

# Rezaul K Begg

## List of Publications by Year in descending order

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Version: 2024-02-01

142  
papers

4,367  
citations

168829

31  
h-index

134545

62  
g-index

147  
all docs

147  
docs citations

147  
times ranked

4490  
citing authors

#	ARTICLE	IF	CITATIONS
1	Exoskeleton Application to Military Manual Handling Tasks. <i>Human Factors</i> , 2022, 64, 527-554.	2.1	35
2	Biomechanical Correlates of Falls Risk in Gait Impaired Stroke Survivors. <i>Frontiers in Physiology</i> , 2022, 13, 833417.	1.3	2
3	Application of Wearable Sensors in Actuation and Control of Powered Ankle Exoskeletons: A Comprehensive Review. <i>Sensors</i> , 2022, 22, 2244.	2.1	6
4	Exercise and the elderly: Gait and balance. , 2022, , 423-435.		0
5	Feasibility of Pilates for Late-Stage Frail Older Adults to Minimize Falls and Enhance Cognitive Functions. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 6716.	1.3	1
6	A cross-sectional study of foot-ground clearance in healthy community dwelling Japanese cohorts aged 50, 60 and 70 years. <i>BMC Geriatrics</i> , 2021, 21, 166.	1.1	3
7	A shoe-insole to improve ankle joint mechanics for injury prevention among older adults. <i>Ergonomics</i> , 2021, 64, 1271-1280.	1.1	8
8	Prediction of gait trajectories based on the Long Short Term Memory neural networks. <i>PLoS ONE</i> , 2021, 16, e0255597.	1.1	17
9	State-of-the-Art Wearable Sensors and Possibilities for Radar in Fall Prevention. <i>Sensors</i> , 2021, 21, 6836.	2.1	9
10	Developments in Smart Multi-Function Gait Assistive Devices for the Prevention and Treatment of Knee Osteoarthritis—A Literature Review. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 10947.	1.3	3
11	Measures of Bipedal Toe-Ground Clearance Asymmetry to Characterize Gait in Stroke Survivors. , 2021, 2021, 6015-6018.		0
12	Ageing-Related Gait Adaptations to Knee Joint Kinetics: Implications for the Development of Knee Osteoarthritis. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 8881.	1.3	6
13	Feasibility of Using Foot—Ground Clearance Biofeedback Training in Treadmill Walking for Post-Stroke Gait Rehabilitation. <i>Brain Sciences</i> , 2020, 10, 978.	1.1	14
14	Lower Limb Kinematics Trajectory Prediction Using Long Short-Term Memory Neural Networks. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 362.	2.0	35
15	Age effects on step adaptation during treadmill walking with continuous step length biofeedback. <i>Gait and Posture</i> , 2020, 80, 174-177.	0.6	5
16	The Use of Wearable Assistive Technology to Increase Soldiers—™ Effectiveness. <i>Human Factors and Mechanical Engineering for Defense and Safety</i> , 2020, 4, 1.	2.4	5
17	Effects of Visually Augmented Gait Training on Foot-Ground Clearance: An Intervention to Reduce Tripping-Related Falls. <i>Journal of Applied Biomechanics</i> , 2020, 36, 20-26.	0.3	1
18	Overview of Computational Intelligence (CI) Techniques for Powered Exoskeletons. <i>Studies in Computational Intelligence</i> , 2019, , 353-383.	0.7	8

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19	Real-time foot clearance biofeedback to assist gait rehabilitation following stroke: a randomized controlled trial protocol. <i>Trials</i> , 2019, 20, 317.	0.7	15
20	Obstacle detection with MIMO 60 GHz radar for fall prevention. , 2019, , .		1
21	General Mental Health Is Associated with Gait Asymmetry. <i>Sensors</i> , 2019, 19, 4908.	2.1	7
22	Stepping strategy used to recover balance during an induced fall is associated with impaired function and strength in people with knee osteoarthritis. <i>International Journal of Rheumatic Diseases</i> , 2018, 21, 1763-1771.	0.9	4
23	Consensus paper on testing and evaluation of military exoskeletons for the dismounted combatant. <i>Journal of Science and Medicine in Sport</i> , 2018, 21, 1154-1161.	0.6	29
24	Shoe-Insole Technology for Injury Prevention in Walking. <i>Sensors</i> , 2018, 18, 1468.	2.1	39
25	Non-MTC gait cycles: An adaptive toe trajectory control strategy in older adults. <i>Gait and Posture</i> , 2017, 53, 73-79.	0.6	12
26	The effect of vitamin D status on pain, lower limb strength and knee function during balance recovery in people with knee osteoarthritis: an exploratory study. <i>Archives of Osteoporosis</i> , 2017, 12, 83.	1.0	10
27	Effects of wide step walking on swing phase hip muscle forces and spatio-temporal gait parameters. , 2017, 2017, 954-957.		1
28	Reply to Miller et al. (2016). <i>Knee</i> , 2017, 24, 1258-1259.	0.8	0
29	Tone Entropy Analysis of Augmented Information Effects on Toe-Ground Clearance When Walking. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2016, 24, 1218-1224.	2.7	1
30	Effects of Prophylactic Knee Bracing on Lower Limb Kinematics, Kinetics, and Energetics During Double-Leg Drop Landing at 2 Heights. <i>American Journal of Sports Medicine</i> , 2016, 44, 1753-1761.	1.9	15
31	Biomechanical balance response during induced falls under dual task conditions in people with knee osteoarthritis. <i>Gait and Posture</i> , 2016, 48, 106-112.	0.6	30
32	Fuzzy-Genetic Model for the Identification of Falls Risk Gait. <i>Procedia Computer Science</i> , 2016, 82, 4-11.	1.2	2
33	Prophylactic knee bracing alters lower-limb muscle forces during a double-leg drop landing. <i>Journal of Biomechanics</i> , 2016, 49, 3347-3354.	0.9	20
34	A Multiple Regression Approach to Normalization of Spatiotemporal Gait Features. <i>Journal of Applied Biomechanics</i> , 2016, 32, 128-139.	0.3	12
35	A multiple regression normalization approach to evaluation of gait in total knee arthroplasty patients. <i>Clinical Biomechanics</i> , 2016, 32, 92-101.	0.5	7
36	Can textured insoles improve ankle proprioception and performance in dancers?. <i>Journal of Sports Sciences</i> , 2016, 34, 1430-1437.	1.0	19

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37	A real time biofeedback using Kinect and Wii to improve gait for post-total knee replacement rehabilitation: a case study report. Disability and Rehabilitation: Assistive Technology, 2016, 11, 251-262.	1.3	26
38	Minimum toe clearance events in divided attention treadmill walking in older and young adults: a cross-sectional study. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 58.	2.4	24
39	Identification of Foot Pathologies Based on Plantar Pressure Asymmetry. Sensors, 2015, 15, 20392-20408.	2.1	96
40	The effects of an ankle foot orthosis on cerebral palsy gait: A multiple regression analysis. , 2015, 2015, 5509-12.		2
41	Can toe-ground footwear margin alter swing-foot ground clearance?. Gait and Posture, 2015, 42, 214-217.	0.6	4
42	A machine learning approach to estimate Minimum Toe Clearance using Inertial Measurement Units. Journal of Biomechanics, 2015, 48, 4309-4316.	0.9	23
43	A simple and inexpensive enteric-coated capsule for delivery of acid-labile macromolecules to the small intestine. Journal of Zhejiang University: Science B, 2015, 16, 586-592.	1.3	16
44	Modelling knee flexion effects on joint power absorption and adduction moment. Knee, 2015, 22, 490-493.	0.8	11
45	Contribution of lower limb eccentric work and different step responses to balance recovery among older adults. Gait and Posture, 2015, 42, 257-262.	0.6	24
46	Classification of Parkinson's Disease Gait Using Spatial-Temporal Gait Features. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 1794-1802.	3.9	163
47	Support Vector Machines for Young and Older Gait Classification using Inertial Sensor Kinematics at Minimum Toe Clearance. , 2015, , .		2
48	Computational Intelligence in Detecting Abnormal Pressure in the Diabetic Foot. , 2015, , 5523-5533.		0
49	Inertial Measurement Units in Gait and Sport Motion Analysis. , 2015, , 6892-6904.		1
50	Gait training with real-time augmented toe-ground clearance information decreases tripping risk in older adults and a person with chronic stroke. Frontiers in Human Neuroscience, 2014, 8, 243.	1.0	45
51	Effects of walking-induced fatigue on gait function and tripping risks in older adults. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 155.	2.4	58
52	Automated classification of plantar pressure asymmetry during pathological gait using artificial neural network. , 2014, , .		4
53	Understanding ageing effects using complexity analysis of footâ€“ground clearance during walking. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 554-564.	0.9	12
54	Biofeedback Training Effects on Minimum Toe Clearance Variability During Treadmill Walking. Annals of Biomedical Engineering, 2013, 41, 1661-1669.	1.3	16

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55	The effect of walking surface on upper limb dynamics measured using inertial sensors. , 2013, , .		0
56	Autonomous detection of different walking tasks using end point foot trajectory vertical displacement data. , 2013, , .		1
57	A performance analysis of a wireless body-area network monitoring system for professional cycling. Personal and Ubiquitous Computing, 2013, 17, 197-209.	1.9	37
58	Comments and Reply to: Foot Plantar Pressure Measurement System: A Review. Sensors 2012, 12, 9884-9912. Sensors, 2013, 13, 3527-3529.	2.1	1
59	Ultrasonic and Infrared Sensors Performance in a Wireless Obstacle Detection System. , 2013, , .		42
60	Asymmetry detection during pathological gait using a plantar pressure sensing system. , 2013, , .		4
61	Wearable textile sensor sock for gait analysis. , 2013, , .		15
62	Biomechanical characteristics of slipping during unconstrained walking, turning, gait initiation and termination. Ergonomics, 2013, 56, 1038-1048.	1.1	23
63	A Comparison of Treadmill and Overground Walking Effects on Step Cycle Asymmetry in Young and Older Individuals. Journal of Applied Biomechanics, 2013, 29, 188-193.	0.3	55
64	Foot Plantar Pressure Measurement System: A Review. Sensors, 2012, 12, 9884-9912.	2.1	585
65	Real-time biofeedback of gait parameters using infrared position sensors. , 2012, , .		5
66	Automatic detection of different walking conditions using inertial sensor data. , 2012, , .		7
67	Swing limb mechanics and minimum toe clearance in people with knee osteoarthritis. Gait and Posture, 2012, 35, 277-281.	0.6	29
68	Prediction of foot clearance parameters as a precursor to forecasting the risk of tripping and falling. Human Movement Science, 2012, 31, 271-283.	0.6	43
69	Regression models for estimating gait parameters using inertial sensors. , 2011, , .		10
70	Ageing and limb dominance effects on foot-ground clearance during treadmill and overground walking. Clinical Biomechanics, 2011, 26, 962-968.	0.5	75
71	Estimation of end point foot clearance points from inertial sensor data. , 2011, 2011, 6503-6.		8
72	Body area wireless sensor networks for the analysis of cycling performance. , 2010, , .		4

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73	Breast-Cancer identification using HMM-fuzzy approach. Computers in Biology and Medicine, 2010, 40, 240-251.	3.9	29
74	Toe clearance and velocity profiles of young and elderly during walking on sloped surfaces. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 18.	2.4	24
75	GK BASED FUZZY CLUSTERING FOR THE DIAGNOSIS OF CARDIAC ARRHYTHMIA. International Journal of Computational Intelligence and Applications, 2010, 09, 105-123.	0.6	2
76	A systematic review of the effect of ageing and falls history on minimum foot clearance characteristics during level walking. Gait and Posture, 2010, 32, 429-435.	0.6	198
77	Silicon implementation of micro pressure sensor. , 2010, , .		1
78	Correlations between end point foot trajectories and inertial sensor data. , 2010, , .		4
79	Computational Intelligence in Gait Research: A Perspective on Current Applications and Future Challenges. IEEE Transactions on Information Technology in Biomedicine, 2009, 13, 687-702.	3.6	112
80	Automatic Recognition of Gait Patterns Exhibiting Patellofemoral Pain Syndrome Using a Support Vector Machine Approach. IEEE Transactions on Information Technology in Biomedicine, 2009, 13, 810-817.	3.6	53
81	Gait classification in children with cerebral palsy by Bayesian approach. Pattern Recognition, 2009, 42, 581-586.	5.1	39
82	The application of support vector machines for detecting recovery from knee replacement surgery using spatio-temporal gait parameters. Gait and Posture, 2009, 29, 91-96.	0.6	40
83	Comparison and silicon realization of custom designed MEMS biomedical pressure sensors. , 2009, , .		6
84	K-Means Clustering on 3 <sup>rd</sup> order polynomial based normalization of Acute Myeloid Leukemia (AML) and Acute Lymphocyte Leukemia (ALL). , 2009, , .		1
85	A study on band-pass filtering for calculating foot displacements from accelerometer and gyroscope sensors. , 2009, 2009, 4824, 4826-7.		6
86	Machine Learning for Designing an Automated Medical Diagnostic System. , 2009, , 544-559.		0
87	Detection of tripping gait patterns in the elderly using autoregressive features and support vector machines. Journal of Biomechanics, 2008, 41, 1762-1772.	0.9	33
88	A comparative study on approximate entropy measure and poincaré plot indexes of minimum foot clearance variability in the elderly during walking. Journal of NeuroEngineering and Rehabilitation, 2008, 5, 4.	2.4	60
89	A method for calculating the probability of tripping while walking. Journal of Biomechanics, 2008, 41, 1147-1151.	0.9	53
90	Investigating Scale Invariant Dynamics in Minimum Toe Clearance Variability of the Young and Elderly During Treadmill Walking. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 380-389.	2.7	58

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91	Measuring toe clearance using a wireless inertial sensing device. , 2008, , .		22
92	Variability in the foot-ground clearance and step timing of young and older men during single-task and dual-task treadmill walking. Gait and Posture, 2008, 28, 563-567.	0.6	32
93	Frequency analysis of inertial sensor data for measuring toe clearance. , 2008, , .		6
94	Fourier analysis of tibia acceleration in subjects with knee osteoarthritis: Preliminary results. , 2008, , .		3
95	Sensitivity optimization of a foot plantar pressure micro-sensor. , 2008, , .		5
96	Design of MEMS biomedical pressure sensor for gait analysis. , 2008, , .		10
97	Micro-sensor for foot pressure measurement. , 2008, , .		5
98	Detecting trunk motion changes due to pregnancy using pattern recognition techniques. , 2008, 2008, 2405-8.		6
99	SVM MODELS FOR DIAGNOSING BALANCE PROBLEMS USING STATISTICAL FEATURES OF THE MTC SIGNAL. International Journal of Computational Intelligence and Applications, 2008, 07, 317-331.	0.6	10
100	Detecting Idiopathic toe-walking gait pattern from normal gait pattern using heel accelerometry data and Support Vector Machines. , 2008, 2008, 4920-3.		11
101	Cardio-locomotor entrainment during walking in young healthy people. A preliminary study. , 2008, , .		2
102	Understanding Ageing Effects by Approximate Entropy Analysis of gait variability. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1965-8.	0.5	26
103	Analysis of foot-to-ground clearance measurement techniques for MEMS realization. , 2007, , .		4
104	Wavelet-Based Multiscale Analysis of Minimum Toe Clearance Variability in the Young and Elderly during Walking. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1558-61.	0.5	2
105	Gait Classificaiton in Children with Cerebral Palsy by Bayesian Approach. , 2007, , .		0
106	Identification of patellofemoral pain syndrome using a Support Vector Machine approach. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 3144-7.	0.5	8
107	Support Vector Machines for detecting recovery from knee replacement surgery using quantitative gait measures. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4875-8.	0.5	15
108	The application of multiclass SVM to the detection of knee pathologies using kinetic data: a preliminary study. , 2007, , .		4

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109	Regulation of Minimum Toe Clearance Variability in the Young and Elderly during Walking on Sloped Surfaces. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4887-90.	0.5	5
110	Minimum foot clearance during walking: Strategies for the minimisation of trip-related falls. Gait and Posture, 2007, 25, 191-198.	0.6	234
111	Stepping responses made by elderly and young female adults to approach and accommodate known surface height changes. Gait and Posture, 2007, 26, 82-89.	0.6	37
112	A hybrid Support Vector Machine and autoregressive model for detecting gait disorders in the elderly. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	8
113	Wavelet-Based Feature Extraction for Support Vector Machines for Screening Balance Impairments in the Elderly. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2007, 15, 587-597.	2.7	95
114	Support Vector Machines and Other Pattern Recognition Approaches to the Diagnosis of Cerebral Palsy Gait. IEEE Transactions on Biomedical Engineering, 2006, 53, 2479-2490.	2.5	121
115	Ageing effects on knee and ankle joint angles at key events and phases of the gait cycle. Journal of Medical Engineering and Technology, 2006, 30, 382-389.	0.8	55
116	Ageing Effects on Visual Reaction Time in a Single Task Condition and When Treadmill Walking. Motor Control, 2006, 10, 201-211.	0.3	24
117	Neural networks for detection and classification of walking pattern changes due to ageing. Australasian Physical and Engineering Sciences in Medicine, 2006, 29, 188-195.	1.4	28
118	Estimating Falls Risk in the Elderly: A Wavelet Based Multiscale Analysis. , 2006, , .		2
119	HMM-Fuzzy Model for Recognition of Gait Changes due to Trip-related Falls. , 2006, 2006, 1216-9.		1
120	Neural network-based prediction of missing key features in vertical GRF time recordings. Journal of Medical Engineering and Technology, 2006, 30, 315-322.	0.8	1
121	Artificial Neural Networks in Smart Homes. Lecture Notes in Computer Science, 2006, , 146-164.	1.0	26
122	A Wavelet-Based Approach for Screening Falls Risk in the Elderly using Support Vector Machines. , 2006, , .		2
123	Limitations and Applications of ICA for Surface Electromyogram. , 2006, 2006, 5739-42.		6
124	Overview of Movement Analysis and Gait Features. Computational Intelligence and Its Applications Series, 2006, , 1-69.	0.2	30
125	Computational Intelligence Techniques. Computational Intelligence and Its Applications Series, 2006, , 139-171.	0.2	0
126	Recognition of Gait Patterns Using Support Vector Machines. Computational Intelligence and Its Applications Series, 2006, , 243-262.	0.2	2



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127	Modeling and Prediction of Foreign Currency Exchange Markets. , 2006, , 139-151.		0
128	A machine learning approach for automated recognition of movement patterns using basic, kinetic and kinematic gait data. Journal of Biomechanics, 2005, 38, 401-408.	0.9	263
129	Support Vector Machines for Automated Gait Classification. IEEE Transactions on Biomedical Engineering, 2005, 52, 828-838.	2.5	314
130	Fuzzy Logic-based Recognition of Gait Changes due to Trip-related Falls. , 2005, 2005, 4970-3.		9
131	Gene Selection and Classification of Human Lymphoma from Microarray Data. Lecture Notes in Computer Science, 2005, , 379-390.	1.0	0
132	A method for the reconstruction of ground reaction force-time characteristics during gait from force platform recordings of simultaneous foot falls. IEEE Transactions on Biomedical Engineering, 2000, 47, 547-551.	2.5	14
133	Gait Characteristics of Young and Older Individuals Negotiating a Raised Surface: Implications for the Prevention of Falls. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2000, 55, M147-M154.	1.7	77
134	Time-domain analysis of footâ€‘ground reaction forces in negotiating obstacles. Gait and Posture, 1998, 7, 99-109.	0.6	62
135	Characteristics of gait in stepping over obstacles. Human Movement Science, 1996, 15, 605-622.	0.6	85
136	Microcomputer-based system for clinical gait studies. Clinical Biomechanics, 1991, 6, 168-172.	0.5	6
137	A microcomputer-based video vector system for clinical gait analysis. Journal of Biomedical Engineering, 1990, 12, 383-388.	0.7	10
138	Instrumentation used in clinical gait studies: A review. Journal of Medical Engineering and Technology, 1989, 13, 290-295.	0.8	41
139	Computational Intelligence in Biomedical Engineering. , 0, , .		39
140	Overview of Artificial Neural Networks and their Applications in Healthcare. , 0, , 1-19.		2
141	Movement Pattern Recognition Using Neural Networks. , 0, , 217-237.		1
142	Artificial Intelligence Techniques in Medicine and Healthcare. , 0, , 784-791.		3