

# Edwin van Asseldonk

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

107  
papers

3,721  
citations

29  
h-index

60  
g-index

114  
ext. papers

4,507  
ext. citations

3.1  
avg, IF

5.38  
L-index

#	Paper	IF	Citations
107	Benefits and Potential of a Neuromuscular Controller for Exoskeleton-Assisted Walking. <i>Biosystems and Biorobotics</i> , <b>2022</b> , 281-285	0.2	1
106	Ankle-Exoskeleton Control for Assisting in Balance Recovery After Unexpected Disturbances During Walking. <i>Biosystems and Biorobotics</i> , <b>2022</b> , 47-51	0.2	1
105	A Transparent Lower Limb Perturbator to Investigate Joint Impedance During Gait. <i>Biosystems and Biorobotics</i> , <b>2022</b> , 525-529	0.2	
104	Cooperative ankle-exoskeleton control can reduce effort to recover balance after unexpected disturbances during walking.. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2022</b> , 19, 21	5.3	2
103	The Existence of Shared Muscle Synergies Underlying Perturbed and Unperturbed Gait Depends on Walking Speed. <i>Applied Sciences (Switzerland)</i> , <b>2022</b> , 12, 2135	2.6	0
102	Whole Body Center of Mass Feedback in a Reflex-Based Neuromuscular Model Predicts Ankle Strategy During Perturbed Walking. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2021</b> , PP,	4.8	1
101	Symbitron Exoskeleton: Design, Control, and Evaluation of a Modular Exoskeleton for Incomplete and Complete Spinal Cord Injured Individuals. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2021</b> , 29, 330-339	4.8	13
100	Effect of assist-as-needed robotic gait training on the gait pattern post stroke: a randomized controlled trial. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2021</b> , 18, 26	5.3	5
99	Neurophysiological validation of simultaneous intrinsic and reflexive joint impedance estimates. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2021</b> , 18, 36	5.3	0
98	Centre of pressure modulations in double support effectively counteract anteroposterior perturbations during gait. <i>Journal of Biomechanics</i> , <b>2021</b> , 126, 110637	2.9	0
97	Disentangling acceleration-, velocity-, and duration-dependency of the short- and medium-latency stretch reflexes in the ankle plantarflexors. <i>Journal of Neurophysiology</i> , <b>2021</b> , 126, 1015-1029	3.2	0
96	Interfacing With Alpha Motor Neurons in Spinal Cord Injury Patients Receiving Trans-spinal Electrical Stimulation. <i>Frontiers in Neurology</i> , <b>2020</b> , 11, 493	4.1	8
95	Can Momentum-Based Control Predict Human Balance Recovery Strategies?. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2020</b> , 28, 2015-2024	4.8	3
94	Predicting reactive stepping in response to perturbations by using a classification approach. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2020</b> , 17, 84	5.3	
93	A Clustering-Based Approach to Identify Joint Impedance During Walking. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2020</b> , 28, 1808-1816	4.8	5
92	Assessing the Involvement of Users During Development of Lower Limb Wearable Robotic Exoskeletons: A Survey Study. <i>Human Factors</i> , <b>2020</b> , 62, 351-364	3.8	22
91	Automatic versus manual tuning of robot-assisted gait training in people with neurological disorders. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2020</b> , 17, 9	5.3	9

90	Neuromuscular Controller Embedded in a Powered Ankle Exoskeleton: Effects on Gait, Clinical Features and Subjective Perspective of Incomplete Spinal Cord Injured Subjects. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2020</b> , 28, 1157-1167	4.8	16
89	Effectiveness of rehabilitation interventions to improve paretic propulsion in individuals with stroke - A systematic review. <i>Clinical Biomechanics</i> , <b>2020</b> , 71, 176-188	2.2	5
88	Effects of selectively assisting impaired subtasks of walking in chronic stroke survivors. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2020</b> , 17, 143	5.3	0
87	Haptic human-human interaction does not improve individual visuomotor adaptation. <i>Scientific Reports</i> , <b>2020</b> , 10, 19902	4.9	3
86	Gait training with Achilles ankle exoskeleton in chronic incomplete spinal cord injury subjects. <i>Journal of Biological Regulators and Homeostatic Agents</i> , <b>2020</b> , 34, 147-164. Technology in Medicine	0.7	2
85	Bio-Inspired Balance Control Assistance Can Reduce Metabolic Energy Consumption in Human Walking. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2019</b> , 27, 1760-1769	4.8	9
84	Ankle muscle responses during perturbed walking with blocked ankle joints. <i>Journal of Neurophysiology</i> , <b>2019</b> , 121, 1711-1717	3.2	4
83	Immediate after-effects of robot-assisted gait with pelvic support or pelvic constraint on overground walking in healthy subjects. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2019</b> , 16, 40	5.3	2
82	Differences in chunking behavior between young and older adults diminish with extended practice. <i>Psychological Research</i> , <b>2019</b> , 83, 275-285	2.5	4
81	Are Ankle Muscle Responses in Balance Recovery Hard-Wired?. <i>Biosystems and Biorobotics</i> , <b>2019</b> , 287-290.	0.2	
80	Modeling Trans-Spinal Direct Current Stimulation in the Presence of Spinal Implants. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2019</b> , 27, 790-797	4.8	1
79	Mechanics of very slow human walking. <i>Scientific Reports</i> , <b>2019</b> , 9, 18079	4.9	19
78	. <i>IEEE Robotics and Automation Letters</i> , <b>2019</b> , 4, 414-421	4.2	12
77	Reduced center of pressure modulation elicits foot placement adjustments, but no additional trunk motion during anteroposterior-perturbed walking. <i>Journal of Biomechanics</i> , <b>2018</b> , 68, 93-98	2.9	15
76	Changes in H-Reflex Recruitment After Trans-Spinal Direct Current Stimulation With Multiple Electrode Configurations. <i>Frontiers in Neuroscience</i> , <b>2018</b> , 12, 151	5.1	9
75	Effects of a powered ankle-foot orthosis on perturbed standing balance. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2018</b> , 15, 50	5.3	25
74	Foot Placement Modulation Diminishes for Perturbations Near Foot Contact. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2018</b> , 6, 48	5.8	11
73	Haptic Human-Human Interaction Through a Compliant Connection Does Not Improve Motor Learning in a Force Field. <i>Lecture Notes in Computer Science</i> , <b>2018</b> , 333-344	0.9	7

72	Validation of Online Intrinsic and Reflexive Joint Impedance Estimates Using Correlation with EMG Measurements <b>2018</b> ,		1
71	Questionnaire results of user experiences with wearable exoskeletons and their preferences for sensory feedback. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2018</b> , 15, 112	5.3	7
70	Improving the Standing Balance of Paraplegics through the Use of a Wearable Exoskeleton <b>2018</b> ,		10
69	Lower extremity joint-level responses to pelvis perturbation during human walking. <i>Scientific Reports</i> , <b>2018</b> , 8, 14621	4.9	23
68	Modeling trans-spinal direct current stimulation for the modulation of the lumbar spinal motor pathways. <i>Journal of Neural Engineering</i> , <b>2017</b> , 14, 056014	5	23
67	Robot-supported assessment of balance in standing and walking. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2017</b> , 14, 80	5.3	24
66	Template model inspired leg force feedback based control can assist human walking. <i>IEEE International Conference on Rehabilitation Robotics</i> , <b>2017</b> , 2017, 473-478	1.3	17
65	Improving the Standing Balance of People with Spinal Cord Injury Through the Use of a Powered Ankle-Foot Orthosis. <i>Biosystems and Biorobotics</i> , <b>2017</b> , 415-419	0.2	1
64	Joint-Level Responses to Counteract Perturbations Scale with Perturbation Magnitude and Direction. <i>Biosystems and Biorobotics</i> , <b>2017</b> , 139-142	0.2	
63	A Versatile Neuromuscular Exoskeleton Controller for Gait Assistance: A Preliminary Study on Spinal Cord Injury Patients. <i>Biosystems and Biorobotics</i> , <b>2017</b> , 163-167	0.2	2
62	Towards Exoskeletons with Balance Capacities. <i>Biosystems and Biorobotics</i> , <b>2017</b> , 175-179	0.2	1
61	Paretic versus non-paretic stepping responses following pelvis perturbations in walking chronic-stage stroke survivors. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2017</b> , 14, 106	5.3	8
60	Vibrotactile feedback to control the amount of weight shift during walking - A first step towards better control of an exoskeleton for spinal cord injury subjects. <i>IEEE International Conference on Rehabilitation Robotics</i> , <b>2017</b> , 2017, 1482-1487	1.3	2
59	An Adaptive Neuromuscular Controller for Assistive Lower-Limb Exoskeletons: A Preliminary Study on Subjects with Spinal Cord Injury. <i>Frontiers in Neurorobotics</i> , <b>2017</b> , 11, 30	3.4	34
58	Transcranial Direct Current Stimulation of the Leg Motor Cortex Enhances Coordinated Motor Output During Walking With a Large Inter-Individual Variability. <i>Brain Stimulation</i> , <b>2016</b> , 9, 182-90	5.1	31
57	Effects of a neuromuscular controller on a powered ankle exoskeleton during human walking <b>2016</b> ,		15
56	Center of mass velocity-based predictions in balance recovery following pelvis perturbations during human walking. <i>Journal of Experimental Biology</i> , <b>2016</b> , 219, 1514-23	3	70
55	LOPES II--Design and Evaluation of an Admittance Controlled Gait Training Robot With Shadow-Leg Approach. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2016</b> , 24, 352-63	4.8	83

54	Analysis of Balance during Functional Walking in Stroke Survivors. <i>PLoS ONE</i> , <b>2016</b> , 11, e0166789	3.7	23
53	Robot-Aided Gait Training with LOPES <b>2016</b> , 461-481		3
52	Similar Representations of Sequence Knowledge in Young and Older Adults: A Study of Effector Independent Transfer. <i>Frontiers in Psychology</i> , <b>2016</b> , 7, 1125	3.4	12
51	Robot-aided assessment of lower extremity functions: a review. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2016</b> , 13, 72	5.3	52
50	. <i>IEEE Transactions on Robotics</i> , <b>2016</b> , 32, 920-932	6.5	18
49	LIMPACT:A Hydraulically Powered Self-Aligning Upper Limb Exoskeleton. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2015</b> , 20, 2285-2298	5.5	83
48	Design and control of the MINDWALKER exoskeleton. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2015</b> , 23, 277-86	4.8	196
47	Spinal plasticity in robot-mediated therapy for the lower limbs. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2015</b> , 12, 81	5.3	6
46	Speed-dependent reference joint trajectory generation for robotic gait support. <i>Journal of Biomechanics</i> , <b>2014</b> , 47, 1447-58	2.9	46
45	The effect of impedance-controlled robotic gait training on walking ability and quality in individuals with chronic incomplete spinal cord injury: an explorative study. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2014</b> , 11, 26	5.3	58
44	Advances in Robotic Gait Training. <i>Biosystems and Biorobotics</i> , <b>2014</b> , 187-190	0.2	
43	Reliability and agreement of intramuscular coherence in tibialis anterior muscle. <i>PLoS ONE</i> , <b>2014</b> , 9, e88428	3.7	25
42	EMG patterns during assisted walking in the exoskeleton. <i>Frontiers in Human Neuroscience</i> , <b>2014</b> , 8, 423	3.3	74
41	Subcortical structures in humans can be facilitated by transcranial direct current stimulation. <i>PLoS ONE</i> , <b>2014</b> , 9, e107731	3.7	36
40	The effect of directional inertias added to pelvis and ankle on gait. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2013</b> , 10, 40	5.3	25
39	Selective control of gait subtasks in robotic gait training: foot clearance support in stroke survivors with a powered exoskeleton. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2013</b> , 10, 3	5.3	34
38	Lateral balance control for robotic gait training. <i>IEEE International Conference on Rehabilitation Robotics</i> , <b>2013</b> , 2013, 6650363	1.3	5
37	Novel actuation design of a gait trainer with shadow leg approach. <i>IEEE International Conference on Rehabilitation Robotics</i> , <b>2013</b> , 2013, 6650369	1.3	7

36	Improving the transparency of a rehabilitation robot by exploiting the cyclic behaviour of walking. <i>IEEE International Conference on Rehabilitation Robotics, 2013, 2013, 6650393</i>	1.3	19
35	Actively controlled lateral gait assistance in a lower limb exoskeleton <b>2013,</b>		19
34	Effectiveness of the Lower Extremity Powered ExoSkeleton (LOPES) Robotic Gait Trainer on Ability and Quality of Walking in SCI Patients. <i>Biosystems and Biorobotics, 2013, 161-165</i>	0.2	3
33	Pilot Study on Following and Resisting Forces on the Pelvis. <i>Biosystems and Biorobotics, 2013, 147-152</i>	0.2	1
32	Use of inertial sensors for ambulatory assessment of center-of-mass displacements during walking. <i>IEEE Transactions on Biomedical Engineering, 2012, 59, 2080-4</i>	5	60
31	Dynamic Balance Control (DBC) in lower leg amputee subjects; contribution of the regulatory activity of the prosthesis side. <i>Clinical Biomechanics, 2012, 27, 40-5</i>	2.2	50
30	PS21 - 101. One week of treatment with an IL-1 receptor antagonist improves insulin sensitivity in patients with type 1 diabetes mellitus: results from a clinical trial. <i>Nederlands Tijdschrift Voor Diabetologie, 2012, 10, 170-171</i>	0	
29	Robot-Aided Gait Training with LOPES <b>2012, 379-396</b>		9
28	Oscillator-based assistance of cyclical movements: model-based and model-free approaches. <i>Medical and Biological Engineering and Computing, 2011, 49, 1173-85</i>	3.1	125
27	Influence of reaching direction on visuomotor adaptation: an explorative study. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975374</i>	1.3	0
26	Model Predictive Control-based gait pattern generation for wearable exoskeletons. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975442</i>	1.3	9
25	Velocity-dependent reference trajectory generation for the LOPES gait training robot. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975414</i>	1.3	6
24	Oscillator-based walking assistance: a model-free approach. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975352</i>	1.3	30
23	Rendering potential wearable robot designs with the LOPES gait trainer. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975448</i>	1.3	4
22	Position and torque tracking: series elastic actuation versus model-based-controlled hydraulic actuation. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975456</i>	1.3	2
21	Effect of added inertia on the pelvis on gait. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975493</i>	1.3	7
20	Locomotor adaptation and retention to gradual and sudden dynamic perturbations. <i>IEEE International Conference on Rehabilitation Robotics, 2011, 2011, 5975379</i>	1.3	7
19	In vivo measurement of human knee and hip dynamics using MIMO system identification. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2010, 2010, 3426-9</i>	0.9	7

18	Nature, timing, frequency and type of augmented feedback; does it influence motor relearning of the hemiparetic arm after stroke? A systematic review. <i>Disability and Rehabilitation</i> , <b>2010</b> , 32, 1799-809	2.4	71
17	Ambulatory estimation of foot placement during walking using inertial sensors. <i>Journal of Biomechanics</i> , <b>2010</b> , 43, 3138-43	2.9	67
16	Influence of haptic guidance in learning a novel visuomotor task. <i>Journal of Physiology (Paris)</i> , <b>2009</b> , 103, 276-85		46
15	Reference trajectory generation for rehabilitation robots: complementary limb motion estimation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2009</b> , 17, 23-30	4.8	141
14	Ambulatory estimation of center of mass displacement during walking. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2009</b> , 56, 1189-95	5	96
13	Ankle-foot orthoses in stroke: effects on functional balance, weight-bearing asymmetry and the contribution of each lower limb to balance control. <i>Clinical Biomechanics</i> , <b>2009</b> , 24, 769-75	2.2	60
12	Selective and adaptive robotic support of foot clearance for training stroke survivors with stiff knee gait <b>2009</b> ,		8
11	Compliant actuation of rehabilitation robots. <i>IEEE Robotics and Automation Magazine</i> , <b>2008</b> , 15, 60-69	3.4	300
10	The Effects on Kinematics and Muscle Activity of Walking in a Robotic Gait Trainer During Zero-Force Control. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2008</b> , 16, 360-370	4.8	92
9	Fixating the pelvis in the horizontal plane affects gait characteristics. <i>Gait and Posture</i> , <b>2008</b> , 28, 157-63	2.6	55
8	Design and evaluation of the LOPES exoskeleton robot for interactive gait rehabilitation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2007</b> , 15, 379-86	4.8	865
7	Use of induced acceleration to quantify the (de)stabilization effect of external and internal forces on postural responses. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2007</b> , 54, 2284-95	5	10
6	Detecting asymmetries in balance control with system identification: first experimental results from Parkinson patients. <i>Journal of Neural Transmission</i> , <b>2007</b> , 114, 1333-7	4.3	29
5	Evaluation of the effect on walking of balance-related degrees of freedom in a robotic gait training device <b>2007</b> ,		9
4	Disentangling the contribution of the paretic and non-paretic ankle to balance control in stroke patients. <i>Experimental Neurology</i> , <b>2006</b> , 201, 441-51	5.7	73
3	Comparison of different methods to identify and quantify balance control. <i>Journal of Neuroscience Methods</i> , <b>2005</b> , 145, 175-203	3	150
2	Decreased movement speed in girls with turner syndrome: a problem in motor planning or muscle initiation?. <i>Journal of Clinical and Experimental Neuropsychology</i> , <b>2004</b> , 26, 795-816	2.1	10
1	Slow motor performance in girls with Turner Syndrome is not related to increased neuromotor noise. <i>Motor Control</i> , <b>2003</b> , 7, 111-33	1.3	11

