Jonathan Bates Dingwell

List of Publications by Year in Descending Order

80 papers	5,318 citations	39 h-index	72 g-index
91 ext. papers	6,145 ext. citations	2.9 avg, IF	6.06 L-index

#	Paper	IF	Citations
80	Walking humans trade off different task goals to regulate lateral stepping. *Journal of Biomechanics*, **2021**, 119, 110314	2.9	0
79	How persons with transtibial amputation regulate lateral stepping while walking in laterally destabilizing environments. *Gait and Posture*, **2021**, 83, 88-95	2.6	2
78	Effects of age, physical and self-perceived balance abilities on lateral stepping adjustments during competing lateral balance tasks. *Gait and Posture*, **2021**, 88, 311-317	2.6	1
77	How healthy older adults regulate lateral foot placement while walking in laterally destabilizing environments. *Journal of Biomechanics*, **2020**, 104, 109714	2.9	6
76	Task-level regulation enhances global stability of the simplest dynamic walker. *Journal of the Royal Society Interface*, **2020**, 17, 20200278	4.1	6
75	Cross-Sectional Study Using Virtual Reality to Measure Cognition. *Frontiers in Sports and Active Living*, **2020**, 2, 543676	2.3	1
74	Humans use multi-objective control to regulate lateral foot placement when walking. *PLoS Computational Biology*, **2019**, 15, e1006850	5	12
73	Correlations of pelvis state to foot placement do not imply within-step active control. *Journal of Biomechanics*, **2019**, 97, 109375	2.9	5
72	Healthy individuals are more maneuverable when walking slower while navigating a virtual obstacle course. *Gait and Posture*, **2018**, 61, 466-472	2.6	4
71	Humans control stride-to-stride stepping movements differently for walking and running, independent of speed. *Journal of Biomechanics*, **2018**, 76, 144-151	2.9	11
70	Cognitively Demanding Object Negotiation While Walking and Texting. *Scientific Reports*, **2018**, 8, 17880	4.9	7
69	How humans use visual optic flow to regulate stepping during walking. *Gait and Posture*, **2017**, 57, 15-20	2.6	19
68	Increased gait variability may not imply impaired stride-to-stride control of walking in healthy older adults: Winner: 2013 Gait and Clinical Movement Analysis Society Best Paper Award. *Gait and Posture*, **2017**, 55, 131-137	2.6	33
67	Obstacle Avoidance and Secondary Task Performance During Locomotion. *Journal of Vision*, **2017**, 17, 708	0.4	
66	Use of Perturbation-Based Gait Training in a Virtual Environment to Address Mediolateral Instability in an Individual With Unilateral Transfemoral Amputation. *Physical Therapy*, **2016**, 96, 1896-1904	3.3	10
65	Adaptability of stride-to-stride control of stepping movements in human walking. *Journal of Biomechanics*, **2016**, 49, 229-37	2.9	21
64	Error Correction and the Structure of Inter-Trial Fluctuations in a Redundant Movement Task. *PLoS Computational Biology*, **2016**, 12, e1005118	5	20

63	Differential Changes with Age in Multiscale Entropy of Electromyography Signals from Leg Muscles during Treadmill Walking. *PLoS ONE*, **2016**, 11, e0162034	3.7	19
62	Mediolateral angular momentum changes in persons with amputation during perturbed walking. *Gait and Posture*, **2015**, 41, 795-800	2.6	25
61	Reliability and Minimum Detectable Change of Temporal-Spatial, Kinematic, and Dynamic Stability Measures during Perturbed Gait. *PLoS ONE*, **2015**, 10, e0142083	3.7	15
60	Identifying stride-to-stride control strategies in human treadmill walking. *PLoS ONE*, **2015**, 10, e0124879	3.7	42
59	Dynamic stability of superior vs. inferior body segments in individuals with transtibial amputation walking in destabilizing environments. *Journal of Biomechanics*, **2014**, 47, 3072-9	2.9	13
58	Margins of stability in young adults with traumatic transtibial amputation walking in destabilizing environments. *Journal of Biomechanics*, **2014**, 47, 1138-43	2.9	41
57	Dynamic stability of individuals with transtibial amputation walking in destabilizing environments. *Journal of Biomechanics*, **2014**, 47, 1675-81	2.9	31
56	Dynamic instability during post-stroke hemiparetic walking. *Gait and Posture*, **2014**, 40, 457-63	2.6	65
55	Effects of local and widespread muscle fatigue on movement timing. *Experimental Brain Research*, **2014**, 232, 3939-48	2.3	13
54	The dynamical analysis of inter-trial fluctuations near goal equivalent manifolds. *Advances in Experimental Medicine and Biology*, **2014**, 826, 125-45	3.6	2
53	Movement variability near goal equivalent manifolds: fluctuations, control, and model-based analysis. *Human Movement Science*, **2013**, 32, 899-923	2.4	40
52	Influence of neuromuscular noise and walking speed on fall risk and dynamic stability in a 3D dynamic walking model. *Journal of Biomechanics*, **2013**, 46, 1722-8	2.9	10
51	Frontal plane dynamic margins of stability in individuals with and without transtibial amputation walking on a loose rock surface. *Gait and Posture*, **2013**, 38, 570-5	2.6	57
50	Using dynamic walking models to identify factors that contribute to increased risk of falling in older adults. *Human Movement Science*, **2013**, 32, 984-96	2.4	21
49	Trial-to-trial dynamics and learning in a generalized, redundant reaching task. *Journal of Neurophysiology*, **2013**, 109, 225-37	3.2	26
48	Dynamic margins of stability during human walking in destabilizing environments. *Journal of Biomechanics*, **2012**, 45, 1053-9	2.9	120
47	Amplitude effects of medio-lateral mechanical and visual perturbations on gait. *Journal of Biomechanics*, **2012**, 45, 1979-86	2.9	17
46	Effects of perturbation magnitude on dynamic stability when walking in destabilizing environments. *Journal of Biomechanics*, **2012**, 45, 2084-91	2.9	31

45	Kinematic strategies for walking across a destabilizing rock surface. *Gait and Posture*, **2012**, 35, 36-42	2.6	74
44	Voluntarily changing step length or step width affects dynamic stability of human walking. *Gait and Posture*, **2012**, 35, 472-7	2.6	71
43	Gait characteristics of individuals with transtibial amputations walking on a destabilizing rock surface. *Gait and Posture*, **2012**, 36, 33-9	2.6	49
42	Voluntary changes in step width and step length during human walking affect dynamic margins of stability. *Gait and Posture*, **2012**, 36, 219-24	2.6	91
41	Comparison of walking overground and in a Computer Assisted Rehabilitation Environment (CAREN) in individuals with and without transtibial amputation. *Journal of NeuroEngineering and Rehabilitation*, **2012**, 9, 81	5.3	39
40	Proximal versus distal control of two-joint planar reaching movements in the presence of neuromuscular noise. *Journal of Biomechanical Engineering*, **2012**, 134, 061007	2.1	8
39	The effects of muscle fatigue and movement height on movement stability and variability. *Experimental Brain Research*, **2011**, 209, 525-36	2.3	37
38	Dynamic stability of human walking in visually and mechanically destabilizing environments. *Journal of Biomechanics*, **2011**, 44, 644-9	2.9	116
37	Influence of simulated neuromuscular noise on the dynamic stability and fall risk of a 3D dynamic walking model. *Journal of Biomechanics*, **2011**, 44, 1514-20	2.9	36
36	Nonlinear smooth orthogonal decomposition of kinematic features of sawing reconstructs muscle fatigue evolution as indicated by electromyography. *Journal of Biomechanical Engineering*, **2011**, 133, 031009	2.1	7
35	Do humans optimally exploit redundancy to control step variability in walking?. *PLoS Computational Biology*, **2010**, 6, e1000856	5	133
34	Re-interpreting detrended fluctuation analyses of stride-to-stride variability in human walking. *Gait and Posture*, **2010**, 32, 348-53	2.6	112
33	Muscle fatigue does not lead to increased instability of upper extremity repetitive movements. *Journal of Biomechanics*, **2010**, 43, 913-9	2.9	24
32	Walking variability during continuous pseudo-random oscillations of the support surface and visual field. *Journal of Biomechanics*, **2010**, 43, 1470-5	2.9	129
31	Influence of simulated neuromuscular noise on movement variability and fall risk in a 3D dynamic walking model. *Journal of Biomechanics*, **2010**, 43, 2929-35	2.9	43
30	Dynamical Analysis of Sawing Motion Tracks Muscle Fatigue Evolution **2009**,		1
29	Slow-time changes in human EMG muscle fatigue states are fully represented in movement kinematics. *Journal of Biomechanical Engineering*, **2009**, 131, 021004	2.1	10
28	Dynamics and stability of muscle activations during walking in healthy young and older adults. *Journal of Biomechanics*, **2009**, 42, 2231-7	2.9	70

27	Comparison of different state space definitions for local dynamic stability analyses. *Journal of Biomechanics*, **2009**, 42, 1345-9	2.9	49
26	Dynamic stability of superior vs. inferior segments during walking in young and older adults. *Gait and Posture*, **2009**, 30, 260-3	2.6	81
25	Changes in muscle activity and kinematics of highly trained cyclists during fatigue. *IEEE Transactions on Biomedical Engineering*, **2008**, 55, 2666-74	5	71
24	Separating the effects of age and walking speed on gait variability. *Gait and Posture*, **2008**, 27, 572-7	2.6	284
23	The effects of neuromuscular fatigue on task performance during repetitive goal-directed movements. *Experimental Brain Research*, **2008**, 187, 573-85	2.3	95
22	Effects of an attention demanding task on dynamic stability during treadmill walking. *Journal of NeuroEngineering and Rehabilitation*, **2008**, 5, 12	5.3	48
21	Effects of walking speed, strength and range of motion on gait stability in healthy older adults. *Journal of Biomechanics*, **2008**, 41, 2899-905	2.9	213
20	BOTH HUMAN AND PASSIVE WALKING ARE BOTH LOCALLY UNSTABLE AND ORBITALLY STABLE. *Journal of Biomechanics*, **2007**, 40, S205	2.9	
19	Possible Biomechanical Origins of the Long-Range Correlations in Stride Intervals of Walking. *Physica A: Statistical Mechanics and Its Applications*, **2007**, 380, 259-270	3.3	55
18	A nonlinear approach to tracking slow-time-scale changes in movement kinematics. *Journal of Biomechanics*, **2007**, 40, 1629-34	2.9	11
17	The effects of sensory loss and walking speed on the orbital dynamic stability of human walking. *Journal of Biomechanics*, **2007**, 40, 1723-30	2.9	57
16	Differences between local and orbital dynamic stability during human walking. *Journal of Biomechanical Engineering*, **2007**, 129, 586-93	2.1	133
15	Dynamic stability of passive dynamic walking on an irregular surface. *Journal of Biomechanical Engineering*, **2007**, 129, 802-10	2.1	70
14	Peripheral neuropathy does not alter the fractal dynamics of stride intervals of gait. *Journal of Applied Physiology*, **2007**, 102, 965-71	3.7	56
13	A direct comparison of local dynamic stability during unperturbed standing and walking. *Experimental Brain Research*, **2006**, 172, 35-48	2.3	80
12	Lyapunov Exponents **2006**,		28
11	Intra-session reliability of local dynamic stability of walking. *Gait and Posture*, **2006**, 24, 386-90	2.6	51
10	Kinematic variability and local dynamic stability of upper body motions when walking at different speeds. *Journal of Biomechanics*, **2006**, 39, 444-52	2.9	424

9	Experimentally confirmed mathematical model for human control of a non-rigid object. *Journal of Neurophysiology*, **2004**, 91, 1158-70	3.2	80
8	Manipulating objects with internal degrees of freedom: evidence for model-based control. *Journal of Neurophysiology*, **2002**, 88, 222-35	3.2	73
7	Local dynamic stability versus kinematic variability of continuous overground and treadmill walking. *Journal of Biomechanical Engineering*, **2001**, 123, 27-32	2.1	449
6	Increased variability of continuous overground walking in neuropathic patients is only indirectly related to sensory loss. *Gait and Posture*, **2001**, 14, 1-10	2.6	116
5	Learning to move amid uncertainty. *Journal of Neurophysiology*, **2001**, 86, 971-85	3.2	315
4	Slower speeds in patients with diabetic neuropathy lead to improved local dynamic stability of continuous overground walking. *Journal of Biomechanics*, **2000**, 33, 1269-77	2.9	184
3	Nonlinear time series analysis of normal and pathological human walking. *Chaos*, **2000**, 10, 848-863	3.3	406
2	Neuropathic gait shows only trends towards increased variability of sagittal plane kinematics during treadmill locomotion. *Gait and Posture*, **1999**, 10, 21-9	2.6	71
1	A rehabilitation treadmill with software for providing real-time gait analysis and visual feedback. *Journal of Biomechanical Engineering*, **1996**, 118, 253-5	2.1	21