

Peter J Keir

List of Publications by Year in descending order

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114
papers

2,947
citations

172207

29
h-index

197535

49
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114
all docs

114
docs citations

114
times ranked

2296
citing authors

#	ARTICLE	IF	CITATIONS
1	Equations to Prescribe Bicycle Saddle Height based on Desired Joint Kinematics and Bicycle Geometry. <i>European Journal of Sport Science</i> , 2022, 22, 344-353.	1.4	5
2	Thirty Minutes of Sub-diastolic Blood Flow Occlusion Alters Carpal Tunnel Tissue Function and Mechanics. <i>Ultrasound in Medicine and Biology</i> , 2022, , .	0.7	2
3	Investigating acute changes in osteoarthritic cartilage by integrating biomechanics and statistical shape models of bone: data from the osteoarthritis initiative. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2022, 35, 861-873.	1.1	6
4	Effect of Force, Posture, and Repetitive Wrist Motion on Intraneural Blood Flow in the Median Nerve. <i>Journal of Ultrasound in Medicine</i> , 2021, 40, 939-950.	0.8	4
5	Hip and ankle kinematics are the most important predictors of knee joint loading during bicycling. <i>Journal of Science and Medicine in Sport</i> , 2021, 24, 98-104.	0.6	6
6	Ultrasound examination predicts 6-month progression in carpal tunnel syndrome patients. <i>Journal of Orthopaedic Research</i> , 2021, 39, 609-618.	1.2	2
7	Relationships and Mechanisms Between Occupational Risk Factors and Distal Upper Extremity Disorders. <i>Human Factors</i> , 2021, 63, 5-31.	2.1	31
8	Investigating the Effects of Mental Fatigue on Resistance Exercise Performance. <i>International Journal of Environmental Research and Public Health</i> , 2021, 18, 6794.	1.2	5
9	Daily cumulative load and body mass index alter knee cartilage response to running in women. <i>Gait and Posture</i> , 2021, 88, 192-197.	0.6	4
10	Wrist Posture Estimation Differences and Reliability Between Video Analysis and Electrogoniometer Methods. <i>Human Factors</i> , 2021, 63, 1284-1294.	2.1	4
11	Glenohumeral stabilizing roles of the scapulohumeral muscles: Implications of muscle geometry. <i>Journal of Biomechanics</i> , 2020, 100, 109589.	0.9	10
12	External Compression and Partial Ischemia Decrease Human Finger Flexor Tendon and Subsynovial Connective Tissue Relative Motion. <i>Journal of Orthopaedic Research</i> , 2020, 38, 1038-1044.	1.2	7
13	Evaluating the relationship between quadriceps muscle quality captured using ultrasound with clinical severity in women with knee osteoarthritis. <i>Clinical Biomechanics</i> , 2020, 80, 105165.	0.5	9
14	Assessment of Joint Angle and Reach Envelope Demands Using a Video-Based Physical Demands Description Tool. <i>Human Factors</i> , 2020, , 001872082095134.	2.1	4
15	Blood flow velocity but not tendon mechanics relates to nerve function in carpal tunnel syndrome patients. <i>Journal of the Neurological Sciences</i> , 2020, 411, 116694.	0.3	10
16	Joint moment trade-offs across the upper extremity and trunk during repetitive work. <i>Applied Ergonomics</i> , 2020, 88, 103142.	1.7	6
17	Using EMG Amplitude and Frequency to Calculate a Multimuscle Fatigue Score and Evaluate Global Shoulder Fatigue. <i>Human Factors</i> , 2019, 61, 526-536.	2.1	28
18	Muscle fibre activation is unaffected by load and repetition duration when resistance exercise is performed to task failure. <i>Journal of Physiology</i> , 2019, 597, 4601-4613.	1.3	84

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19	Modeling the effects of musculoskeletal geometry on scapulohumeral muscle moment arms and lines of action. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2019, 22, 1311-1322.	0.9	6
20	Postural and muscular adaptations to repetitive simulated work. <i>Ergonomics</i> , 2019, 62, 1214-1226.	1.1	12
21	Evaluation of a virtual reality head mounted display as a tool for posture assessment in digital human modelling software. <i>Applied Ergonomics</i> , 2019, 79, 1-8.	1.7	24
22	Comparison of Video-Based and Traditional Physical Demands Description Methods. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2019, 63, 1169-1172.	0.2	2
23	Muscular and kinematic adaptations to fatiguing repetitive upper extremity work. <i>Applied Ergonomics</i> , 2019, 75, 250-256.	1.7	34
24	Diagnostic and Research Techniques in Carpal Tunnel Syndrome. <i>Critical Reviews in Biomedical Engineering</i> , 2019, 47, 457-471.	0.5	2
25	Upper body kinematic and muscular variability in response to targeted rotator cuff fatigue. <i>Human Movement Science</i> , 2018, 59, 121-133.	0.6	9
26	Submaximal normalizing methods to evaluate load sharing changes in the shoulder during repetitive work. <i>Journal of Electromyography and Kinesiology</i> , 2018, 39, 58-69.	0.7	4
27	Development of an Ergonomic Tool to Predict Carpal Tunnel Syndrome Risk Based on Estimated Carpal Tunnel Pressure. <i>IIEE Transactions on Occupational Ergonomics and Human Factors</i> , 2018, 6, 32-42.	0.5	5
28	Effect of wrist posture, rate of force development/relaxation, and isotonic contractions on finger force independence. <i>Journal of Electromyography and Kinesiology</i> , 2018, 38, 215-223.	0.7	4
29	Dynamic and static shoulder strength relationship and predictive model. <i>Applied Ergonomics</i> , 2018, 67, 162-169.	1.7	4
30	The Effects of Lower Extremity Strengthening Delivered in the Workplace on Physical Function and Work-Related Outcomes Among Desk-Based Workers. <i>Journal of Occupational and Environmental Medicine</i> , 2018, 60, 1005-1014.	0.9	7
31	Assessment of Musculoskeletal Disorder Risk with Hand and Syringe use in Chemotherapy Nurses and Pharmacy Assistants. <i>IIEE Transactions on Occupational Ergonomics and Human Factors</i> , 2018, 6, 128-142.	0.5	9
32	Reduced common carotid artery longitudinal wall motion and intramural shear strain in individuals with elevated cardiovascular disease risk using speckle tracking. <i>Clinical Physiology and Functional Imaging</i> , 2017, 37, 106-116.	0.5	34
33	Randomized Controlled Trial Investigating the Role of Exercise in the Workplace to Improve Work Ability, Performance, and Patient-Reported Symptoms Among Older Workers With Osteoarthritis. <i>Journal of Occupational and Environmental Medicine</i> , 2017, 59, 550-556.	0.9	23
34	Physiological responses to incremental, interval, and continuous counterweighted single-leg and double-leg cycling at the same relative intensities. <i>European Journal of Applied Physiology</i> , 2017, 117, 1423-1435.	1.2	21
35	Upper Extremity Muscle Activity During In-Phase and Anti-Phase Continuous Pushing Tasks. <i>Human Factors</i> , 2017, 59, 1066-1077.	2.1	6
36	Grip Type Alters Maximal Pinch Forces in Syringe Use. <i>Human Factors</i> , 2017, 59, 1088-1095.	2.1	6

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37	An open-source model and solution method to predict co-contraction in the finger. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2017, 20, 1373-1381.	0.9	11
38	Optimized maximum voluntary exertion protocol for normalizing shoulder muscle activity. <i>International Biomechanics</i> , 2017, 4, 9-16.	0.9	5
39	Lean muscle volume of the thigh has a stronger relationship with muscle power than muscle strength in women with knee osteoarthritis. <i>Clinical Biomechanics</i> , 2017, 41, 92-97.	0.5	18
40	Effects of Wrist Posture and Fingertip Force on Median Nerve Blood Flow Velocity. <i>BioMed Research International</i> , 2017, 2017, 1-8.	0.9	16
41	Posture and Loading in the Pathomechanics of Carpal Tunnel Syndrome: A Review. <i>Critical Reviews in Biomedical Engineering</i> , 2016, 44, 397-410.	0.5	13
42	Relative motion between the flexor digitorum superficialis tendon and paratenon in zone V increases with wrist flexion angle. <i>Journal of Orthopaedic Research</i> , 2016, 34, 1248-1255.	1.2	8
43	Relative displacement of the tendon and subsynovial connective tissue using ultrasound captures different phenomena than mechanical tendon shear. <i>Journal of Biomechanics</i> , 2016, 49, 3682-3687.	0.9	4
44	Combining Multiple Data Acquisition Systems to Study Corticospinal Output and Multi-segment Biomechanics. <i>Journal of Visualized Experiments</i> , 2016, .	0.2	1
45	Major League Baseball pace-of-play rules and their influence on predicted muscle fatigue during simulated baseball games. <i>Journal of Sports Sciences</i> , 2016, 34, 2054-2062.	1.0	11
46	Toward a realistic optoelectronic-based kinematic model of the hand: representing the transverse metacarpal arch reduces accessory rotations of the metacarpophalangeal joints. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016, 19, 639-647.	0.9	5
47	Adaptations to isolated shoulder fatigue during simulated repetitive work. Part II: Recovery. <i>Journal of Electromyography and Kinesiology</i> , 2016, 29, 42-49.	0.7	37
48	Adaptations to isolated shoulder fatigue during simulated repetitive work. Part I: Fatigue. <i>Journal of Electromyography and Kinesiology</i> , 2016, 29, 34-41.	0.7	46
49	The Response of the Shoulder Complex to Repetitive Work: Implications for Workplace Design. <i>Critical Reviews in Biomedical Engineering</i> , 2015, 43, 21-32.	0.5	3
50	Neuromechanical control of the forearm muscles during gripping with sudden flexion and extension wrist perturbations. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 1826-1834.	0.9	33
51	Biomechanical risk factors and flexor tendon frictional work in the cadaveric carpal tunnel. <i>Journal of Biomechanics</i> , 2015, 48, 449-455.	0.9	23
52	Pathological changes in the subsynovial connective tissue increase with self-reported carpal tunnel syndrome symptoms. <i>Clinical Biomechanics</i> , 2015, 30, 360-365.	0.5	33
53	Validation of Color Doppler Sonography for Evaluating Relative Displacement Between the Flexor Tendon and Subsynovial Connective Tissue. <i>Journal of Ultrasound in Medicine</i> , 2015, 34, 679-687.	0.8	16
54	Development of a kinematic model to predict finger flexor tendon and subsynovial connective tissue displacement in the carpal tunnel. <i>Ergonomics</i> , 2015, 58, 1398-1409.	1.1	7

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55	Effect of grip type, wrist motion, and resistance level on pressures within the carpal tunnel of normal wrists. <i>Journal of Orthopaedic Research</i> , 2014, 32, 524-530.	1.2	22
56	Cycle to cycle variability in a repetitive upper extremity task. <i>Ergonomics</i> , 2014, 57, 1405-1415.	1.1	4
57	The influence of muscle action on joint loading during dynamic finger pressing tasks in an open-source modelling environment. <i>International Journal of Human Factors Modelling and Simulation</i> , 2014, 4, 162.	0.1	0
58	Muscle Contributions to Elbow Joint Rotational Stiffness in Preparation for Sudden External Arm Perturbations. <i>Journal of Applied Biomechanics</i> , 2014, 30, 282-289.	0.3	7
59	Obtaining maximum muscle excitation for normalizing shoulder electromyography in dynamic contractions. <i>Journal of Electromyography and Kinesiology</i> , 2013, 23, 1166-1173.	0.7	27
60	Independence and control of the fingers depend on direction and contraction mode. <i>Human Movement Science</i> , 2013, 32, 457-471.	0.6	21
61	The effect of high pass filtering and non-linear normalization on the EMG force relationship during sub-maximal finger exertions. <i>Journal of Electromyography and Kinesiology</i> , 2013, 23, 564-571.	0.7	8
62	Repetitive differential finger motion increases shear strain between the flexor tendon and subsynovial connective tissue. <i>Journal of Orthopaedic Research</i> , 2013, 31, 1533-1539.	1.2	23
63	Force, frequency and gripping alter upper extremity muscle activity during a cyclic push task. <i>Ergonomics</i> , 2012, 55, 813-824.	1.1	15
64	Posture and hand load alter muscular response to sudden elbow perturbations. <i>Journal of Electromyography and Kinesiology</i> , 2012, 22, 191-198.	0.7	16
65	Targeted gripping reduces shoulder muscle activity and variability. <i>Journal of Electromyography and Kinesiology</i> , 2012, 22, 186-190.	0.7	15
66	Biomechanical properties of the transverse carpal ligament under biaxial strain. <i>Journal of Orthopaedic Research</i> , 2012, 30, 757-763.	1.2	16
67	Tendon and nerve excursion in the carpal tunnel in healthy and CTD wrists. <i>Clinical Biomechanics</i> , 2011, 26, 930-936.	0.5	29
68	Carpal tunnel and transverse carpal ligament stiffness with changes in wrist posture and indenter size. <i>Journal of Orthopaedic Research</i> , 2011, 29, 1682-1687.	1.2	13
69	Task rotation effects on upper extremity and back muscle activity. <i>Applied Ergonomics</i> , 2011, 42, 814-819.	1.7	39
70	Modelling tendon excursions and moment arms of the finger flexors: Anatomic fidelity versus function. <i>Journal of Biomechanics</i> , 2011, 44, 1967-1973.	0.9	20
71	Effects of training and experience on patient transfer biomechanics. <i>International Journal of Industrial Ergonomics</i> , 2010, 40, 282-288.	1.5	28
72	Continuous assessment of low back loads in long-term care nurses. <i>Ergonomics</i> , 2010, 53, 1108-1116.	1.1	28

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73	Continuous assessment of work activities and posture in long-term care nurses. <i>Ergonomics</i> , 2010, 53, 1097-1107.	1.1	55
74	Forearm posture and grip effects during push and pull tasks. <i>Ergonomics</i> , 2010, 53, 336-343.	1.1	29
75	Effects of posture, movement and hand load on shoulder muscle activity. <i>Journal of Electromyography and Kinesiology</i> , 2010, 20, 191-198.	0.7	90
76	Reliability of Distal Upper Extremity Posture Matching Using Slow-Motion and Frame-by-Frame Video Methods. <i>Human Factors</i> , 2010, 52, 441-455.	2.1	13
77	Constrained handgrip force decreases upper extremity muscle activation and arm strength. <i>Ergonomics</i> , 2009, 52, 1144-1152.	1.1	14
78	The effect of landmarks and bone motion on posture-related changes in carpal tunnel volume. <i>Clinical Biomechanics</i> , 2009, 24, 708-715.	0.5	15
79	Tai Chi workplace program for improving musculoskeletal fitness among female computer users. <i>Work</i> , 2009, 34, 331-338.	0.6	11
80	Effect of wrist posture on carpal tunnel pressure while typing. <i>Journal of Orthopaedic Research</i> , 2008, 26, 1269-1273.	1.2	70
81	Wrist and carpal tunnel size and shape measurements: Effects of posture. <i>Clinical Biomechanics</i> , 2008, 23, 1112-1120.	0.5	31
82	Wrist Splint Effects on Muscle Activity and Force during a Handgrip Task. <i>Journal of Applied Biomechanics</i> , 2008, 24, 298-303.	0.3	6
83	Guidelines for Wrist Posture Based on Carpal Tunnel Pressure Thresholds. <i>Human Factors</i> , 2007, 49, 88-99.	2.1	81
84	Interfering effects of multitasking on muscle activity in the upper extremity. <i>Journal of Electromyography and Kinesiology</i> , 2007, 17, 578-586.	0.7	53
85	Effects of backrest design on biomechanics and comfort during seated work. <i>Applied Ergonomics</i> , 2007, 38, 755-764.	1.7	97
86	Evaluation of the carpal tunnel based on 3-D reconstruction from MRI. <i>Journal of Biomechanics</i> , 2007, 40, 2222-2229.	0.9	28
87	Evaluating the Carpal Tunnel using MRI Based Modelling. <i>Medicine and Science in Sports and Exercise</i> , 2007, 39, S50-S51.	0.2	0
88	Work and activity-related musculoskeletal disorders of the upper extremity. , 2007, , .		2
89	Prediction of forearm muscle activity during gripping. <i>Ergonomics</i> , 2006, 49, 1121-1130.	1.1	18
90	An MRI evaluation of carpal tunnel dimensions in healthy wrists: Implications for carpal tunnel syndrome. <i>Clinical Biomechanics</i> , 2006, 21, 816-825.	0.5	72

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91	Pathomechanics of Carpal Tunnel Syndrome. <i>Medicine and Science in Sports and Exercise</i> , 2005, 37, S282.	0.2	0
92	Pathomechanics of Carpal Tunnel Syndrome. <i>Medicine and Science in Sports and Exercise</i> , 2005, 37, S282.	0.2	0
93	Pathomechanics of Peripheral Nerve Loading. <i>Journal of Hand Therapy</i> , 2005, 18, 259-269.	0.7	77
94	Interfering effects of the task demands of grip force and mental processing on isometric shoulder strength and muscle activity. <i>Ergonomics</i> , 2005, 48, 1749-1769.	1.1	40
95	The development and validation of equations to predict grip force in the workplace: contributions of muscle activity and posture. <i>Ergonomics</i> , 2005, 48, 1243-1259.	1.1	31
96	Muscle activity during patient transfers: a preliminary study on the influence of lift assists and experience. <i>Ergonomics</i> , 2004, 47, 296-306.	1.1	92
97	MRI of the Carpal Tunnel. <i>Medicine and Science in Sports and Exercise</i> , 2004, 36, S287??S288.	0.2	0
98	Trunk muscle response to lifting unbalanced loads with and without knowledge of centre of mass. <i>Clinical Biomechanics</i> , 2003, 18, 712-720.	0.5	11
99	Crosstalk in surface electromyography of the proximal forearm during gripping tasks. <i>Journal of Electromyography and Kinesiology</i> , 2003, 13, 63-71.	0.7	136
100	The effects of posture on forearm muscle loading during gripping. <i>Ergonomics</i> , 2003, 46, 956-975.	1.1	162
101	Technical-Methodological Report. <i>Journal of Strength and Conditioning Research</i> , 2003, 17, 701-703.	1.0	1
102	Technical-Methodological Report: A Nomogram for Peak Leg Power Output in the Vertical Jump. <i>Journal of Strength and Conditioning Research</i> , 2003, 17, 701.	1.0	10
103	The Effect of Typing Posture on Wrist Extensor Muscle Loading. <i>Human Factors</i> , 2002, 44, 392-403.	2.1	24
104	Magnetic Resonance Imaging as a Research Tool for Biomechanical Studies of the Wrist. <i>Seminars in Musculoskeletal Radiology</i> , 2001, 05, 241-250.	0.4	10
105	Flexor muscle incursion into the carpal tunnel: a mechanism for increased carpal tunnel pressure?. <i>Clinical Biomechanics</i> , 2000, 15, 301-305.	0.5	28
106	Canadian Musculoskeletal Fitness Norms. <i>Applied Physiology, Nutrition, and Metabolism</i> , 2000, 25, 430-442.	1.7	28
107	Effects of computer mouse design and task on carpal tunnel pressure. <i>Ergonomics</i> , 1999, 42, 1350-1360.	1.1	151
108	Changes in geometry of the finger flexor tendons in the carpal tunnel with wrist posture and tendon load: an MRI study on normal wrists. <i>Clinical Biomechanics</i> , 1999, 14, 635-645.	0.5	47

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109	Fingertip loading and carpal tunnel pressure: Differences between a pinching and a pressing task. <i>Journal of Orthopaedic Research</i> , 1998, 16, 112-115.	1.2	61
110	Effects of finger posture on carpal tunnel pressure during wrist motion. <i>Journal of Hand Surgery</i> , 1998, 23, 1004-1009.	0.7	93
111	Comparison of Surface to Indwelling Extrinsic Finger Muscle EMG during use of Computer Pointing Devices. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1998, 42, 541-545.	0.2	2
112	The effects of tendon load and posture on carpal tunnel pressure. <i>Journal of Hand Surgery</i> , 1997, 22, 628-634.	0.7	76
113	Effects of static fingertip loading on carpal tunnel pressure. <i>Journal of Orthopaedic Research</i> , 1997, 15, 422-426.	1.2	87
114	Passive properties of the forearm musculature with reference to hand and finger postures. <i>Clinical Biomechanics</i> , 1996, 11, 401-409.	0.5	35