Richard R Neptune

List of Publications by Year
in descending order

116 papers	9,536 citations	47409 49 h-index	43601 95 g-index
119 all docs	119 docs citations	119 times ranked	5919 citing authors

#	Article	IF	Citations
1	Motion envelopes: unfolding longitudinal rotation data from walking stick-figures. Computer Methods in Biomechanics and Biomedical Engineering, 2022, 25, 1459-1470.	0.9	1
2	Task-prioritization and balance recovery strategies used by young healthy adults during dual-task walking. Gait and Posture, 2022, 95, 115-120.	0.6	5
3	Muscle contributions to pre-swing biomechanical tasks influence swing leg mechanics in individuals post-stroke during walking. Journal of NeuroEngineering and Rehabilitation, 2022, 19, .	2.4	2
4	Individual muscle responses to mediolateral foot placement perturbations during walking. Journal of Biomechanics, 2022, 141, 111201.	0.9	3
5	Assessment of turning performance and muscle coordination in individuals post-stroke. Journal of Biomechanics, 2021, 114, 110113.	0.9	5
6	The relationship between the hand pattern used during fast wheelchair propulsion and shoulder pain development. Journal of Biomechanics, 2021, 116, 110202.	0.9	3
7	Biomechanical response to mediolateral foot-placement perturbations during walking. Journal of Biomechanics, 2021, 116, 110213.	0.9	11
8	The Influence of Load Carriage on Knee Joint Loading and Metabolic Cost on Walking with Lower-Limb Amputation: A Preliminary Modeling Study. Journal of Prosthetics and Orthotics, 2021, 33, 118-124.	0.2	0
9	The influence of cognitive load on balance control during steady-state walking. Journal of Biomechanics, 2021, 122, 110466.	0.9	7
10	Differences in balance control between healthy younger and older adults during steady-state walking. Journal of Biomechanics, 2021, 128, 110717.	0.9	16
11	The influence of lateral stabilization on walking performance and balance control in neurologically-intact and post-stroke individuals. Clinical Biomechanics, 2020, 73, 172-180.	0.5	9
12	Muscle Contributions to Balance Control During Amputee and Nonamputee Stair Ascent. Journal of Biomechanical Engineering, 2020, 142, .	0.6	1
13	Muscle contributions to mediolateral and anteroposterior foot placement during walking. Journal of Biomechanics, 2019, 95, 109310.	0.9	12
14	Ideal operating conditions for a variable stiffness transverse plane adapter for individuals with lower-limb amputation. Journal of Biomechanics, 2019, 96, 109330.	0.9	5
15	Stiffness and energy storage characteristics of energy storage and return prosthetic feet. Prosthetics and Orthotics International, 2019, 43, 266-275.	0.5	20
16	Neuromusculoskeletal Simulation Reveals Abnormal Rectus Femoris-Gluteus Medius Coupling in Post-stroke Gait. Frontiers in Neurology, 2019, 10, 301.	1.1	15
17	Predictors of shoulder pain in manual wheelchair users. Clinical Biomechanics, 2019, 65, 1-12.	0.5	24
18	The influence of locomotor training on dynamic balance during steady-state walking post-stroke. Journal of Biomechanics, 2019, 89, 21-27.	0.9	6

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19	Merged plantarflexor muscle activity is predictive of poor walking performance in post-stroke hemiparetic subjects. Journal of Biomechanics, 2019, 82, 361-367.	0.9	19
20	Paretic propulsion as a measure of walking performance and functional motor recovery post-stroke: A review. Gait and Posture, 2019, 68, 6-14.	0.6	90
21	Dynamic Balance During Human Movement: Measurement and Control Mechanisms. Journal of Biomechanical Engineering, 2019, 141, .	0.6	30
22	Muscle Function and Coordination of Stair Ascent. Journal of Biomechanical Engineering, 2018, 140, .	0.6	28
23	Foot and Ankle Joint Biomechanical Adaptations to an Unpredictable Coronally Uneven Surface. Journal of Biomechanical Engineering, 2018, 140, .	0.6	11
24	Dynamic balance during walking adaptability tasks in individuals post-stroke. Journal of Biomechanics, 2018, 74, 106-115.	0.9	19
25	Using a Module-Based Analysis Framework for Investigating Muscle Coordination during Walking in Individuals Poststroke: A Literature Review and Synthesis. Applied Bionics and Biomechanics, 2018, 2018, 1-16.	0.5	6
26	Muscle Function and Coordination of Amputee Stair Ascent. Journal of Biomechanical Engineering, 2018, 140, .	0.6	5
27	A Coronally Clutching Ankle to Improve Amputee Balance on Coronally Uneven and Unpredictable Terrain. Journal of Medical Devices, Transactions of the ASME, 2018, 12, .	0.4	4
28	Identifying classifier input signals to predict a cross-slope during transtibial amputee walking. PLoS ONE, 2018, 13, e0192950.	1.1	3
29	Hip recovery strategy used by below-knee amputees following mediolateral foot perturbations. Journal of Biomechanics, 2018, 76, 61-67.	0.9	15
30	Ankle-foot orthosis bending axis influences running mechanics. Gait and Posture, 2017, 56, 147-152.	0.6	10
31	The effects of prosthetic foot stiffness on transtibial amputee walking mechanics and balance control during turning. Clinical Biomechanics, 2017, 49, 56-63.	0.5	33
32	The influence of limb alignment and transfemoral amputation technique on muscle capacity during gait. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 1167-1174.	0.9	23
33	Avoiding deleterious effects of exoskeletal assistance in people with Stiff-Knee Gait after stroke. , 2017, , .		1
34	The influence of passive-dynamic ankle-foot orthosis bending axis location on gait performance in individuals with lower-limb impairments. Clinical Biomechanics, 2016, 37, 13-21.	0.5	25
35	Balance and recovery on coronally-uneven and unpredictable terrain. Journal of Biomechanics, 2016, 49, 2734-2740.	0.9	15
36	Muscle contributions to frontal plane angular momentum during walking. Journal of Biomechanics, 2016, 49, 2975-2981.	0.9	62

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37	The influence of wheelchair propulsion hand pattern on upper extremity muscle power and stress. Journal of Biomechanics, 2016, 49, 1554-1561.	0.9	28
38	Correlations between measures of dynamic balance in individuals with post-stroke hemiparesis. Journal of Biomechanics, 2016, 49, 396-400.	0.9	80
39	Compensatory strategies during manual wheelchair propulsion in response to weakness in individual muscle groups: A simulation study. Clinical Biomechanics, 2016, 33, 34-41.	0.5	20
40	Locomotor Adaptability Task Promotes Intense and Task-Appropriate Output From the Paretic Leg During Walking. Archives of Physical Medicine and Rehabilitation, 2016, 97, 493-496.	0.5	15
41	An Investigation of Bilateral Symmetry During Manual Wheelchair Propulsion. Frontiers in Bioengineering and Biotechnology, 2015, 3, 86.	2.0	30
42	Individual muscle contributions to circular turning mechanics. Journal of Biomechanics, 2015, 48, 1067-1074.	0.9	28
43	The influence of speed and grade on wheelchair propulsion hand pattern. Clinical Biomechanics, 2015, 30, 927-932.	0.5	20
44	Selective Laser Sintered Versus Carbon Fiber Passive-Dynamic Ankle-Foot Orthoses: A Comparison of Patient Walking Performance. Journal of Biomechanical Engineering, 2014, 136, 091001.	0.6	27
45	Modular organization across changing task demands in healthy and poststroke gait. Physiological Reports, 2014, 2, e12055.	0.7	56
46	The influence of solid ankle-foot-orthoses on forward propulsion and dynamic balance in healthy adults during walking. Clinical Biomechanics, 2014, 29, 583-589.	0.5	44
47	The influence of ankle-foot orthosis stiffness on walking performance in individuals with lower-limb impairments. Clinical Biomechanics, 2014, 29, 877-884.	0.5	55
48	Whole-body angular momentum during stair walking using passive and powered lower-limb prostheses*. Journal of Biomechanics, 2014, 47, 3380-3389.	0.9	56
49	Three-dimensional knee joint contact forces during walking in unilateral transtibial amputees. Journal of Biomechanics, 2014, 47, 2556-2562.	0.9	32
50	Whole-body angular momentum during stair ascent and descent. Gait and Posture, 2014, 39, 1109-1114.	0.6	64
51	Forward propulsion asymmetry is indicative of changes in plantarflexor coordination during walking in individuals with post-stroke hemiparesis. Clinical Biomechanics, 2014, 29, 780-786.	0.5	46
52	Locomotor Rehabilitation of Individuals With Chronic Stroke: Difference Between Responders and Nonresponders. Archives of Physical Medicine and Rehabilitation, 2013, 94, 856-862.	0.5	84
53	The influence of merged muscle excitation modules on post-stroke hemiparetic walking performance. Clinical Biomechanics, 2013, 28, 697-704.	0.5	91
54	The influence of locomotor rehabilitation on module quality and post-stroke hemiparetic walking performance. Gait and Posture, 2013, 38, 511-517.	0.6	135

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55	A theoretical analysis of the influence of wheelchair seat position on upper extremity demand. Clinical Biomechanics, 2013, 28, 378-385.	0.5	22
56	Altering prosthetic foot stiffness influences foot and muscle function during below-knee amputee walking: A modeling and simulation analysis. Journal of Biomechanics, 2013, 46, 637-644.	0.9	63
57	Optimization of Prosthetic Foot Stiffness to Reduce Metabolic Cost and Intact Knee Loading During Below-Knee Amputee Walking: A Theoretical Study. Journal of Biomechanical Engineering, 2012, 134, 111005.	0.6	92
58	The influence of wheelchair propulsion technique on upper extremity muscle demand: A simulation study. Clinical Biomechanics, 2012, 27, 879-886.	0.5	46
59	Whole-body angular momentum in incline and decline walking. Journal of Biomechanics, 2012, 45, 965-971.	0.9	71
60	Musculotendon lengths and moment arms for a three-dimensional upper-extremity model. Journal of Biomechanics, 2012, 45, 1739-1744.	0.9	23
61	Three-dimensional modular control of human walking. Journal of Biomechanics, 2012, 45, 2157-2163.	0.9	138
62	Muscle and prosthesis contributions to amputee walking mechanics: A modeling study. Journal of Biomechanics, 2012, 45, 2271-2278.	0.9	76
63	3D intersegmental knee loading in below-knee amputees across steady-state walking speeds. Clinical Biomechanics, 2012, 27, 409-414.	0.5	28
64	Coordination of the non-paretic leg during hemiparetic gait: Expected and novel compensatory patterns. Clinical Biomechanics, 2012, 27, 1023-1030.	0.5	47
65	The effects of prosthetic ankle dorsiflexion and energy return on below-knee amputee leg loading. Clinical Biomechanics, 2011, 26, 298-303.	0.5	50
66	Muscle work is increased in pre-swing during hemiparetic walking. Clinical Biomechanics, 2011, 26, 859-866.	0.5	14
67	The influence of energy storage and return foot stiffness on walking mechanics and muscle activity in below-knee amputees. Clinical Biomechanics, 2011, 26, 1025-1032.	0.5	142
68	The effect of prosthetic ankle energy storage and return properties on muscle activity in below-knee amputee walking. Gait and Posture, 2011, 33, 220-226.	0.6	53
69	Step length asymmetry is representative of compensatory mechanisms used in post-stroke hemiparetic walking. Gait and Posture, 2011, 33, 538-543.	0.6	158
70	Braking and propulsive impulses increase with speed during accelerated and decelerated walking. Gait and Posture, 2011, 33, 562-567.	0.6	69
71	Compensatory mechanisms of transtibial amputees during circular turning. Gait and Posture, 2011, 34, 307-312.	0.6	41
72	Differences in whole-body angular momentum between below-knee amputees and non-amputees across walking speeds. Journal of Biomechanics, 2011, 44, 379-385.	0.9	88

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73	Individual muscle contributions to push and recovery subtasks during wheelchair propulsion. Journal of Biomechanics, 2011, 44, 1246-1252.	0.9	60
74	Comparison of Motor Control Deficits During Treadmill and Overground Walking Poststroke. Neurorehabilitation and Neural Repair, 2011, 25, 756-765.	1.4	69
75	A phenomenological model and validation of shortening-induced force depression during muscle contractions. Journal of Biomechanics, 2010, 43, 449-454.	0.9	26
76	Modular control of human walking: Adaptations to altered mechanical demands. Journal of Biomechanics, 2010, 43, 412-419.	0.9	134
77	Pre-swing deficits in forward propulsion, swing initiation and power generation by individual muscles during hemiparetic walking. Journal of Biomechanics, 2010, 43, 2348-2355.	0.9	90
78	Individual muscle contributions to the axial knee joint contact force during normal walking. Journal of Biomechanics, 2010, 43, 2780-2784.	0.9	131
79	The influence of altering push force effectiveness on upper extremity demand during wheelchair propulsion. Journal of Biomechanics, 2010, 43, 2771-2779.	0.9	48
80	Merging of Healthy Motor Modules Predicts Reduced Locomotor Performance and Muscle Coordination Complexity Post-Stroke. Journal of Neurophysiology, 2010, 103, 844-857.	0.9	676
81	Manufacture of Energy Storage and Return Prosthetic Feet Using Selective Laser Sintering. Journal of Biomechanical Engineering, 2010, 132, 015001.	0.6	41
82	The influence of increasing steady-state walking speed on muscle activity in below-knee amputees. Journal of Electromyography and Kinesiology, 2010, 20, 155-161.	0.7	60
83	Leg extension is an important predictor of paretic leg propulsion in hemiparetic walking. Gait and Posture, 2010, 32, 451-456.	0.6	91
84	Foot placement in a body reference frame during walking and its relationship to hemiparetic walking performance. Clinical Biomechanics, 2010, 25, 483-490.	0.5	50
85	Forward Dynamics Simulations Provide Insight Into Muscle Mechanical Work During Human Locomotion. Exercise and Sport Sciences Reviews, 2009, 37, 203-210.	1.6	35
86	The relationships between muscle, external, internal and joint mechanical work during normal walking. Journal of Experimental Biology, 2009, 212, 738-744.	0.8	75
87	Modular Control of Human Walking: A Modeling and Simulation Study. , 2009, , .		0
88	Author's response to comment on â€œContributions of the individual ankle plantar flexors to support, forward progression and swing initiation during walkingâ€•(Neptune et al., 2001) and â€œMuscle mechanical work requirements during normal walking: The energetic cost of raising the body's center-of-mass is significantâ€•(Neptune et al., 2004). Journal of Biomechanics, 2009, 42, 1786-1789.	0.9	7
89	Modular control of human walking: A simulation study. Journal of Biomechanics, 2009, 42, 1282-1287.	0.9	343
90	Variability in spatiotemporal step characteristics and its relationship to walking performance post-stroke. Gait and Posture, 2009, 29, 408-414.	0.6	196

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91	The Influence of Muscle Physiology and Advanced Technology on Sports Performance. Annual Review of Biomedical Engineering, 2009, 11, 81-107.	5.7	40
92	A theoretical analysis of an optimal chainring shape to maximize crank power during isokinetic pedaling. Journal of Biomechanics, 2008, 41, 1494-1502.	0.9	34
93	Can treadmill walking be used to assess propulsion generation?. Journal of Biomechanics, 2008, 41, 1805-1808.	0.9	42
94	Muscle compensatory mechanisms during able-bodied toe walking. Gait and Posture, 2008, 27, 440-446.	0.6	13
95	The effect of walking speed on muscle function and mechanical energetics. Gait and Posture, 2008, 28, 135-143.	0.6	324
96	Compensatory mechanisms in below-knee amputee gait in response to increasing steady-state walking speeds. Gait and Posture, 2008, 28, 602-609.	0.6	154
97	Manufacture of Passive Dynamic Ankleâ€“Foot Orthoses Using Selective Laser Sintering. IEEE Transactions on Biomedical Engineering, 2008, 55, 784-790.	2.5	152
98	Case Report: Variably Compliant Transtibial Prosthetic Socket Fabricated Using Solid Freeform Fabrication. Journal of Prosthetics and Orthotics, 2008, 20, 1-7.	0.2	33
99	Advanced Trans-Tibial Socket Fabrication Using Selective Laser Sintering. Prosthetics and Orthotics International, 2007, 31, 88-100.	0.5	62
100	Relationship Between Step Length Asymmetry and Walking Performance in Subjects With Chronic Hemiparesis. Archives of Physical Medicine and Rehabilitation, 2007, 88, 43-49.	0.5	379
101	Relationships Between Muscle Activity and Anteroposterior Ground Reaction Forces in Hemiparetic Walking. Archives of Physical Medicine and Rehabilitation, 2007, 88, 1127-1135.	0.5	133
102	Compensatory strategies during normal walking in response to muscle weakness and increased hip joint stiffness. Gait and Posture, 2007, 25, 360-367.	0.6	86
103	The neuromuscular demands of toe walking: A forward dynamics simulation analysis. Journal of Biomechanics, 2007, 40, 1293-1300.	0.9	29
104	Mechanical energetic contributions from individual muscles and elastic prosthetic feet during symmetric unilateral transtibial amputee walking: A theoretical study. Journal of Biomechanics, 2007, 40, 1824-1831.	0.9	69
105	Anterior-Posterior Ground Reaction Forces as a Measure of Paretic Leg Contribution in Hemiparetic Walking. Stroke, 2006, 37, 872-876.	1.0	283
106	Muscle mechanical work and elastic energy utilization during walking and running near the preferred gait transition speed. Gait and Posture, 2006, 23, 383-390.	0.6	178
107	Differences in muscle function during walking and running at the same speed. Journal of Biomechanics, 2006, 39, 2005-2013.	0.9	148
108	An Experimental and Theoretical Framework for Manufacturing Prosthetic Sockets for Transtibial Amputees. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2006, 14, 304-310.	2.7	45

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109	Ankle plantar flexor force production is an important determinant of the preferred walk-to-run transition speed. Journal of Experimental Biology, 2005, 208, 799-808.	0.8	168
110	Muscle mechanical work requirements during normal walking: the energetic cost of raising the body's center-of-mass is significant. Journal of Biomechanics, 2004, 37, 817-825.	0.9	140
111	Muscle force redistributes segmental power for body progression during walking. Gait and Posture, 2004, 19, 194-205.	0.6	308
112	Biomechanics and muscle coordination of human walking. Gait and Posture, 2003, 17, 1-17.	0.6	357
113	Biomechanical Determinants of Pedaling Energetics: Internal and External Work Are Not Independent. Exercise and Sport Sciences Reviews, 2002, 30, 159-165.	1.6	63
114	Biomechanics and muscle coordination of human walking. Gait and Posture, 2002, 16, 215-232.	0.6	495
115	Contributions of the individual ankle plantar flexors to support, forward progression and swing initiation during walking. Journal of Biomechanics, 2001, 34, 1387-1398.	0.9	959
116	The effects of ankle compliance and flexibility on ankle sprains. Medicine and Science in Sports and Exercise, 2000, 32, 260.	0.2	33