Alena M Grabowski

List of Publications by Year
in descending order

63 papers	2,339 citations	257357 24 h-index	223716 46 g-index
67 all docs	67 docs citations	67 times ranked	1643 citing authors

#	Article	IF	Citations
1	Sprinting with prosthetic versus biological legs: insight from experimental data. Royal Society Open Science, 2022, 9, 211799.	1.1	10
2	Predicting continuous ground reaction forces from accelerometers during uphill and downhill running: a recurrent neural network solution. PeerJ, 2022, 10, e12752.	0.9	27
3	Running-specific prosthesis model, stiffness and height affect biomechanics and asymmetry of athletes with unilateral leg amputations across speeds. Royal Society Open Science, 2022, 9, .	1.1	2
4	Sacral acceleration can predict whole-body kinetics and stride kinematics across running speeds. PeerJ, 2021, 9, e11199.	0.9	16
5	Low-pass filter cutoff frequency affects sacral-mounted inertial measurement unit estimations of peak vertical ground reaction force and contact time during treadmill running. Journal of Biomechanics, 2021, 119, 110323.	0.9	25
6	Muscle Eccentric Contractions Increase in Downhill and High-Grade Uphill Walking. Frontiers in Bioengineering and Biotechnology, 2020, 8, 573666.	2.0	9
7	Passive-elastic knee-ankle exoskeleton reduces the metabolic cost of walking. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 104.	2.4	29
8	Prosthetic shape, but not stiffness or height, affects the maximum speed of sprinters with bilateral transtibial amputations. PLoS ONE, 2020, 15, e0229035.	1.1	6
9	Prosthetic model, but not stiffness or height, affects maximum running velocity in athletes with unilateral transtibial amputations. Scientific Reports, 2020, 10, 1763.	1.6	8
10	Differences in postural sway among healthy adults are associated with the ability to perform steady contractions with leg muscles. Experimental Brain Research, 2020, 238, 487-497.	0.7	29
11	The metabolic power required to support body weight and accelerate body mass changes during walking on uphill and downhill slopes. Journal of Biomechanics, 2020, 103, 109667.	0.9	3
12	Added lower limb mass does not affect biomechanical asymmetry but increases metabolic power in runners with a unilateral transtibial amputation. European Journal of Applied Physiology, 2020, 120, 1449-1456.	1.2	4
13	Hopping with degressive spring stiffness in a full-leg exoskeleton lowers metabolic cost compared with progressive spring stiffness and hopping without assistance. Journal of Applied Physiology, 2019, 127, 520-530.	1.2	4
14	Vertical stiffness during one-legged hopping with and without using a running-specific prosthesis. Journal of Biomechanics, 2019, 86, 34-39.	0.9	5
15	Long jumpers with and without a transtibial amputation have different three-dimensional centre of mass and joint take-off step kinematics. Royal Society Open Science, 2019, 6, 190107.	1.1	5
16	Three-Dimensional Takeoff Step Kinetics of Long Jumpers with and without a Transtibial Amputation. Medicine and Science in Sports and Exercise, 2019, 51, 716-725.	0.2	11
17	Athletes With Versus Without Leg Amputations: Different Biomechanics, Similar Running Economy. Exercise and Sport Sciences Reviews, 2019, 47, 15-21.	1.6	10
18	Patients with sacroiliac joint dysfunction exhibit altered movement strategies when performing a sit-to-stand task. Spine Journal, 2018, 18, 1434-1440.	0.6	10

#	Article	IF	Citations
19	The biomechanics of the fastest sprinter with a unilateral transtibial amputation. Journal of Applied Physiology, 2018, 124, 641-645.	1.2	10
20	An Overview on Principles for Energy Efficient Robot Locomotion. Frontiers in Robotics and AI, 2018, 5, 129.	2.0	60
21	Individuals with sacroiliac joint dysfunction display asymmetrical gait and a depressed synergy between muscles providing sacroiliac joint force closure when walking. Journal of Electromyography and Kinesiology, 2018, 43, 95-103.	0.7	16
22	The contributions of ankle, knee and hip joint work to individual leg work change during uphill and downhill walking over a range of speeds. Royal Society Open Science, 2018, 5, 180550.	1.1	49
23	Use of a powered ankleâ€“foot prosthesis reduces the metabolic cost of uphill walking and improves leg work symmetry in people with transtibial amputations. Journal of the Royal Society Interface, 2018, 15, 20180442.	1.5	33
24	What determines the metabolic cost of human running across a wide range of velocities?. Journal of Experimental Biology, 2018, 221, .	0.8	56
25	Step time asymmetry increases metabolic energy expenditure during running. European Journal of Applied Physiology, 2018, 118, 2147-2154.	1.2	27
26	Neither total muscle activation nor co-activation explains the youthful walking economy of older runners. Gait and Posture, 2018, 65, 163-168.	0.6	3
27	Does Metabolic Rate Increase Linearly with Running Speed in all Distance Runners?. Sports Medicine International Open, 2018, 02, E1-E8.	0.3	27
28	Axial and torsional stiffness of pediatric prosthetic feet. Clinical Biomechanics, 2017, 42, 47-54.	0.5	7
29	Prosthetic model, but not stiffness or height, affects the metabolic cost of running for athletes with unilateral transtibial amputations. Journal of Applied Physiology, 2017, 123, 38-48.	1.2	25
30	Reduced prosthetic stiffness lowers the metabolic cost of running for athletes with bilateral transtibial amputations. Journal of Applied Physiology, 2017, 122, 976-984.	1.2	25
31	The Functional Roles of Muscles, Passive Prostheses, and Powered Prostheses During Sloped Walking in People With a Transtibial Amputation. Journal of Biomechanical Engineering, 2017, 139, .	0.6	24
32	Individuals with Sacroiliac Joint Dysfunction Display Fewer Muscle Synergies When Walking. Medicine and Science in Sports and Exercise, 2017, 49, 774.	0.2	1
33	Elite long jumpers with below the knee prostheses approach the board slower, but take-off more effectively than non-amputee athletes. Scientific Reports, 2017, 7, 16058.	1.6	33
34	How do prosthetic stiffness, height and running speed affect the biomechanics of athletes with bilateral transtibial amputations?. Journal of the Royal Society Interface, 2017, 14, 20170230.	1.5	27
35	Individual Leg and Joint Work during Sloped Walking for People with a Transtibial Amputation Using Passive and Powered Prostheses. Frontiers in Robotics and AI, 2017, 4, .	2.0	13
36	Is the Metabolic Cost of Running Different for Athletes with Unilateral Versus Bilateral Transtibial Amputations?. Medicine and Science in Sports and Exercise, 2017, 49, 857.	0.2	0

#	Article	IF	Citations
37	Older Runners Retain Youthful Running Economy despite Biomechanical Differences. Medicine and Science in Sports and Exercise, 2016, 48, 697-704.	0.2	22
38	The functional roles of muscles during sloped walking. Journal of Biomechanics, 2016, 49, 3244-3251.	0.9	57
39	Maximum-speed curve-running biomechanics of sprinters with and without unilateral leg amputations. Journal of Experimental Biology, 2016, 219, 851-858.	0.8	26
40	Characterizing the Mechanical Properties of Running-Specific Prostheses. PLoS ONE, 2016, 11, e0168298.	1.1	51
41	The correlation between metabolic and individual leg mechanical power during walking at different slopes and velocities. Journal of Biomechanics, 2015, 48, 2919-2924.	0.9	20
42	Effect of Running Speed and Leg Prostheses on Mediolateral Foot Placement and Its Variability. PLoS ONE, 2015, 10, e0115637.	1.1	13
43	Does Use of a Powered Ankle-foot Prosthesis Restore Whole-body Angular Momentum During Walking at Different Speeds?. Clinical Orthopaedics and Related Research, 2014, 472, 3044-3054.	0.7	31
44	A scoping literature review of the provision of orthoses and prostheses in resource-limited environments 2000â€“2010. Part one. Prosthetics and Orthotics International, 2014, 38, 269-286.	0.5	20
45	A scoping literature review of the provision of orthoses and prostheses in resource-limited environments 2000â€“2010. Part two. Prosthetics and Orthotics International, 2014, 38, 343-362.	0.5	28
46	Optimal Starting Block Configuration in Sprint Running: A Comparison of Biological and Prosthetic Legs. Journal of Applied Biomechanics, 2014, 30, 381-389.	0.3	10
47	Running Improves the Economy of Walking Among Older Adults.. Medicine and Science in Sports and Exercise, 2014, 46, 557.	0.2	0
48	Effects of a powered ankle-foot prosthesis on kinetic loading of the unaffected leg during level-ground walking. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 49.	2.4	92
49	Dynamic stability of running: The effects of speed and leg amputations on the maximal Lyapunov exponent. Chaos, 2013, 23, 043131.	1.0	22
50	Leg stiffness of sprinters using running-specific prostheses. Journal of the Royal Society Interface, 2012, 9, 1975-1982.	1.5	76
51	Bionic ankleâ€“foot prosthesis normalizes walking gait for persons with leg amputation. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 457-464.	1.2	341
52	K3 Promoterâ„¢ Prosthetic Foot Reduces the Metabolic Cost of Walking for Unilateral Transtibial Amputees. Journal of Prosthetics and Orthotics, 2010, 22, 113-120.	0.2	22
53	Point: Artificial limbs do make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1011-1012.	1.2	38
54	Running-specific prostheses limit ground-force during sprinting. Biology Letters, 2010, 6, 201-204.	1.0	86

#	Article	IF	Citations
55	Metabolic and Biomechanical Effects of Velocity and Weight Support Using a Lower-Body Positive Pressure Device During Walking. Archives of Physical Medicine and Rehabilitation, 2010, 91, 951-957.	0.5	70
56	Counterpoint: Artificial legs do not make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1012-1014.	1.2	26
57	Last Word on Point:Counterpoint: Artificial limbs do/do not make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1020-1020.	1.2	3
58	The fastest runner on artificial legs: different limbs, similar function?. Journal of Applied Physiology, 2009, 107, 903-911.	1.2	136
59	Leg exoskeleton reduces the metabolic cost of human hopping. Journal of Applied Physiology, 2009, 107, 670-678.	1.2	101
60	Running with horizontal pulling forces: the benefits of towing. European Journal of Applied Physiology, 2008, 104, 473-479.	1.2	3
61	Effects of Velocity and Weight Support on Ground Reaction Forces and Metabolic Power during Running. Journal of Applied Biomechanics, 2008, 24, 288-297.	0.3	108
62	Effects of independently altering body weight and body mass on the metabolic cost of running. Journal of Experimental Biology, 2007, 210, 4418-4427.	0.8	94
63	Independent metabolic costs of supporting body weight and accelerating body mass during walking. Journal of Applied Physiology, 2005, 98, 579-583.	1.2	190