative Symptoms and Clinical Outcomes in Anterior Cervical Discectomy and Fusion Patients. <i>Neurospine</i> , 2020, 17, 190-203.	1.1	9
51	Resistance of coated polyetheretherketone lumbar interbody fusion cages against abrasion under simulated impaction into the disc space. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2019, 17, 228080001878285.	0.7	6
52	In vitro analysis of kinematics and elastostatics of the human rib cage during thoracic spinal movement for the validation of numerical models. <i>Journal of Biomechanics</i> , 2019, 94, 147-157.	0.9	18
53	GEORG SCHMORL PRIZE OF THE GERMAN SPINE SOCIETY (DWG) 2018: combined inflammatory and mechanical stress weakens the annulus fibrosus: evidences from a loaded bovine AF organ culture. <i>European Spine Journal</i> , 2019, 28, 922-933.	1.0	14
54	Fully automated radiological analysis of spinal disorders and deformities: a deep learning approach. <i>European Spine Journal</i> , 2019, 28, 951-960.	1.0	98

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55	Towards intervertebral disc engineering: Bio-mimetics of form and function of the annulus fibrosus lamellae. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 94, 298-307.	1.5	17
56	Analysis of microscopic bone properties in an osteoporotic sheep model: a combined biomechanics, FE and ToF-SIMS study. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20180793.	1.5	10
57	Patterns of serial rib fractures after blunt chest trauma: An analysis of 380 cases. <i>PLoS ONE</i> , 2019, 14, e0224105.	1.1	31
58	Material failure in dynamic spine implants: are the standardized implant tests before market launch sufficient?. <i>European Spine Journal</i> , 2019, 28, 872-882.	1.0	1
59	The Mechanical Role of the Radial Fiber Network Within the Annulus Fibrosus of the Lumbar Intervertebral Disc: A Finite Elements Study. <i>Journal of Biomechanical Engineering</i> , 2019, 141, .	0.6	19
60	Introducing the craniocervical Y-ligament. <i>Surgical and Radiologic Anatomy</i> , 2019, 41, 197-202.	0.6	4
61	Neck mobility in the Jurassic plesiosaur <i>Cryptoclidus eurymerus</i> : finite element analysis as a new approach to understanding the cervical skeleton in fossil vertebrates. <i>PeerJ</i> , 2019, 7, e7658.	0.9	6
62	Asymmetrical intrapleural pressure distribution: a cause for scoliosis? A computational analysis. <i>European Journal of Applied Physiology</i> , 2018, 118, 1315-1329.	1.2	7
63	The Role of the Size and Location of the Tumors and of the Vertebral Anatomy in Determining the Structural Stability of the Metastatically Involved Spine: a Finite Element Study. <i>Translational Oncology</i> , 2018, 11, 639-646.	1.7	16
64	A musculoskeletal model of the lumbar spine using ArtiSynth – development and validation. <i>Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization</i> , 2018, 6, 483-490.	1.3	16
65	Artificial neural networks for the recognition of vertebral landmarks in the lumbar spine. <i>Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization</i> , 2018, 6, 447-452.	1.3	10
66	Is intervertebral disc degeneration related to segmental instability? An evaluation with two different grading systems based on clinical imaging. <i>Acta Radiologica</i> , 2018, 59, 327-335.	0.5	10
67	Comparison of three-dimensional helical axes of the cervical spine between in vitro and in vivo testing. <i>Spine Journal</i> , 2018, 18, 515-524.	0.6	17
68	In vitro validation of a novel mechanical model for testing the anchorage capacity of pedicle screws using physiological load application. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 77, 578-585.	1.5	21
69	Uncertainty analysis of material properties and morphology parameters in numerical models regarding the motion of lumbar vertebral segments. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2018, 21, 673-683.	0.9	6
70	Influence of morphology and material properties on the range of motion of the costovertebral joint – a probabilistic finite element analysis. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2018, 21, 731-739.	0.9	7
71	Motion Preservation. , 2018, , 329-342.		0
72	Three-dimensional microstructural reconstruction of the ovine intervertebral disc using ultrahigh field MRI. <i>Spine Journal</i> , 2018, 18, 2119-2127.	0.6	15

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73	The effect of follower load on the intersegmental coupled motion characteristics of the human thoracic spine: An in vitro study using entire rib cage specimens. <i>Journal of Biomechanics</i> , 2018, 78, 36-44.	0.9	21
74	Exploring the Potential of Generative Adversarial Networks for Synthesizing Radiological Images of the Spine to be Used in In Silico Trials. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018, 6, 53.	2.0	34
75	Biomechanical advantages of supplemental accessory and satellite rods with and without interbody cages implantation for the stabilization of pedicle subtraction osteotomy. <i>European Spine Journal</i> , 2018, 27, 2357-2366.	1.0	48
76	Characteristic morphological patterns within adolescent idiopathic scoliosis may be explained by mechanical loading. <i>European Spine Journal</i> , 2018, 27, 2184-2191.	1.0	14
77	Comparative biomechanical study of a new transpedicular vertebral device and vertebroplasty for the treatment or prevention of vertebral compression fractures. <i>Clinical Biomechanics</i> , 2018, 56, 40-45.	0.5	14
78	Animal Models for Spine Biomechanics. , 2018, , 279-296.		2
79	The Cervical Spine. , 2018, , 11-34.		2
80	Basic Biomechanics of the Thoracic Spine and Rib Cage. , 2018, , 35-50.		7
81	Basic Biomechanics of the Lumbar Spine. , 2018, , 51-67.		3
82	The Vertebral Bone. , 2018, , 71-87.		0
83	In Vitro Testing of Cadaveric Specimens. , 2018, , 203-221.		0
84	Bone-Preserving Decompression Procedures Have a Minor Effect on the Flexibility of the Lumbar Spine. <i>Journal of Korean Neurosurgical Society</i> , 2018, 61, 680-688.	0.5	3
85	Influence of Complex Loading Conditions on Intervertebral Disc Failure. <i>Spine</i> , 2017, 42, E78-E85.	1.0	46
86	Two-piece ALIF cage optimizes the bone-implant interface in a 360° setting. <i>European Spine Journal</i> , 2017, 26, 2747-2753.	1.0	3
87	Is pelvic fixation the only option to provide additional stability to the sacral anchorage in long lumbar instrumentation? A comparative biomechanical study of new techniques. <i>Clinical Biomechanics</i> , 2017, 43, 34-39.	0.5	7
88	Biomechanical in vitro comparison of radiofrequency kyphoplasty and balloon kyphoplasty. <i>European Spine Journal</i> , 2017, 26, 3225-3234.	1.0	8
89	Spinal fusion without instrumentation – Experimental animal study. <i>Clinical Biomechanics</i> , 2017, 46, 6-14.	0.5	4
90	A new multiscale micromechanical model of vertebral trabecular bones. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 933-946.	1.4	13

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91	Osteocyte Regulation of Receptor Activator of NF- κ B Ligand/Osteoprotegerin in a Sheep Model of Osteoporosis. <i>American Journal of Pathology</i> , 2017, 187, 1686-1699.	1.9	14
92	A nonlinear micromechanical model for progressive damage of vertebral trabecular bones. <i>Journal of Mechanics of Materials and Structures</i> , 2017, 12, 407-424.	0.4	5
93	Determinants of the biomechanical and radiological outcome of surgical correction of adolescent idiopathic scoliosis surgery: the role of rod properties and patient characteristics. <i>European Spine Journal</i> , 2017, 26, 524-532.	1.0	15
94	Vertebral bone microarchitecture and osteocyte characteristics of three toothed whale species with varying diving behaviour. <i>Scientific Reports</i> , 2017, 7, 1604.	1.6	18
95	EUROSPINE 2016 FULL PAPER AWARD: Wire cerclage can restore the stability of the thoracic spine after median sternotomy: an in vitro study with entire rib cage specimens. <i>European Spine Journal</i> , 2017, 26, 1401-1407.	1.0	19
96	Moderately degenerated lumbar motion segments: Are they truly unstable?. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 537-547.	1.4	8
97	Preclinical evaluation of posterior spine stabilization devices: can we compare in vitro and in vivo loads on the instrumentation?. <i>European Spine Journal</i> , 2017, 26, 200-209.	1.0	18
98	Numerical Prediction of the Mechanical Failure of the Intervertebral Disc under Complex Loading Conditions. <i>Materials</i> , 2017, 10, 31.	1.3	17
99	A novel finite element model of the ovine lumbar intervertebral disc with anisotropic hyperelastic material properties. <i>PLoS ONE</i> , 2017, 12, e0177088.	1.1	20
100	In vitro analysis of the segmental flexibility of the thoracic spine. <i>PLoS ONE</i> , 2017, 12, e0177823.	1.1	50
101	Semiautomated 3D Spine Reconstruction from Biplanar Radiographic Images: Prediction of Intervertebral Loading in Scoliotic Subjects. <i>Frontiers in Bioengineering and Biotechnology</i> , 2017, 5, 1.	2.0	74
102	The rib cage stabilizes the human thoracic spine: An in vitro study using stepwise reduction of rib cage structures. <i>PLoS ONE</i> , 2017, 12, e0178733.	1.1	66
103	Role of muscle damage on loading at the level adjacent to a lumbar spine fusion: a biomechanical analysis. <i>European Spine Journal</i> , 2016, 25, 2929-2937.	1.0	27
104	A pedicle screw system and a lamina hook system provide similar primary and long-term stability: a biomechanical in vitro study with quasi-static and dynamic loading conditions. <i>European Spine Journal</i> , 2016, 25, 2919-2928.	1.0	31
105	Spine Research Is Multidisciplinary. <i>Spine</i> , 2016, 41, S1-S3.	1.0	0
106	Cyclic tensile stress of human annulus fibrosus cells induces MAPK activation: involvement in proinflammatory gene expression. <i>Osteoarthritis and Cartilage</i> , 2016, 24, 679-687.	0.6	24
107	Preclinical evaluation of posterior spine stabilization devices: can the current standards represent basic everyday life activities?. <i>European Spine Journal</i> , 2016, 25, 2909-2918.	1.0	24
108	Does impaction of titanium-coated interbody fusion cages into the disc space cause wear debris or delamination?. <i>Spine Journal</i> , 2016, 16, 235-242.	0.6	68

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109	A Degenerative/Proinflammatory Intervertebral Disc Organ Culture: An <i>Ex Vivo</i> Model for Anti-inflammatory Drug and Cell Therapy. <i>Tissue Engineering - Part C: Methods</i> , 2016, 22, 8-19.	1.1	35
110	A new dynamic six degrees of freedom disc-loading simulator allows to provoke disc damage and herniation. <i>European Spine Journal</i> , 2016, 25, 1363-1372.	1.0	40
111	Disc herniations in astronauts: What causes them, and what does it tell us about herniation on earth?. <i>European Spine Journal</i> , 2016, 25, 144-154.	1.0	77
112	On the Relative Relevance of Subject-Specific Geometries and Degeneration-Specific Mechanical Properties for the Study of Cell Death in Human Intervertebral Disk Models. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 5.	2.0	26
113	Planning the Surgical Correction of Spinal Deformities: Toward the Identification of the Biomechanical Principles by Means of Numerical Simulation. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 178.	2.0	16
114	Structural Behavior of Human Lumbar Intervertebral Disc under Direct Shear. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2015, 13, 66-71.	0.7	9
115	Development of a scoliotic spine model for biomechanical in vitro studies. <i>Clinical Biomechanics</i> , 2015, 30, 182-187.	0.5	9
116	Pedicle screw loosening: a clinically relevant complication?. <i>European Spine Journal</i> , 2015, 24, 1005-1016.	1.0	263
117	Limitations of current in vitro test protocols for investigation of instrumented adjacent segment biomechanics: critical analysis of the literature. <i>European Spine Journal</i> , 2015, 24, 1882-1892.	1.0	82
118	Cement Augmented Anterior Odontoid Screw Fixation is Biomechanically Advantageous in Osteoporotic Patients With Anderson Type II Fractures. <i>Journal of Spinal Disorders and Techniques</i> , 2015, 28, E126-E132.	1.8	14
119	Intervertebral disc lesions: visualisation with ultra-high field MRI at 11.7T. <i>European Spine Journal</i> , 2015, 24, 2488-2495.	1.0	21
120	Do in vivo kinematic studies provide insight into adjacent segment degeneration? A qualitative systematic literature review. <i>European Spine Journal</i> , 2015, 24, 1865-1881.	1.0	59
121	Comparison between Different Methods for Biomechanical Assessment of Ex Vivo Fracture Callus Stiffness in Small Animal Bone Healing Studies. <i>PLoS ONE</i> , 2015, 10, e0119603.	1.1	30
122	Frisbee - the first artificial cervical disc of 3RD generation. <i>Coluna/ Columna</i> , 2014, 13, 43-48.	0.0	0
123	Köllmann's Disease: Clarifying the Mechanisms and Patients' Inclusion Criteria. <i>The Open Orthopaedics Journal</i> , 2014, 8, 288-297.	0.1	37
124	Numerical evaluation of the correlation between the normal variation in the sagittal alignment of the lumbar spine and the spinal loads. <i>Journal of Orthopaedic Research</i> , 2014, 32, 537-544.	1.2	16
125	Increase or decrease in stability after nucleotomy? Conflicting <i>in vitro</i> and <i>in vivo</i> results in the sheep model. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140650.	1.5	12
126	Molecular Interactions Between Human Cartilaginous Endplates and Nucleus Pulposus Cells. <i>Spine</i> , 2014, 39, 1355-1364.	1.0	22

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127	Inverse numerical prediction of the transport properties of vertebral endplates in low back pain patients. <i>Biomedizinische Technik</i> , 2014, 59, 385-97.	0.9	2
128	Mechanical loading of the intervertebral disc: from the macroscopic to the cellular level. <i>European Spine Journal</i> , 2014, 23, 333-343.	1.0	130
129	In vivo biofunctional evaluation of hydrogels for disc regeneration. <i>European Spine Journal</i> , 2014, 23, 19-26.	1.0	39
130	Ageing and degenerative changes of the intervertebral disc and their impact on spinal flexibility. <i>European Spine Journal</i> , 2014, 23 Suppl 3, S324-32.	1.0	73
131	Comparison of eight published static finite element models of the intact lumbar spine: Predictive power of models improves when combined together. <i>Journal of Biomechanics</i> , 2014, 47, 1757-1766.	0.9	291
132	ASTM F1717 standard for the preclinical evaluation of posterior spinal fixators: Can we improve it?. Proceedings of the Institution of Mechanical Engineers, Part H: <i>Journal of Engineering in Medicine</i> , 2014, 228, 1014-1026.	1.0	24
133	Comparison of various contact algorithms for poroelastic tissues. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2014, 17, 1323-1334.	0.9	8
134	Finite element study of human lumbar disc nucleus replacements. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2014, 17, 1762-1776.	0.9	21
135	Is post-contrast MRI a valuable method for the study of the nutrition of the intervertebral disc?. <i>Journal of Biomechanics</i> , 2014, 47, 3028-3034.	0.9	6
136	Circumferential dynamic stabilization of the lumbar spine: a biomechanical analysis. <i>European Spine Journal</i> , 2014, 23, 2330-2339.	1.0	7
137	The benefits of multi-disciplinary research on intervertebral disc degeneration. <i>European Spine Journal</i> , 2014, 23, 303-304.	1.0	10
138	Evaluation of platelet-rich plasma and hydrostatic pressure regarding cell differentiation in nucleus pulposus tissue engineering. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2013, 7, 244-252.	1.3	21
139	Computational biomechanics of a lumbar motion segment in pure and combined shear loads. <i>Journal of Biomechanics</i> , 2013, 46, 2513-2521.	0.9	27
140	K ^{1/4} mmell ² disease: Is ischemic necrosis or vertebral μ microcracking the first step in the sequence?. <i>Medical Hypotheses</i> , 2013, 80, 505.	0.8	18
141	Influence of sagittal balance on spinal lumbar loads: A numerical approach. <i>Clinical Biomechanics</i> , 2013, 28, 370-377.	0.5	27
142	Effect of intervertebral disc degeneration on disc cell viability: a numerical investigation. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 328-337.	0.9	31
143	Can Prevention of a Reherniation Be Investigated? Establishment of a Herniation Model and Experiments With an Anular Closure Device. <i>Spine</i> , 2013, 38, E587-E593.	1.0	58
144	Preliminary Investigations on Intradiscal Pressures during Daily Activities: An In Vivo Study Using the Merino Sheep. <i>PLoS ONE</i> , 2013, 8, e69610.	1.1	63

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145	<i>In vitro</i> and <i>in silico</i> investigations of disc nucleus replacement. Journal of the Royal Society Interface, 2012, 9, 1869-1879.	1.5	50
146	Forces on the spine. , 2012, , 114-143.		3
147	Geometry strongly influences the response of numerical models of the lumbar spineâ€™A probabilistic finite element analysis. Journal of Biomechanics, 2012, 45, 1414-1423.	0.9	112
148	Posterior motion preserving implants evaluated by means of intervertebral disc bulging and annular fiber strains. Clinical Biomechanics, 2012, 27, 218-225.	0.5	19
149	Hydrogels for nucleus replacementâ€™Facing the biomechanical challenge. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 14, 67-77.	1.5	51
150	Fabric-based Tsaiâ€™Wu yield criteria for vertebral trabecular bone in stress and strain space. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 15, 218-228.	1.5	66
151	What do patients know about their low back pain? An analysis of the quality of information available on the Internet. Technology and Health Care, 2012, 20, 477-485.	0.5	6
152	Resect or not to resect: the role of posterior longitudinal ligament in lumbar total disc replacement. European Spine Journal, 2012, 21, 592-598.	1.0	10
153	Effect of multilevel lumbar disc arthroplasty on spine kinematics and facet joint loads in flexion and extension: a finite element analysis. European Spine Journal, 2012, 21, 663-674.	1.0	121
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