Jackie D Zehr

List of Publications by Year
in descending order

68 papers	2,528 citations	236925 25 h-index	197818 49 g-index
68 all docs	68 docs citations	68 times ranked	1586 citing authors

#	Article	IF	Citations
1	Cervical Spine Motion Requirements From Night Vision Goggles May Play a Greater Role in Chronic Neck Pain than Helmet Mass Properties. Human Factors, 2024, 66, 363-376.	3.5	2
2	Strain Response in the Facet Joint Capsule During Physiological Joint Rotation and Translation Following a Simulated Impact Exposure: An In Vitro Porcine Model. Journal of Biomechanical Engineering, 2022, 144, .	1.3	1
3	Reaction Forces and Flexionâ€“Extension Moments Imposed on Functional Spinal Units With Constrained and Unconstrained In Vitro Testing Systems. Journal of Biomechanical Engineering, 2022, 144, .	1.3	5
4	Characterizing Lumbar Spine Kinematics and Kinetics During Simulated Low-Speed Rear Impact Collisions. Journal of Applied Biomechanics, 2022, 38, 155-163.	0.8	1
5	Partitioning the total seatback reaction force amongst the lumbar spine motion segments during simulated rear-impact collisions. International Journal of Occupational Safety and Ergonomics, 2021, 27, 613-619.	1.9	4
6	Night Vision Goggle and Counterweight Use Affect Neck Muscle Activity During Reciprocal Scanning. Aerospace Medicine and Human Performance, 2021, 92, 172-181.	0.4	3
7	Reconstructing an accelerometer-based pelvis segment for three-dimensional kinematic analyses during laboratory simulated tasks with obstructed line-of-sight. Journal of Biomechanics, 2021, 123, 110512.	2.1	4
8	Exploring the influence of impact severity and posture on vertebral joint mechanics in an in-vitro porcine model. Journal of Biomechanics, 2021, 122, 110479.	2.1	1
9	Exposure to Sustained Flexion Impacts Lumbar Extensor Spinae Muscle Fiber Orientation. Journal of Applied Biomechanics, 2021, 37, 248-253.	0.8	2
10	Considering Temporal Movement Factors In Lumbar Spine Load Management Plans. Medicine and Science in Sports and Exercise, 2021, 53, 157-157.	0.4	0
11	Moving Toward Individual-Specific Automotive Seat Design: How Individual Characteristics and Time Alter the Selected Lumbar Support Prominence. Human Factors, 2021, , 001872082110427.	3.5	2
12	An Electromyographically Driven Cervical Spine Model in OpenSim. Journal of Applied Biomechanics, 2021, 37, 481-493.	0.8	7
13	Quantifying parameters of the seat-occupant interface during simulated low speed rear-impact collisions. International Journal of Vehicle Design, 2021, 85, 32.	0.3	0
14	Wrist Posture Estimation Differences and Reliability Between Video Analysis and Electrogoniometer Methods. Human Factors, 2021, 63, 1284-1294.	3.5	4
15	A comparative analysis of lumbar spine mechanics during barbell- and crate-lifting: implications for occupational lifting task assessments. International Journal of Occupational Safety and Ergonomics, 2020, 26, 1-8.	1.9	8
16	Strain of the facet joint capsule during rotation and translation range-of-motion tests: an in vitro porcine model as a human surrogate. Spine Journal, 2020, 20, 475-487.	1.3	4
17	Joint fatigue-failure: A demonstration of viscoelastic responses to rate and frequency loading parameters using the porcine cervical spine. Journal of Biomechanics, 2020, 113, 110081.	2.1	10
18	The effect of age, prolonged seated work and sex on posture and perceived effort during a lifting task. Applied Ergonomics, 2020, 89, 103198.	3.1	4

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19	The effect of axial twist angle on in vitro cumulative injury load tolerance: a magnitude-weighting approach for axial twist exposures. Theoretical Issues in Ergonomics Science, 2020, 21, 463-477.	1.8	2
20	Spine loading during laboratory-simulated fireground operations â€" inter-individual variation and method of load quantification. Ergonomics, 2019, 62, 1426-1438.	2.1	10
21	Examining endplate fatigue failure during cyclic compression loading with variable and consistent peak magnitudes using a force weighting adjustment approach: an in vitro study. Ergonomics, 2019, 62, 1339-1348.	2.1	8
22	Incorporating loading variability into in vitro injury analyses and its effect on cumulative compression tolerance in porcine cervical spine units. Journal of Biomechanics, 2019, 88, 48-54.	2.1	11
23	Using relative phase analyses and vector coding to quantify Pelvis-Thorax coordination during liftingâ€"A methodological investigation. Journal of Electromyography and Kinesiology, 2018, 39, 104-113.	1.7	21
24	Biomechanical investigation of prolonged driving in an ergonomically designed truck seat prototype. Ergonomics, 2018, 61, 367-380.	2.1	26
25	Identifying interactive effects of task demands in lifting on estimates of in vivo low back joint loads. Applied Ergonomics, 2018, 67, 203-210.	3.1	20
26	The Impact of Posture on the Mechanical Properties of a Functional Spinal Unit During Cyclic Compressive Loading. Journal of Biomechanical Engineering, 2016, 138, .	1.3	6
27	Lumbar postures, seat interface pressures and discomfort responses to a novel thoracic support for police officers during prolonged simulated driving exposures. Applied Ergonomics, 2016, 52, 160-168.	3.1	23
28	Exercise-Based Performance Enhancement and Injury Prevention for Firefighters. Journal of Strength and Conditioning Research, 2015, 29, 2441-2459.	2.1	33
29	Evaluating Abdominal and Lower-Back Muscle Activity While Performing Core Exercises on a Stability Ball and a Dynamic Office Chair. Human Factors, 2015, 57, 1149-1161.	3.5	13
30	Spine Posture and Discomfort During Prolonged Simulated Driving With Self-Selected Lumbar Support Prominence. Human Factors, 2015, 57, 976-987.	3.5	23
31	Characterizing the combined effects of force, repetition and posture on injury pathways and micro-structural damage in isolated functional spinal units from sub-acute-failure magnitudes of cyclic compressive loading. Clinical Biomechanics, 2015, 30, 953-959.	1.2	23
32	Exploring interactions between force, repetition and posture on intervertebral disc height loss and bulging in isolated porcine cervical functional spinal units from sub-acute-failure magnitudes of cyclic compressive loading. Journal of Biomechanics, 2015, 48, 3701-3708.	2.1	18
33	The influence of precision requirements and cognitive challenges on upper extremity joint reaction forces, moments and muscle force estimates during prolonged repetitive lifting. Ergonomics, 2014, 57, 236-246.	2.1	7
34	Physical fitness improvements and occupational low-back loading â€“ an exercise intervention study with firefighters. Ergonomics, 2014, 57, 744-763.	2.1	43
35	Unilateral ankle immobilization alters the kinematics and kinetics of lifting. Work, 2014, 47, 221-234.	1.1	19
36	The impact of shear force magnitude on cumulative injury load tolerance: a force weighting approach for low-back shear loads. Theoretical Issues in Ergonomics Science, 2013, 14, 402-416.	1.8	2

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37	The Impact of Posture and Prolonged Cyclic Compressive Loading on Vertebral Joint Mechanics. Spine, 2012, 37, E1023-E1029.	2.0	25
38	Compressive force magnitude and intervertebral joint flexion/extension angle influence shear failure force magnitude in the porcine cervical spine. Journal of Biomechanics, 2012, 45, 484-490.	2.1	26
39	Influence of automobile seat lumbar support prominence on spine and pelvic postures: A radiological investigation. Applied Ergonomics, 2012, 43, 876-882.	3.1	43
40	An examination of the mechanical properties of the annulus fibrosus: The effect of vibration on the intra-lamellar matrix strength. Medical Engineering and Physics, 2012, 34, 472-477.	1.7	18
41	Does Vibration Influence the Initiation of Intervertebral Disc Herniation?. Spine, 2011, 36, E225-E231.	2.0	27
42	Passive stiffness changes in the lumbar spine and effect of gender during prolonged simulated driving. International Journal of Industrial Ergonomics, 2011, 41, 617-624.	2.6	43
43	Neck loads and posture exposure of helicopter pilots during simulated day and night flights. International Journal of Industrial Ergonomics, 2011, 41, 128-135.	2.6	40
44	Lumbar spine movement patterns during prolonged sitting differentiate low back pain developers from matched asymptomatic controls. Work, 2010, 35, 3-14.	1.1	84
45	Gender- and time-varying postural and discomfort responses during prolonged driving. Occupational Ergonomics, 2010, 9, 41-53.	0.3	24
46	Effects of Anterior Shear Displacement Rate on the Structural Properties of the Porcine Cervical Spine. Journal of Biomechanical Engineering, 2010, 132, 091004.	1.3	10
47	Lumbar Spine and Pelvic Posture Between Standing and Sitting: A Radiologic Investigation Including Reliability and Repeatability of the Lumbar Lordosis Measure. Journal of Manipulative and Physiological Therapeutics, 2010, 33, 48-55.	0.9	98
48	Dynamic factors and force-weighting corrections influence estimates of cumulative vertebral joint compression. Theoretical Issues in Ergonomics Science, 2010, 11, 474-488.	1.8	5
49	The Effect of an Active Lumbar System on the Seating Comfort of Officers in Police Fleet Vehicles. International Journal of Occupational Safety and Ergonomics, 2009, 15, 295-307.	1.9	43
50	Using sitting as a component of job rotation strategies: Are lifting/lowering kinetics and kinematics altered following prolonged sitting. Applied Ergonomics, 2009, 40, 433-439.	3.1	24
51	The role of dynamic flexion in spine injury is altered by increasing dynamic load magnitude. Clinical Biomechanics, 2009, 24, 148-154.	1.2	54
52	The rule of 1s for padding kinematic data prior to digital filtering: Influence of sampling and filter cutoff frequencies. Journal of Electromyography and Kinesiology, 2009, 19, 875-881.	1.7	29
53	Muscular contribution to low-back loading and stiffness during standard and suspended push-ups. Human Movement Science, 2008, 27, 457-472.	1.4	56
54	Quantification of the relationship between load magnitude, rest duration and cumulative compressive tolerance of the spine: development of a weighting system for adjustment to a common injury exposure level. Theoretical Issues in Ergonomics Science, 2008, 9, 255-268.	1.8	14

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55	The Influence of Posture and Loading on Interfacet Spacing. Spine, 2008, 33, E728-E734.	2.0	31
56	Progressive Disc Herniation. Spine, 2007, 32, 2869-2874.	2.0	85
57	The role of load magnitude as a modifier of the cumulative load tolerance of porcine cervical spinal units: progress towards a force weighting approach. Theoretical Issues in Ergonomics Science, 2007, 8, 171-184.	1.8	33
58	Quantifying low back peak and cumulative loads in open and senior sheep shearers in New Zealand: Examining the effects of a trunk harness. Ergonomics, 2006, 49, 968-981.	2.1	34
59	Elimination of electrocardiogram contamination from electromyogram signals: An evaluation of currently used removal techniques. Journal of Electromyography and Kinesiology, 2006, 16, 175-187.	1.7	313
60	Upper body kinematic and low-back kinetic responses to precision placement challenges and cognitive distractions during repetitive lifting. International Journal of Industrial Ergonomics, 2006, 36, 637-650.	2.6	37
61	Estimating the Compressive Strength of the Porcine Cervical Spine. Spine, 2005, 30, E492-E498.	2.0	47
62	The influence of static axial torque in combined loading on intervertebral joint failure mechanics using a porcine model. Clinical Biomechanics, 2005, 20, 1038-1045.	1.2	89
63	Examination of the flexion relaxation phenomenon in erector spinae muscles during short duration slumped sitting. Clinical Biomechanics, 2002, 17, 353-360.	1.2	148
64	Intervertebral disc herniation: studies on a porcine model exposed to highly repetitive flexion/extension motion with compressive force. Clinical Biomechanics, 2001, 16, 28-37.	1.2	317
65	Spinal posture and prior loading history modulate compressive strength and type of failure in the spine: a biomechanical study using a porcine cervical spine model. Clinical Biomechanics, 2001, 16, 471-480.	1.2	105
66	The Porcine Cervical Spine as a Model of the Human Lumbar Spine. Journal of Spinal Disorders, 1999, 12, 415-423.	1.1	125
67	Dynamic loading affects the mechanical properties and failure site of porcine spines. Clinical Biomechanics, 1997, 12, 301-305.	1.2	77
68	Frozen storage increases the ultimate compressive load of porcine vertebrae. Journal of Orthopaedic Research, 1995, 13, 809-812.	2.3	54