Jason R Franz

List of Publications by Year
in descending order

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	Cueing Changes in Peak Vertical Ground Reaction Force to Improve Coordination Dynamics in Walking. Journal of Motor Behavior, 2022, 54, 125-134.	0.9	3
2	Reduced Achilles Tendon Stiffness Disrupts Calf Muscle Neuromechanics in Elderly Gait. Gerontology, 2022, 68, 241-251.	2.8	18
3	Association of Quality of Life With Moderate-to-Vigorous Physical Activity After Anterior Cruciate Ligament Reconstruction. Journal of Athletic Training, 2022, 57, 532-539.	1.8	8
4	Personalized fusion of ultrasound and electromyography-derived neuromuscular features increases prediction accuracy of ankle moment during plantarflexion. Biomedical Signal Processing and Control, 2022, 71, 103100.	5.7	13
5	Optical flow balance perturbations alter gait kinematics and variability in chronic ankle instability patients. Gait and Posture, 2022, 92, 271-276.	1.4	4
6	Multimodal Diagnostic Approaches to Advance Precision Medicine in Sarcopenia and Frailty. Nutrients, 2022, 14, 1384.	4.1	13
7	The metabolic cost of walking balance control and adaptation in young adults. Gait and Posture, 2022, 96, 190-194.	1.4	0
8	Feasibility evaluation of a dual-mode ankle exoskeleton to assist and restore community ambulation in older adults. Wearable Technologies, 2022, 3, .	3.1	5
9	Shorter muscle fascicle operating lengths increase the metabolic cost of cyclic force production. Journal of Applied Physiology, 2022, 133, 524-533.	2.5	14
10	Slowing down to preserve balance in the presence of optical flow perturbations. Gait and Posture, 2022, 96, 365-370.	1.4	3
11	Imaging and Simulation of Inter-muscular Differences in Triceps Surae Contributions to Forward Propulsion During Walking. Annals of Biomedical Engineering, 2021, 49, 703-715.	2.5	13
12	Gradually learning to increase gait propulsion in young unimpaired adults. Human Movement Science, 2021, 75, 102745.	1.4	6
13	Muscle metabolic energy costs while modifying propulsive force generation during walking. Computer Methods in Biomechanics and Biomedical Engineering, 2021, 24, 1552-1565.	1.6	9
14	Age does not affect the relationship between muscle activation and joint work during incline and decline walking. Journal of Biomechanics, 2021, 124, 110555.	2.1	3
15	Editorial: Tendon Structure-Function Relationship in Health, Ageing, and Injury. Frontiers in Sports and Active Living, 2021, 3, 701815.	1.8	0
16	Effects of age and locomotor demand on foot mechanics during walking. Journal of Biomechanics, 2021, 123, 110499.	2.1	4
17	The metabolic and mechanical consequences of altered propulsive force generation in walking. Journal of Biomechanics, 2021, 122, 110447.	2.1	11
18	Automated analysis of medial gastrocnemius muscle-tendon junction displacements in heathy young adults during isolated contractions and walking using deep neural networks. Computer Methods and Programs in Biomedicine, 2021, 206, 106120.	4.7	9

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19	The effects of triceps surae muscle stimulation on localized Achilles subtendon tissue displacements. Journal of Experimental Biology, 2021, 224, .	1.7	4
20	Age-related differences in calf muscle recruitment strategies in the time-frequency domain during walking as a function of task demand. Journal of Applied Physiology, 2021, 131, 1348-1360.	2.5	3
21	Effects of Horizontal Impeding Force Gait Training on Older Adult Push-Off Intensity. Medicine and Science in Sports and Exercise, 2021, 53, 574-580.	0.4	5
22	Age-related changes to triceps surae muscle-subtendon interaction dynamics during walking. Scientific Reports, 2021, 11, 21264.	3.3	10
23	A sound approach to improving exoskeletons and exosuits. Science Robotics, 2021, 6, eabm6369.	17.6	5
24	Triceps surae muscleâ€"subtendon interaction differs between young and older adults. Connective Tissue Research, 2020, 61, 104-113.	2.3	16
25	How age and surface inclination affect joint moment strategies to accelerate and decelerate individual leg joints during walking. Journal of Biomechanics, 2020, 98, 109440.	2.1	4
26	Can shank acceleration provide a clinically feasible surrogate for individual limb propulsion during walking?. Journal of Biomechanics, 2020, 98, 109449.	2.1	8
27	Biofeedback augmenting lower limb loading alters the underlying temporal structure of gait following anterior cruciate ligament reconstruction. Human Movement Science, 2020, 73, 102685.	1.4	6
28	These legs were made for propulsion: advancing the diagnosis and treatment of post-stroke propulsion deficits. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 139.	4.6	43
29	Cyclically producing the same average muscle-tendon force with a smaller duty increases metabolic rate. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20200431.	2.6	24
30	Biomechanical effects of manipulating peak vertical ground reaction force throughout gait in individuals 6â€"12Âmonths after anterior cruciate ligament reconstruction. Clinical Biomechanics, 2020, 76, 105014.	1.2	20
31	Can optical flow perturbations detect walking balance impairment in people with multiple sclerosis?. PLoS ONE, 2020, 15, e0230202.	2.5	12
32	Effects of aging and target location on reaction time and accuracy of lateral precision stepping during walking. Journal of Biomechanics, 2020, 104, 109710.	2.1	3
33	Shorter gastrocnemius fascicle lengths in older adults associate with worse capacity to enhance push-off intensity in walking. Gait and Posture, 2020, 77, 89-94.	1.4	14
34	Increasing the Propulsive Demands of Walking to Their Maximum Elucidates Functionally Limiting Impairments in Older Adult Gait. Journal of Aging and Physical Activity, 2020, 28, 1-8.	1.0	19
35	Decreased Loading During Gait Alters Intralimb Coordination In Anterior Cruciate Ligament Reconstructed Individuals. Medicine and Science in Sports and Exercise, 2020, 52, 246-246.	0.4	1
36	The effects of knee extensor moment biofeedback on gait biomechanics and quadriceps contractile behavior. PeerJ, 2020, 8, e9509.	2.0	11

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37	Older Adults Overcome Reduced Triceps Surae Structural Stiffness to Preserve Ankle Joint Quasi-Stiffness During Walking. Journal of Applied Biomechanics, 2020, 36, 209-216.	0.8	3
38	Fewer Steps Per Day Associates With Greater Cartilage Breakdown Biomarkers Post Anterior Cruciate Ligament Reconstruction. Medicine and Science in Sports and Exercise, 2020, 52, 246-246.	0.4	1
39	Effects Of ACL Reconstruction On In Vivo Quadriceps Contractile Behavior During Weight Acceptance In Walking. Medicine and Science in Sports and Exercise, 2020, 52, 244-244.	0.4	1
40	Immediate Biochemical Changes After Gait Biofeedback in Individuals With Anterior Cruciate Ligament Reconstruction. Journal of Athletic Training, 2020, 55, 1106-1115.	1.8	14
41	Time-dependent tuning of balance control and aftereffects following optical flow perturbation training in older adults. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 81.	4.6	11
42	Activation-Dependent Changes in Soleus Lengthâ€"Tension Behavior Augment Ankle Joint Quasi-Stiffness. Journal of Applied Biomechanics, 2019, 35, 182-189.	0.8	10
43	Ankle power biofeedback attenuates the distal-to-proximal redistribution in older adults. Gait and Posture, 2019, 71, 44-49.	1.4	35
44	Visuomotor error augmentation affects mediolateral head and trunk stabilization during walking. Human Movement Science, 2019, 68, 102525.	1.4	2
45	Advanced Age Redistributes Positive but Not Negative Leg Joint Work during Walking. Medicine and Science in Sports and Exercise, 2019, 51, 615-623.	0.4	25
46	The effects of cognitive load and optical flow on antagonist leg muscle coactivation during walking for young and older adults. Journal of Electromyography and Kinesiology, 2019, 44, 8-14.	1.7	14
47	Ankle Rotation and Muscle Loading Effects on the Calcaneal Tendon Moment Arm: An In Vivo Imaging and Modeling Study. Annals of Biomedical Engineering, 2019, 47, 590-600.	2.5	7
48	Biplanar ultrasound investigation of in vivo Achilles tendon displacement non-uniformity. Translational Sports Medicine, 2019, 2, 73-81.	1.1	18
49	Manipulating Initial Peak vGRF During Walking Affects Loading Throughout Stance in Individuals with ACL Reconstruction. Medicine and Science in Sports and Exercise, 2019, 51, 260-261.	0.4	0
50	Aging effects on leg joint variability during walking with balance perturbations. Gait and Posture, 2018, 62, 27-33.	1.4	36
51	Does local dynamic stability during unperturbed walking predict the response to balance perturbations? An examination across age and falls history. Gait and Posture, 2018, 62, 80-85.	1.4	16
52	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. Clinical Biomechanics, 2018, 60, 13-19.	1.2	27
53	Biomechanical effects of augmented ankle power output during human walking. Journal of Experimental Biology, 2018, 221, .	1.7	21
54	The Functional Utilization of Propulsive Capacity During Human Walking. Journal of Applied Biomechanics, 2018, 34, 474-482.	0.8	16

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55	Age and falls history effects on antagonist leg muscle coactivation during walking with balance perturbations. Clinical Biomechanics, 2018, 59, 94-100.	1.2	22
56	Association between kinesiophobia and walking gait characteristics in physically active individuals with anterior cruciate ligament reconstruction. Gait and Posture, 2018, 64, 220-225.	1.4	15
57	The motor repertoire of older adult fallers may constrain their response to balance perturbations. Journal of Neurophysiology, 2018, 120, 2368-2378.	1.8	22
58	More push from your push-off: Joint-level modifications to modulate propulsive forces in old age. PLoS ONE, 2018, 13, e0201407.	2.5	46
59	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. Journal of Biomechanics, 2018, 76, 94-102.	2.1	39
60	Aging effects on the Achilles tendon moment arm during walking. Journal of Biomechanics, 2018, 77, 34-39.	2.1	17
61	Do triceps surae muscle dynamics govern non-uniform Achilles tendon deformations?. PeerJ, 2018, 6, e5182.	2.0	22
62	The independent effects of speed and propulsive force on joint power generation in walking. Journal of Biomechanics, 2017, 55, 48-55.	2.1	32
63	The Neuromuscular Origins of Kinematic Variability during Perturbed Walking. Scientific Reports, 2017, 7, 808.	3.3	40
64	Do kinematic metrics of walking balance adapt to perturbed optical flow?. Human Movement Science, 2017, 54, 34-40.	1.4	38
65	Does dynamic stability govern propulsive force generation in human walking?. Royal Society Open Science, 2017, 4, 171673.	2.4	24
66	The effects of Achilles tendon compliance on triceps surae mechanics and energetics in walking. Journal of Biomechanics, 2017, 60, 227-231.	2.1	43
67	Variation in the human Achilles tendon moment arm during walking. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 201-205.	1.6	46
68	Visuomotor Entrainment and the Frequency-Dependent Response of Walking Balance to Perturbations. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1135-1142.	4.9	28
69	Assessment of anisotropy using viscoelastic response (VisR) ultrasound in the biceps brachii of healthy older adults and stroke patients. , 2017, , .		0
70	Neuroimaging of Human Balance Control: A Systematic Review. Frontiers in Human Neuroscience, 2017, 11, 170.	2.0	107
71	Assessment of anisotropy using viscoelastic response (VisR) ultrasound in the biceps brachii of healthy older adults and stroke patients. , 2017, , .		0
72	Itâ€™s positive to be negative: Achilles tendon work loops during human locomotion. PLoS ONE, 2017, 12, e0179976.	2.5	40

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73	The Age-Associated Reduction in Propulsive Power Generation in Walking. Exercise and Sport Sciences Reviews, 2016, 44, 129-136.	3.0	84
74	Imaging and simulation of Achilles tendon dynamics: Implications for walking performance in the elderly. Journal of Biomechanics, 2016, 49, 1403-1410.	2.1	46
75	Advanced age brings a greater reliance on visual feedback to maintain balance during walking. Human Movement Science, 2015, 40, 381-392.	1.4	88
76	Gait variability in healthy old adults is more affected by a visual perturbation than by a cognitive or narrow step placement demand. Gait and Posture, 2015, 42, 380-385.	1.4	46
77	Depth-dependent variations in Achilles tendon deformations with age are associated with reduced plantarflexor performance during walking. Journal of Applied Physiology, 2015, 119, 242-249.	2.5	47
78	Non-uniform in vivo deformations of the human Achilles tendon during walking. Gait and Posture, 2015, 41, 192-197.	1.4	99
79	A Test of the Metabolic Cost of Cushioning Hypothesis during Unshod and Shod Running. Medicine and Science in Sports and Exercise, 2014, 46, 324-329.	0.4	75
80	Real-time feedback enhances forward propulsion during walking in old adults. Clinical Biomechanics, 2014, 29, 68-74.	1.2	64
81	Advanced age and the mechanics of uphill walking: A joint-level, inverse dynamic analysis. Gait and Posture, 2014, 39, 135-140.	1.4	85
82	Advanced age affects the individual leg mechanics of level, uphill, and downhill walking. Journal of Biomechanics, 2013, 46, 535-540.	2.1	67
83	How does age affect leg muscle activity/coactivity during uphill and downhill walking?. Gait and Posture, 2013, 37, 378-384.	1.4	99
84	Metabolic Cost of Running Barefoot versus Shod. Medicine and Science in Sports and Exercise, 2012, 44, 1519-1525.	0.4	163
85	Mechanical work performed by the individual legs during uphill and downhill walking. Journal of Biomechanics, 2012, 45, 257-262.	2.1	77
86	The effects of grade and speed on leg muscle activations during walking. Gait and Posture, 2012, 35, 143-147.	1.4	123
87	Baseline-dependent effect of noise-enhanced insoles on gait variability in healthy elderly walkers. Gait and Posture, 2012, 36, 537-540.	1.4	48
88	Effect of a Supervised Hip Flexor Stretching Program on Gait in Elderly Individuals. PM and R, 2011, 3, 324-329.	1.6	31
89	Effect of a Supervised Hip Flexor Stretching Program on Gait in Frail Elderly Patients. PM and R, 2011, 3, 330-335.	1.6	41
90	Lower limb joint kinetics in walking: The role of industry recommended footwear. Gait and Posture, 2011, 33, 350-355.	1.4	44

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91	The Metabolic Cost of Locomotion; Muscle by Muscle. Exercise and Sport Sciences Reviews, 2011, 39, 57-58.	3.0	2
92	Lower Limb Joint Kinetics During Moderately Sloped Running. Journal of Athletic Training, 2010, 45, 16-21.	1.8	51
93	Changes in hip joint muscleâ€"tendon lengths with mode of locomotion. Gait and Posture, 2010, 31, 279-283.	1.4	26
94	A three-dimensional kinematic and kinetic comparison of overground and treadmill walking in healthy elderly subjects. Clinical Biomechanics, 2010, 25, 444-449.	1.2	154
95	Differences in Static and Dynamic Measures in Evaluation of Talonavicular Mobility in Gait. Journal of Orthopaedic and Sports Physical Therapy, 2009, 39, 628-634.	3.5	46
96	Changes in the coordination of hip and pelvis kinematics with mode of locomotion. Gait and Posture, 2009, 29, 494-498.	1.4	70
97	Controlled Partial Bodyâ€weight Support for Treadmill Trainingâ€"A Case Study. PM and R, 2009, 1, 496-499.	1.6	0
98	The Effect of Running Shoes on Lower Extremity Joint Torques. PM and R, 2009, 1, 1058-1063.	1.6	90
99	Gait synchronized force modulation during the stance period of one limb achieved by an active partial body weight support system. Journal of Biomechanics, 2008, 41, 3116-3120.	2.1	10
100	A Kinematics and Kinetic Comparison of Overground and Treadmill Running. Medicine and Science in Sports and Exercise, 2008, 40, 1093-1100.	0.4	352
101	The Influence of Arch Supports on Knee Torques Relevant to Knee Osteoarthritis. Medicine and Science in Sports and Exercise, 2008, 40, 913-917.	0.4	44
102	Physiological modulation of gait variables by an active partial body weight support system. Journal of Biomechanics, 2007, 40, 3244-3250.	2.1	19