

Jason R Franz

List of Publications by Year in descending order

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Version: 2024-02-01

102
papers

3,378
citations

126907

33
h-index

168389

53
g-index

106
all docs

106
docs citations

106
times ranked

2877
citing authors

#	ARTICLE	IF	CITATIONS
1	A Kinematics and Kinetic Comparison of Overground and Treadmill Running. <i>Medicine and Science in Sports and Exercise</i> , 2008, 40, 1093-1100.	0.4	352
2	Metabolic Cost of Running Barefoot versus Shod. <i>Medicine and Science in Sports and Exercise</i> , 2012, 44, 1519-1525.	0.4	163
3	A three-dimensional kinematic and kinetic comparison of overground and treadmill walking in healthy elderly subjects. <i>Clinical Biomechanics</i> , 2010, 25, 444-449.	1.2	154
4	The effects of grade and speed on leg muscle activations during walking. <i>Gait and Posture</i> , 2012, 35, 143-147.	1.4	123
5	Neuroimaging of Human Balance Control: A Systematic Review. <i>Frontiers in Human Neuroscience</i> , 2017, 11, 170.	2.0	107
6	How does age affect leg muscle activity/coactivity during uphill and downhill walking?. <i>Gait and Posture</i> , 2013, 37, 378-384.	1.4	99
7	Non-uniform in vivo deformations of the human Achilles tendon during walking. <i>Gait and Posture</i> , 2015, 41, 192-197.	1.4	99
8	The Effect of Running Shoes on Lower Extremity Joint Torques. <i>PM and R</i> , 2009, 1, 1058-1063.	1.6	90
9	Advanced age brings a greater reliance on visual feedback to maintain balance during walking. <i>Human Movement Science</i> , 2015, 40, 381-392.	1.4	88
10	Advanced age and the mechanics of uphill walking: A joint-level, inverse dynamic analysis. <i>Gait and Posture</i> , 2014, 39, 135-140.	1.4	85
11	The Age-Associated Reduction in Propulsive Power Generation in Walking. <i>Exercise and Sport Sciences Reviews</i> , 2016, 44, 129-136.	3.0	84
12	Mechanical work performed by the individual legs during uphill and downhill walking. <i>Journal of Biomechanics</i> , 2012, 45, 257-262.	2.1	77
13	A Test of the Metabolic Cost of Cushioning Hypothesis during Unshod and Shod Running. <i>Medicine and Science in Sports and Exercise</i> , 2014, 46, 324-329.	0.4	75
14	Changes in the coordination of hip and pelvis kinematics with mode of locomotion. <i>Gait and Posture</i> , 2009, 29, 494-498.	1.4	70
15	Advanced age affects the individual leg mechanics of level, uphill, and downhill walking. <i>Journal of Biomechanics</i> , 2013, 46, 535-540.	2.1	67
16	Real-time feedback enhances forward propulsion during walking in old adults. <i>Clinical Biomechanics</i> , 2014, 29, 68-74.	1.2	64
17	Lower Limb Joint Kinetics During Moderately Sloped Running. <i>Journal of Athletic Training</i> , 2010, 45, 16-21.	1.8	51
18	Baseline-dependent effect of noise-enhanced insoles on gait variability in healthy elderly walkers. <i>Gait and Posture</i> , 2012, 36, 537-540.	1.4	48

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19	Depth-dependent variations in Achilles tendon deformations with age are associated with reduced plantarflexor performance during walking. <i>Journal of Applied Physiology</i> , 2015, 119, 242-249.	2.5	47
20	Differences in Static and Dynamic Measures in Evaluation of Talonavicular Mobility in Gait. <i>Journal of Orthopaedic and Sports Physical Therapy</i> , 2009, 39, 628-634.	3.5	46
21	Gait variability in healthy old adults is more affected by a visual perturbation than by a cognitive or narrow step placement demand. <i>Gait and Posture</i> , 2015, 42, 380-385.	1.4	46
22	Imaging and simulation of Achilles tendon dynamics: Implications for walking performance in the elderly. <i>Journal of Biomechanics</i> , 2016, 49, 1403-1410.	2.1	46
23	Variation in the human Achilles tendon moment arm during walking. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2017, 20, 201-205.	1.6	46
24	More push from your push-off: Joint-level modifications to modulate propulsive forces in old age. <i>PLoS ONE</i> , 2018, 13, e0201407.	2.5	46
25	The Influence of Arch Supports on Knee Torques Relevant to Knee Osteoarthritis. <i>Medicine and Science in Sports and Exercise</i> , 2008, 40, 913-917.	0.4	44
26	Lower limb joint kinetics in walking: The role of industry recommended footwear. <i>Gait and Posture</i> , 2011, 33, 350-355.	1.4	44
27	The effects of Achilles tendon compliance on triceps surae mechanics and energetics in walking. <i>Journal of Biomechanics</i> , 2017, 60, 227-231.	2.1	43
28	These legs were made for propulsion: advancing the diagnosis and treatment of post-stroke propulsion deficits. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2020, 17, 139.	4.6	43
29	Effect of a Supervised Hip Flexor Stretching Program on Gait in Frail Elderly Patients. <i>PM and R</i> , 2011, 3, 330-335.	1.6	41
30	The Neuromuscular Origins of Kinematic Variability during Perturbed Walking. <i>Scientific Reports</i> , 2017, 7, 808.	3.3	40
31	It's positive to be negative: Achilles tendon work loops during human locomotion. <i>PLoS ONE</i> , 2017, 12, e0179976.	2.5	40
32	Real-time biofeedback can increase and decrease vertical ground reaction force, knee flexion excursion, and knee extension moment during walking in individuals with anterior cruciate ligament reconstruction. <i>Journal of Biomechanics</i> , 2018, 76, 94-102.	2.1	39
33	Do kinematic metrics of walking balance adapt to perturbed optical flow?. <i>Human Movement Science</i> , 2017, 54, 34-40.	1.4	38
34	Aging effects on leg joint variability during walking with balance perturbations. <i>Gait and Posture</i> , 2018, 62, 27-33.	1.4	36
35	Ankle power biofeedback attenuates the distal-to-proximal redistribution in older adults. <i>Gait and Posture</i> , 2019, 71, 44-49.	1.4	35
36	The independent effects of speed and propulsive force on joint power generation in walking. <i>Journal of Biomechanics</i> , 2017, 55, 48-55.	2.1	32

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37	Effect of a Supervised Hip Flexor Stretching Program on Gait in Elderly Individuals. <i>PM and R</i> , 2011, 3, 324-329.	1.6	31
38	Visuomotor Entrainment and the Frequency-Dependent Response of Walking Balance to Perturbations. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2017, 25, 1135-1142.	4.9	28
39	Lesser lower extremity mechanical loading associates with a greater increase in serum cartilage oligomeric matrix protein following walking in individuals with anterior cruciate ligament reconstruction. <i>Clinical Biomechanics</i> , 2018, 60, 13-19.	1.2	27
40	Changes in hip joint muscle-tendon lengths with mode of locomotion. <i>Gait and Posture</i> , 2010, 31, 279-283.	1.4	26
41	Advanced Age Redistributes Positive but Not Negative Leg Joint Work during Walking. <i>Medicine and Science in Sports and Exercise</i> , 2019, 51, 615-623.	0.4	25
42	Does dynamic stability govern propulsive force generation in human walking?. <i>Royal Society Open Science</i> , 2017, 4, 171673.	2.4	24
43	Cyclically producing the same average muscle-tendon force with a smaller duty increases metabolic rate. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20200431.	2.6	24
44	Age and falls history effects on antagonist leg muscle coactivation during walking with balance perturbations. <i>Clinical Biomechanics</i> , 2018, 59, 94-100.	1.2	22
45	The motor repertoire of older adult fallers may constrain their response to balance perturbations. <i>Journal of Neurophysiology</i> , 2018, 120, 2368-2378.	1.8	22
46	Do triceps surae muscle dynamics govern non-uniform Achilles tendon deformations?. <i>PeerJ</i> , 2018, 6, e5182.	2.0	22
47	Biomechanical effects of augmented ankle power output during human walking. <i>Journal of Experimental Biology</i> , 2018, 221, .	1.7	21
48	Biomechanical effects of manipulating peak vertical ground reaction force throughout gait in individuals 6-12 months after anterior cruciate ligament reconstruction. <i>Clinical Biomechanics</i> , 2020, 76, 105014.	1.2	20
49	Physiological modulation of gait variables by an active partial body weight support system. <i>Journal of Biomechanics</i> , 2007, 40, 3244-3250.	2.1	19
50	Increasing the Propulsive Demands of Walking to Their Maximum Elucidates Functionally Limiting Impairments in Older Adult Gait. <i>Journal of Aging and Physical Activity</i> , 2020, 28, 1-8.	1.0	19
51	Biplanar ultrasound investigation of in vivo Achilles tendon displacement non-uniformity. <i>Translational Sports Medicine</i> , 2019, 2, 73-81.	1.1	18
52	Reduced Achilles Tendon Stiffness Disrupts Calf Muscle Neuromechanics in Elderly Gait. <i>Gerontology</i> , 2022, 68, 241-251.	2.8	18
53	Ageing effects on the Achilles tendon moment arm during walking. <i>Journal of Biomechanics</i> , 2018, 77, 34-39.	2.1	17
54	Does local dynamic stability during unperturbed walking predict the response to balance perturbations? An examination across age and falls history. <i>Gait and Posture</i> , 2018, 62, 80-85.	1.4	16

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55	The Functional Utilization of Propulsive Capacity During Human Walking. <i>Journal of Applied Biomechanics</i> , 2018, 34, 474-482.	0.8	16
56	Triceps surae muscleâ€™subtendon interaction differs between young and older adults. <i>Connective Tissue Research</i> , 2020, 61, 104-113.	2.3	16
57	Association between kinesiophobia and walking gait characteristics in physically active individuals with anterior cruciate ligament reconstruction. <i>Gait and Posture</i> , 2018, 64, 220-225.	1.4	15
58	The effects of cognitive load and optical flow on antagonist leg muscle coactivation during walking for young and older adults. <i>Journal of Electromyography and Kinesiology</i> , 2019, 44, 8-14.	1.7	14
59	Shorter gastrocnemius fascicle lengths in older adults associate with worse capacity to enhance push-off intensity in walking. <i>Gait and Posture</i> , 2020, 77, 89-94.	1.4	14
60	Immediate Biochemical Changes After Gait Biofeedback in Individuals With Anterior Cruciate Ligament Reconstruction. <i>Journal of Athletic Training</i> , 2020, 55, 1106-1115.	1.8	14
61	Shorter muscle fascicle operating lengths increase the metabolic cost of cyclic force production. <i>Journal of Applied Physiology</i> , 2022, 133, 524-533.	2.5	14
62	Imaging and Simulation of Inter-muscular Differences in Triceps Surae Contributions to Forward Propulsion During Walking. <i>Annals of Biomedical Engineering</i> , 2021, 49, 703-715.	2.5	13
63	Personalized fusion of ultrasound and electromyography-derived neuromuscular features increases prediction accuracy of ankle moment during plantarflexion. <i>Biomedical Signal Processing and Control</i> , 2022, 71, 103100.	5.7	13
64	Multimodal Diagnostic Approaches to Advance Precision Medicine in Sarcopenia and Frailty. <i>Nutrients</i> , 2022, 14, 1384.	4.1	13
65	Can optical flow perturbations detect walking balance impairment in people with multiple sclerosis?. <i>PLoS ONE</i> , 2020, 15, e0230202.	2.5	12
66	Time-dependent tuning of balance control and aftereffects following optical flow perturbation training in older adults. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2019, 16, 81.	4.6	11
67	The metabolic and mechanical consequences of altered propulsive force generation in walking. <i>Journal of Biomechanics</i> , 2021, 122, 110447.	2.1	11
68	The effects of knee extensor moment biofeedback on gait biomechanics and quadriceps contractile behavior. <i>PeerJ</i> , 2020, 8, e9509.	2.0	11
69	Gait synchronized force modulation during the stance period of one limb achieved by an active partial body weight support system. <i>Journal of Biomechanics</i> , 2008, 41, 3116-3120.	2.1	10
70	Activation-Dependent Changes in Soleus Lengthâ€™Tension Behavior Augment Ankle Joint Quasi-Stiffness. <i>Journal of Applied Biomechanics</i> , 2019, 35, 182-189.	0.8	10
71	Age-related changes to triceps surae muscle-subtendon interaction dynamics during walking. <i>Scientific Reports</i> , 2021, 11, 21264.	3.3	10
72	Muscle metabolic energy costs while modifying propulsive force generation during walking. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2021, 24, 1552-1565.	1.6	9

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73	Automated analysis of medial gastrocnemius muscle-tendon junction displacements in healthy young adults during isolated contractions and walking using deep neural networks. <i>Computer Methods and Programs in Biomedicine</i> , 2021, 206, 106120.	4.7	9
74	Can shank acceleration provide a clinically feasible surrogate for individual limb propulsion during walking?. <i>Journal of Biomechanics</i> , 2020, 98, 109449.	2.1	8
75	Association of Quality of Life With Moderate-to-Vigorous Physical Activity After Anterior Cruciate Ligament Reconstruction. <i>Journal of Athletic Training</i> , 2022, 57, 532-539.	1.8	8
76	Ankle Rotation and Muscle Loading Effects on the Calcaneal Tendon Moment Arm: An In Vivo Imaging and Modeling Study. <i>Annals of Biomedical Engineering</i> , 2019, 47, 590-600.	2.5	7
77	Biofeedback augmenting lower limb loading alters the underlying temporal structure of gait following anterior cruciate ligament reconstruction. <i>Human Movement Science</i> , 2020, 73, 102685.	1.4	6
78	Gradually learning to increase gait propulsion in young unimpaired adults. <i>Human Movement Science</i> , 2021, 75, 102745.	1.4	6
79	Effects of Horizontal Impeding Force Gait Training on Older Adult Push-Off Intensity. <i>Medicine and Science in Sports and Exercise</i> , 2021, 53, 574-580.	0.4	5
80	A sound approach to improving exoskeletons and exosuits. <i>Science Robotics</i> , 2021, 6, eabm6369.	17.6	5
81	Feasibility evaluation of a dual-mode ankle exoskeleton to assist and restore community ambulation in older adults. <i>Wearable Technologies</i> , 2022, 3, .	3.1	5
82	How age and surface inclination affect joint moment strategies to accelerate and decelerate individual leg joints during walking. <i>Journal of Biomechanics</i> , 2020, 98, 109440.	2.1	4
83	Effects of age and locomotor demand on foot mechanics during walking. <i>Journal of Biomechanics</i> , 2021, 123, 110499.	2.1	4
84	The effects of triceps surae muscle stimulation on localized Achilles subtendon tissue displacements. <i>Journal of Experimental Biology</i> , 2021, 224, .	1.7	4
85	Optical flow balance perturbations alter gait kinematics and variability in chronic ankle instability patients. <i>Gait and Posture</i> , 2022, 92, 271-276.	1.4	4
86	Effects of aging and target location on reaction time and accuracy of lateral precision stepping during walking. <i>Journal of Biomechanics</i> , 2020, 104, 109710.	2.1	3
87	Age does not affect the relationship between muscle activation and joint work during incline and decline walking. <i>Journal of Biomechanics</i> , 2021, 124, 110555.	2.1	3
88	Cueing Changes in Peak Vertical Ground Reaction Force to Improve Coordination Dynamics in Walking. <i>Journal of Motor Behavior</i> , 2022, 54, 125-134.	0.9	3
89	Age-related differences in calf muscle recruitment strategies in the time-frequency domain during walking as a function of task demand. <i>Journal of Applied Physiology</i> , 2021, 131, 1348-1360.	2.5	3
90	Older Adults Overcome Reduced Triceps Surae Structural Stiffness to Preserve Ankle Joint Quasi-Stiffness During Walking. <i>Journal of Applied Biomechanics</i> , 2020, 36, 209-216.	0.8	3

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91	Slowing down to preserve balance in the presence of optical flow perturbations. <i>Gait and Posture</i> , 2022, 96, 365-370.	1.4	3
92	The Metabolic Cost of Locomotion; Muscle by Muscle. <i>Exercise and Sport Sciences Reviews</i> , 2011, 39, 57-58.	3.0	2
93	Visuomotor error augmentation affects mediolateral head and trunk stabilization during walking. <i>Human Movement Science</i> , 2019, 68, 102525.	1.4	2
94	Decreased Loading During Gait Alters Intralimb Coordination In Anterior Cruciate Ligament Reconstructed Individuals. <i>Medicine and Science in Sports and Exercise</i> , 2020, 52, 246-246.	0.4	1
95	Fewer Steps Per Day Associates With Greater Cartilage Breakdown Biomarkers Post Anterior Cruciate Ligament Reconstruction. <i>Medicine and Science in Sports and Exercise</i> , 2020, 52, 246-246.	0.4	1
96	Effects Of ACL Reconstruction On In Vivo Quadriceps Contractile Behavior During Weight Acceptance In Walking. <i>Medicine and Science in Sports and Exercise</i> , 2020, 52, 244-244.	0.4	1
97	Controlled Partial Bodyweight Support for Treadmill Training—A Case Study. <i>PM and R</i> , 2009, 1, 496-499.	1.6	0
98	Assessment of anisotropy using viscoelastic response (VisR) ultrasound in the biceps brachii of healthy older adults and stroke patients. , 2017, , .		0
99	Assessment of anisotropy using viscoelastic response (VisR) ultrasound in the biceps brachii of healthy older adults and stroke patients. , 2017, , .		0
100	Editorial: Tendon Structure-Function Relationship in Health, Ageing, and Injury. <i>Frontiers in Sports and Active Living</i> , 2021, 3, 701815.	1.8	0
101	Manipulating Initial Peak vGRF During Walking Affects Loading Throughout Stance in Individuals with ACL Reconstruction. <i>Medicine and Science in Sports and Exercise</i> , 2019, 51, 260-261.	0.4	0
102	The metabolic cost of walking balance control and adaptation in young adults. <i>Gait and Posture</i> , 2022, 96, 190-194.	1.4	0