

Aboulfazl Shirazi-Adl

List of Publications by Year in descending order

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152
papers

7,995
citations

38742

50
h-index

58581

82
g-index

152
all docs

152
docs citations

152
times ranked

4203
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	2.1	291
2	A finite element study of a lumbar motion segment subjected to pure sagittal plane moments. <i>Journal of Biomechanics</i> , 1986, 19, 331-350.	2.1	233
3	Poroelastic creep response analysis of a lumbar motion segment in compression. <i>Journal of Biomechanics</i> , 1996, 29, 1331-1339.	2.1	230
4	Experimental determination of friction characteristics at the trabecular bone/porous-coated metal interface in cementless implants. <i>Journal of Biomedical Materials Research Part B</i> , 1993, 27, 167-175.	3.1	205
5	Biomechanics of the knee joint in flexion under various quadriceps forces. <i>Knee</i> , 2005, 12, 424-434.	1.6	193
6	Finite element analysis of human knee joint in varus-valgus. <i>Clinical Biomechanics</i> , 1997, 12, 139-148.	1.2	186
7	Role of cartilage collagen fibrils networks in knee joint biomechanics under compression. <i>Journal of Biomechanics</i> , 2008, 41, 3340-3348.	2.1	167
8	Biomechanics of the human knee joint in compression: reconstruction, mesh generation and finite element analysis. <i>Knee</i> , 1995, 2, 69-79.	1.6	162
9	Estimation of loads on human lumbar spine: A review of in vivo and computational model studies. <i>Journal of Biomechanics</i> , 2016, 49, 833-845.	2.1	160
10	Intervertebral Disk Nutrition: A Review of Factors Influencing Concentrations of Nutrients and Metabolites. <i>Orthopedic Clinics of North America</i> , 2011, 42, 465-477.	1.2	158
11	Model and in vivo studies on human trunk load partitioning and stability in isometric forward flexions. <i>Journal of Biomechanics</i> , 2006, 39, 510-521.	2.1	155
12	Analysis of squat and stoop dynamic liftings: muscle forces and internal spinal loads. <i>European Spine Journal</i> , 2007, 16, 687-699.	2.2	148
13	Strain in Fibers of a Lumbar Disc. <i>Spine</i> , 1989, 14, 96-103.	2.0	136
14	Dynamics of Human Lumbar Intervertebral Joints. <i>Spine</i> , 1992, 17, 93-102.	2.0	134
15	Biomechanics of the Lumbar Spine in Sagittal/Lateral Moments. <i>Spine</i> , 1994, 19, 2407-2414.	2.0	129
16	Biomechanics of Changes in Lumbar Posture in Static Lifting. <i>Spine</i> , 2005, 30, 2637-2648.	2.0	129
17	Muscle Activity, Internal Loads, and Stability of the Human Spine in Standing Postures: Combined Model and In Vivo Studies. <i>Spine</i> , 2004, 29, 2633-2642.	2.0	125
18	Cruciate coupling and screw-home mechanism in passive knee joint during extension and flexion. <i>Journal of Biomechanics</i> , 2005, 38, 1075-1083.	2.1	125

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19	Analysis of cell viability in intervertebral disc: Effect of endplate permeability on cell population. Journal of Biomechanics, 2010, 43, 1330-1336.	2.1	124
20	Analysis of large compression loads on lumbar spine in flexion and in torsion using a novel wrapping element. Journal of Biomechanics, 2006, 39, 267-275.	2.1	121
21	Comparison of trunk muscle forces and spinal loads estimated by two biomechanical models. Clinical Biomechanics, 2009, 24, 533-541.	1.2	112
22	Computational biodynamics of human knee joint in gait: From muscle forces to cartilage stresses. Journal of Biomechanics, 2012, 45, 2149-2156.	2.1	109
23	Response analysis of the lumbar spine during regular daily activitiesâ€”A finite element analysis. Journal of Biomechanics, 2010, 43, 1849-1856.	2.1	105
24	Computational biomechanics of articular cartilage of human knee joint: Effect of osteochondral defects. Journal of Biomechanics, 2009, 42, 2458-2465.	2.1	104
25	What have we learned from finite element model studies of lumbar intervertebral discs in the past four decades?. Journal of Biomechanics, 2013, 46, 2342-2355.	2.1	102
26	Computation of coupled diffusion of oxygen, glucose and lactic acid in an intervertebral disc. Journal of Biomechanics, 2007, 40, 2645-2654.	2.1	101
27	Finite-Element Evaluation of Contact Loads on Facets of an L2-L3 Lumbar Segment in Complex Loads. Spine, 1991, 16, 533-541.	2.0	97
28	Nonlinear stress analysis of the whole lumbar spine in torsionâ€”Mechanics of facet articulation. Journal of Biomechanics, 1994, 27, 289-299.	2.1	90
29	Synergy of the human spine in neutral postures. European Spine Journal, 1998, 7, 471-479.	2.2	86
30	Lumbopelvic rhythm during forward and backward sagittal trunk rotations: Combined in vivo measurement with inertial tracking device and biomechanical modeling. Clinical Biomechanics, 2014, 29, 7-13.	1.2	84
31	Steeper posterior tibial slope markedly increases ACL force in both active gait and passive knee joint under compression. Journal of Biomechanics, 2014, 47, 1353-1359.	2.1	82
32	A comparative study of two trunk biomechanical models under symmetric and asymmetric loadings. Journal of Biomechanics, 2010, 43, 485-491.	2.1	81
33	Sensitivity of kinematics-based model predictions to optimization criteria in static lifting tasks. Medical Engineering and Physics, 2006, 28, 504-514.	1.7	79
34	Load-bearing and stress analysis of the human spine under a novel wrapping compression loading. Clinical Biomechanics, 2000, 15, 718-725.	1.2	75
35	On the fibre composite material models of disc annulusâ€”Comparison of predicted stresses. Journal of Biomechanics, 1989, 22, 357-365.	2.1	73
36	Comparative evaluation of six quantitative lifting tools to estimate spine loads during static activities. Applied Ergonomics, 2015, 48, 22-32.	3.1	73

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37	Quantification of the role of tibial posterior slope in knee joint mechanics and ACL force in simulated gait. <i>Journal of Biomechanics</i> , 2015, 48, 1899-1905.	2.1	72
38	Spinal muscle forces, internal loads and stability in standing under various postures and loads—application of kinematics-based algorithm. <i>European Spine Journal</i> , 2005, 14, 381-392.	2.2	71
39	Role of intra-abdominal pressure in the unloading and stabilization of the human spine during static lifting tasks. <i>European Spine Journal</i> , 2006, 15, 1265-1275.	2.2	71
40	Predictive equations to estimate spinal loads in symmetric lifting tasks. <i>Journal of Biomechanics</i> , 2011, 44, 84-91.	2.1	71
41	Wrapping of trunk thoracic extensor muscles influences muscle forces and spinal loads in lifting tasks. <i>Clinical Biomechanics</i> , 2006, 21, 668-675.	1.2	69
42	An improved multi-joint EMG-assisted optimization approach to estimate joint and muscle forces in a musculoskeletal model of the lumbar spine. <i>Journal of Biomechanics</i> , 2011, 44, 1521-1529.	2.1	67
43	Muscle force evaluation and the role of posture in human lumbar spine under compression. <i>European Spine Journal</i> , 2002, 11, 519-526.	2.2	66
44	On the coupling between anterior and posterior cruciate ligaments, and knee joint response under anterior femoral drawer in flexion: a finite element study. <i>Clinical Biomechanics</i> , 2003, 18, 751-759.	1.2	65
45	Biomechanics of passive knee joint in drawer: load transmission in intact and ACL-deficient joints. <i>Knee</i> , 2003, 10, 265-276.	1.6	63
46	Biomechanics of changes in ACL and PCL material properties or prestrains in flexion under muscle force-implications in ligament reconstruction. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2006, 9, 201-209.	1.6	58
47	Computation of trunk equilibrium and stability in free flexion—extension movements at different velocities. <i>Journal of Biomechanics</i> , 2008, 41, 412-421.	2.1	58
48	Partitioning of knee joint internal forces in gait is dictated by the knee adduction angle and not by the knee adduction moment. <i>Journal of Biomechanics</i> , 2014, 47, 1696-1703.	2.1	56
49	Effect of body weight on spinal loads in various activities: A personalized biomechanical modeling approach. <i>Journal of Biomechanics</i> , 2015, 48, 276-282.	2.1	55
50	Effects of sex, age, body height and body weight on spinal loads: Sensitivity analyses in a subject-specific trunk musculoskeletal model. <i>Journal of Biomechanics</i> , 2016, 49, 3492-3501.	2.1	54
51	Biomechanical response of the passive human knee joint under anterior-posterior forces. <i>Clinical Biomechanics</i> , 1998, 13, 625-633.	1.2	53
52	Evaluation of knee joint muscle forces and tissue stresses—strains during gait in severe OA versus normal subjects. <i>Journal of Orthopaedic Research</i> , 2014, 32, 69-78.	2.3	53
53	Subject-specific biomechanics of trunk: musculoskeletal scaling, internal loads and intradiscal pressure estimation. <i>Biomechanics and Modeling in Mechanobiology</i> , 2016, 15, 1699-1712.	2.8	53
54	Analysis of partial meniscectomy and ACL reconstruction in knee joint biomechanics under a combined loading. <i>Clinical Biomechanics</i> , 2009, 24, 755-761.	1.2	51

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55	Effects of eight different ligament property datasets on biomechanics of a lumbar L4-L5 finite element model. <i>Journal of Biomechanics</i> , 2018, 70, 33-42.	2.1	51
56	<i>In vitro</i> and <i>in silico</i> investigations of disc nucleus replacement. <i>Journal of the Royal Society Interface</i> , 2012, 9, 1869-1879.	3.4	50
57	Nonlinear Response Analysis of the Human Ligamentous Lumbar Spine in Compression. <i>Spine</i> , 1993, 18, 147-158.	2.0	49
58	Knee joint mechanics under quadriceps and hamstrings muscle forces are influenced by tibial restraint. <i>Clinical Biomechanics</i> , 2006, 21, 841-848.	1.2	49
59	Effect of tibial tubercle elevation on biomechanics of the entire knee joint under muscle loads. <i>Clinical Biomechanics</i> , 2007, 22, 344-351.	1.2	47
60	A novel stability and kinematics-driven trunk biomechanical model to estimate muscle and spinal forces. <i>Medical Engineering and Physics</i> , 2014, 36, 1296-1304.	1.7	44
61	Role of gastrocnemius activation in knee joint biomechanics: gastrocnemius acts as an ACL antagonist. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016, 19, 376-385.	1.6	44
62	Reconstruction of a human ligamentous lumbar spine using CT images – A three-dimensional finite element mesh generation. <i>Annals of Biomedical Engineering</i> , 1991, 19, 291-302.	2.5	43
63	Computation of trunk muscle forces, spinal loads and stability in whole-body vibration. <i>Journal of Sound and Vibration</i> , 2008, 318, 1334-1347.	3.9	43
64	Knee joint biomechanics in open-kinetic-chain flexion exercises. <i>Clinical Biomechanics</i> , 2008, 23, 477-482.	1.2	43
65	Trunk biomechanical models based on equilibrium at a single-level violate equilibrium at other levels. <i>European Spine Journal</i> , 2007, 16, 701-709.	2.2	42
66	Seated whole body vibrations with high-magnitude accelerations – relative roles of inertia and muscle forces. <i>Journal of Biomechanics</i> , 2008, 41, 2639-2646.	2.1	40
67	Predictive equations for lumbar spine loads in load-dependent asymmetric one- and two-handed lifting activities. <i>Clinical Biomechanics</i> , 2012, 27, 537-544.	1.2	40
68	Criterion validity and between-day reliability of an inertial-sensor-based trunk postural stability test during unstable sitting. <i>Journal of Electromyography and Kinesiology</i> , 2013, 23, 899-907.	1.7	39
69	Obesity and Obesity Shape Markedly Influence Spine Biomechanics: A Subject-Specific Risk Assessment Model. <i>Annals of Biomedical Engineering</i> , 2017, 45, 2373-2382.	2.5	39
70	Analysis of Role of Bone Compliance on Mechanics of a Lumbar Motion Segment. <i>Journal of Biomechanical Engineering</i> , 1994, 116, 408-412.	1.3	37
71	Dynamic Stability of Spine Using Stability-Based Optimization and Muscle Spindle Reflex. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2008, 16, 106-118.	4.9	37
72	Revised NIOSH Lifting Equation May generate spine loads exceeding recommended limits. <i>International Journal of Industrial Ergonomics</i> , 2015, 47, 1-8.	2.6	37

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73	Spinal stability and role of passive stiffness in dynamic squat and stoop lifts. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2007, 10, 351-360.	1.6	36
74	Knee joint biomechanics in closed-kinetic-chain exercises. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2009, 12, 661-670.	1.6	35
75	A combined passive and active musculoskeletal model study to estimate L4-L5 load sharing. <i>Journal of Biomechanics</i> , 2018, 70, 157-165.	2.1	35
76	Relative efficiency of abdominal muscles in spine stability. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2008, 11, 291-299.	1.6	34
77	Alterations in knee contact forces and centers in stance phase of gait: A detailed lower extremity musculoskeletal model. <i>Journal of Biomechanics</i> , 2016, 49, 185-192.	2.1	33
78	Effect of intervertebral translational flexibilities on estimations of trunk muscle forces, kinematics, loads, and stability. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 1760-1767.	1.6	32
79	Comparison of trunk muscle forces, spinal loads and stability estimated by one stability- and three EMG-assisted optimization approaches. <i>Medical Engineering and Physics</i> , 2015, 37, 792-800.	1.7	32
80	Effects of motion segment simulation and joint positioning on spinal loads in trunk musculoskeletal models. <i>Journal of Biomechanics</i> , 2018, 70, 149-156.	2.1	32
81	Trunk response analysis under sudden forward perturbations using a kinematics-driven model. <i>Journal of Biomechanics</i> , 2009, 42, 1193-1200.	2.1	31
82	Effect of changes in the lumbar posture in lifting on trunk muscle and spinal loads: A combined in vivo, musculoskeletal, and finite element model study. <i>Journal of Biomechanics</i> , 2020, 104, 109728.	2.1	31
83	Finite Element Stress Analysis of a Push-Out Test Part 1: Fixed Interface Using Stress Compatible Elements. <i>Journal of Biomechanical Engineering</i> , 1992, 114, 111-118.	1.3	30
84	Fixation pull-out response measurement of bone screws and porous-surfaced posts. <i>Journal of Biomechanics</i> , 1994, 27, 1249-1258.	2.1	29
85	Biomechanics of human tibio-femoral joint in axial rotation. <i>Knee</i> , 1997, 4, 203-213.	1.6	28
86	Subject-specific 2D/3D image registration and kinematics-driven musculoskeletal model of the spine. <i>Journal of Biomechanics</i> , 2017, 57, 18-26.	2.1	28
87	Effect of strain rate on tensile properties of sheep disc anulus fibrosus. <i>Technology and Health Care</i> , 2004, 12, 333-342.	1.2	27
88	Computational biomechanics of a lumbar motion segment in pure and combined shear loads. <i>Journal of Biomechanics</i> , 2013, 46, 2513-2521.	2.1	27
89	Cross-sectional area of human trunk paraspinal muscles before and after posterior lumbar surgery using magnetic resonance imaging. <i>European Spine Journal</i> , 2016, 25, 774-782.	2.2	26
90	Modeling of human intervertebral disc annulus fibrosus with complex multi-fiber networks. <i>Acta Biomaterialia</i> , 2021, 123, 208-221.	8.3	26

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91	Nonlinear Gross Response Analysis of a Lumbar Motion Segment in Combined Sagittal Loadings. <i>Journal of Biomechanical Engineering</i> , 1988, 110, 216-222.	1.3	25
92	Effect of load position on muscle forces, internal loads and stability of the human spine in upright postures. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2005, 8, 359-368.	1.6	25
93	Trunk Hybrid Passive-Active Musculoskeletal Modeling to Determine the Detailed T12-S1 Response Under In Vivo Loads. <i>Annals of Biomedical Engineering</i> , 2018, 46, 1830-1843.	2.5	25
94	The Effect of Variations in Trunk Models in Predicting Muscle Strength and Spinal Loading. <i>Journal of Musculoskeletal Research</i> , 1997, 01, 55-69.	0.2	24
95	Consideration of equilibrium equations at the hip joint alongside those at the knee and ankle joints has mixed effects on knee joint response during gait. <i>Journal of Biomechanics</i> , 2013, 46, 619-624.	2.1	24
96	Knee joint passive stiffness and moment in sagittal and frontal planes markedly increase with compression. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 339-350.	1.6	21
97	Separate the Sheep from the Goats. <i>Journal of Bone and Joint Surgery - Series A</i> , 2017, 99, e102.	3.0	21
98	Finite Element Stress Analysis of a Push-Out Test Part II: Free Interface With Nonlinear Friction Properties. <i>Journal of Biomechanical Engineering</i> , 1992, 114, 155-161.	1.3	20
99	Trunk biomechanics during maximum isometric axial torque exertions in upright standing. <i>Clinical Biomechanics</i> , 2008, 23, 969-978.	1.2	20
100	Trunk strength, muscle activity and spinal loads in maximum isometric flexion and extension exertions: A combined in vivo-computational study. <i>Journal of Biomechanics</i> , 2013, 46, 2228-2235.	2.1	20
101	Trunk response to sudden forward perturbations - Effects of preload and sudden load magnitudes, posture and abdominal antagonistic activation. <i>Journal of Electromyography and Kinesiology</i> , 2014, 24, 394-403.	1.7	20
102	Fluid-flow dependent response of intervertebral discs under cyclic loading: On the role of specimen preparation and preconditioning. <i>Journal of Biomechanics</i> , 2016, 49, 846-856.	2.1	20
103	3D active-passive response of human knee joint in gait is markedly altered when simulated as a planar 2D joint. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 693-703.	2.8	20
104	Biomechanical effects of lumbar fusion surgery on adjacent segments using musculoskeletal models of the intact, degenerated and fused spine. <i>Scientific Reports</i> , 2021, 11, 17892.	3.3	20
105	Computational biomechanics of knee joint in open kinetic chain extension exercises. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2008, 11, 55-61.	1.6	19
106	Internal load-sharing in the human passive lumbar spine: Review of in vitro and finite element model studies. <i>Journal of Biomechanics</i> , 2020, 102, 109441.	2.1	19
107	Soft tissue wobbling affects trunk dynamic response in sudden perturbations. <i>Journal of Biomechanics</i> , 2011, 44, 547-551.	2.1	18
108	Trunk active response and spinal forces in sudden forward loading - analysis of the role of perturbation load and pre-perturbation conditions by a kinematics-driven model. <i>Journal of Biomechanics</i> , 2015, 48, 44-52.	2.1	18

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109	Effect of changes in cruciate ligaments pretensions on knee joint laxity and ligament forces. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2005, 8, 17-24.	1.6	17
110	A novel approach to evaluate abdominal coactivities for optimal spinal stability and compression force in lifting. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2009, 12, 735-745.	1.6	17
111	On the modeling of human intervertebral disc annulus fibrosus: Elastic, permanent deformation and failure responses. <i>Journal of Biomechanics</i> , 2020, 102, 109463.	2.1	17
112	Coupled objective function to study the role of abdominal muscle forces in lifting using the kinematics-driven model. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 54-65.	1.6	16
113	Disc size markedly influences concentration profiles of intravenously administered solutes in the intervertebral disc: a computational study on glucosamine as a model solute. <i>European Spine Journal</i> , 2014, 23, 715-723.	2.2	16
114	Subject-specific loads on the lumbar spine in detailed finite element models scaled geometrically and kinematics-driven by radiography images. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2019, 35, e3182.	2.1	16
115	Computational stability of human knee joint at early stance in Gait: Effects of muscle coactivity and anterior cruciate ligament deficiency. <i>Journal of Biomechanics</i> , 2017, 63, 110-116.	2.1	15
116	Trunk musculoskeletal response in maximum voluntary exertions: A combined measurement-modeling investigation. <i>Journal of Biomechanics</i> , 2018, 70, 124-133.	2.1	15
117	Subject-specific regression equations to estimate lower spinal loads during symmetric and asymmetric static lifting. <i>Journal of Biomechanics</i> , 2020, 102, 109550.	2.1	15
118	Transient analysis of trunk response in sudden release loading using kinematics-driven finite element model. <i>Clinical Biomechanics</i> , 2009, 24, 341-347.	1.2	14
119	Computation of trunk stability in forward perturbations—Effects of preload, perturbation load, initial flexion and abdominal preactivation. <i>Journal of Biomechanics</i> , 2015, 48, 716-720.	2.1	14
120	Hypersensitivity of trunk biomechanical model predictions to errors in image-based kinematics when using fully displacement-control techniques. <i>Journal of Biomechanics</i> , 2019, 84, 161-171.	2.1	14
121	A parametric axisymmetric model study on the interface motions in porous-surfaced tibial implants. <i>Annals of Biomedical Engineering</i> , 1989, 17, 411-421.	2.5	13
122	Nonlinear finite element analysis of wrapping uniaxial elements. <i>Computers and Structures</i> , 1989, 32, 119-123.	4.4	13
123	A novel coupled musculoskeletal finite element model of the spine — Critical evaluation of trunk models in some tasks. <i>Journal of Biomechanics</i> , 2021, 119, 110331.	2.1	13
124	Effects of variation in external pulling force magnitude, elevation, and orientation on trunk muscle forces, spinal loads and stability. <i>Journal of Biomechanics</i> , 2016, 49, 946-952.	2.1	12
125	Computation of the role of kinetics, kinematics, posterior tibial slope and muscle cocontraction on the stability of ACL-deficient knee joint at heel strike — Towards identification of copers from non-copers. <i>Journal of Biomechanics</i> , 2018, 77, 171-182.	2.1	12
126	Finite-element simulation of changes in the fluid content of human lumbar discs. <i>Mechanical and clinical implications. Spine</i> , 1992, 17, 206-12.	2.0	12

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127	Computational study of the role of fluid content and flow on the lumbar disc response in cyclic compression: Replication of in vitro and in vivo conditions. <i>Journal of Biomechanics</i> , 2018, 70, 16-25.	2.1	11
128	Comparison of different lifting analysis tools in estimating lower spinal loads – Evaluation of NIOSH criterion. <i>Journal of Biomechanics</i> , 2020, 112, 110024.	2.1	11
129	Blood clot behaves as a poro-visco-elastic material. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 128, 105101.	3.1	11
130	Computational pharmacokinetics of solute penetration into human intervertebral discs – Effects of endplate permeability, solute molecular weight and disc size. <i>Journal of Biomechanics</i> , 2012, 45, 2195-2202.	2.1	10
131	Trunk response and stability in standing under sagittal-symmetric pull – push forces at different orientations, elevations and magnitudes. <i>Journal of Biomechanics</i> , 2018, 70, 166-174.	2.1	10
132	THE EFFECTS OF INTRA-ABDOMINAL PRESSURE ON THE STABILITY AND UNLOADING OF THE SPINE. <i>Journal of Mechanics in Medicine and Biology</i> , 2012, 12, 1250014.	0.7	9
133	Active – passive biodynamics of the human trunk when seated on a wobble chair. <i>Journal of Biomechanics</i> , 2016, 49, 939-945.	2.1	9
134	Sensitivity of medial-lateral load sharing to changes in adduction moments or angles in an asymptomatic knee joint model during gait. <i>Gait and Posture</i> , 2019, 70, 39-47.	1.4	9
135	Sensitivity of the knee joint response, muscle forces and stability to variations in gait kinematics-kinetics. <i>Journal of Biomechanics</i> , 2020, 99, 109472.	2.1	9
136	Effect of changes in lordosis on mechanics of the lumbar spine-lumbar curvature in lifting. <i>Journal of Spinal Disorders</i> , 1999, 12, 436-47.	1.1	7
137	Adjacent segments biomechanics following lumbar fusion surgery: a musculoskeletal finite element model study. <i>European Spine Journal</i> , 2022, 31, 1630-1639.	2.2	7
138	Effect of changes in orientation and position of external loads on trunk muscle activity and kinematics in upright standing. <i>Journal of Electromyography and Kinesiology</i> , 2014, 24, 387-393.	1.7	6
139	Elevation and orientation of external loads influence trunk neuromuscular response and spinal forces despite identical moments at the L5 – S1 level. <i>Journal of Biomechanics</i> , 2014, 47, 3035-3042.	2.1	6
140	Temporal and spatial variations of pressure within intervertebral disc nuclei. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 79, 309-313.	3.1	6
141	Changes in gastrocnemii activation at mid-to-late stance markedly affects the intact and anterior cruciate ligament deficient knee biomechanics and stability in gait. <i>Knee</i> , 2021, 29, 530-540.	1.6	6
142	Knee flexion angle and muscle activations control the stability of an anterior cruciate ligament deficient joint in gait. <i>Journal of Biomechanics</i> , 2021, 117, 110258.	2.1	6
143	Role of posture in mechanics of the lumbar spine in compression. <i>Journal of Spinal Disorders</i> , 1996, 9, 277-86.	1.1	6
144	Spine loading and deformation – From loading to recovery. <i>Journal of Biomechanics</i> , 2016, 49, 813-816.	2.1	5

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145	Evaluating stability of human spine in static tasks: a combined in vivo-computational study. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2021, , 1-13.	1.6	4
146	Submaximal electromyography-driven musculoskeletal modeling of the human trunk during static tasks: Equilibrium and stability analyses. <i>Journal of Electromyography and Kinesiology</i> , 2022, 65, 102664.	1.7	4
147	Estimation of Trunk Muscle Forces Using a Bio-Inspired Control Strategy Implemented in a Neuro-Osteo-Ligamentous Finite Element Model of the Lumbar Spine. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 949.	4.1	3
148	3-D finite element modeling of human spinal discs and correlation with volume-pressure relation due to loading. , 0, , .		1
149	Computational investigation of sulphate diffusion into the dog disc. , 2011, , .		1
150	2nd international workshop on spinal loading and deformation. <i>Journal of Biomechanics</i> , 2018, 70, 1-3.	2.1	1
151	Computational Musculoskeletal Biomechanics of the Knee Joint. , 2019, , 181-199.		1
152	3rd International workshop on spinal loading and deformation. <i>Journal of Biomechanics</i> , 2020, 102, 109627.	2.1	0