

# CITATION REPORT

List of articles citing

## Toward Pervasive Gait Analysis With Wearable Sensors: A Systematic Review

DOI: 10.1109/jbhi.2016.2608720

IEEE Journal of Biomedical and Health Informatics,  
2016, 20, 1521-1537.

**Source:** <https://exaly.com/paper-pdf/64357026/citation-report.pdf>

**Version:** 2024-04-28

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

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

#	Paper	IF	Citations
249	Multisensor System for Analyzing the Thigh Movement During Walking. <b>2017</b> , 17, 4953-4961		7
248	Wearables for independent living in older adults: Gait and falls. <b>2017</b> , 100, 16-26		57
247	Matrix and Tensor Completion on a Human Activity Recognition Framework. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2017</b> , 21, 1554-1561	7.2	15
246	Development of an Inertial Motion Capture System for Clinical Application. <b>2017</b> , 16, 113-129		7
245	Real-time inertial lower body kinematics and ground contact estimation at anatomical foot points for agile human locomotion. <b>2017</b> ,		13
244	A rehabilitation gait training system for half lower limb disorder. <b>2017</b> ,		
243	Estimating double support in pathological gaits using an HMM-based analyzer for an intelligent robotic walker. <b>2017</b> ,		3
242	Quantifying Variation in Gait Features from Wearable Inertial Sensors Using Mixed Effects Models. <i>Sensors</i> , <b>2017</b> , 17,	3.8	6
241	Benchmarking Foot Trajectory Estimation Methods for Mobile Gait Analysis. <i>Sensors</i> , <b>2017</b> , 17,	3.8	13
240	Lightweight Biometric Sensing for Walker Classification Using Narrowband RF Links. <i>Sensors</i> , <b>2017</b> , 17,	3.8	5
239	An Overview of Smart Shoes in the Internet of Health Things: Gait and Mobility Assessment in Health Promotion and Disease Monitoring. <b>2017</b> , 7, 986		60
238	Towards Mobile Gait Analysis: Concurrent Validity and Test-Retest Reliability of an Inertial Measurement System for the Assessment of Spatio-Temporal Gait Parameters. <i>Sensors</i> , <b>2017</b> , 17,	3.8	76
237	A Review on Accelerometry-Based Gait Analysis and Emerging Clinical Applications. <b>2018</b> , 11, 177-194		68
236	Using computational support in motor ability analysis of individuals with Down syndrome: Literature review. <b>2018</b> , 157, 145-152		3
235	Barriers to the Adoption of Wearable Sensors in the Workplace: A Survey of Occupational Safety and Health Professionals. <b>2018</b> , 60, 351-362		73
234	The use of wearable devices for walking and running gait analysis outside of the lab: A systematic review. <i>Gait and Posture</i> , <b>2018</b> , 63, 124-138	2.6	92
233	Variables influencing wearable sensor outcome estimates in individuals with stroke and incomplete spinal cord injury: a pilot investigation validating two research grade sensors. <b>2018</b> , 15, 19		12

232	Development of A Textile Capacitive Proximity Sensor and Gait Monitoring System for Smart Healthcare. <b>2018</b> , 42, 76		11
231	Wearable Units. <b>2018</b> , 211-249		4
230	Vision-based assessment of parkinsonism and levodopa-induced dyskinesia with pose estimation. <b>2018</b> , 15, 97		36
229	Developing Support Technologies. <b>2018</b> ,		2
228	Wearable Sensors to Monitor, Enable Feedback, and Measure Outcomes of Activity and Practice. <b>2018</b> , 18, 87		25
227	Wearable sensors for the monitoring of movement disorders. <b>2018</b> , 41, 249-253		20
226	Human Motion Capturing and Activity Recognition Using Wearable Sensor Networks. <b>2018</b> , 191-206		1
225	Smart Annotation Tool for Multi-sensor Gait-based Daily Activity Data. <b>2018</b> ,		2
224	Wearable Sensor Data to Track Subject-Specific Movement Patterns Related to Clinical Outcomes Using a Machine Learning Approach. <i>Sensors</i> , <b>2018</b> , 18,	3.8	20
223	"You can tell by the way I use my walk." Predicting the presence of cognitive load with gait measurements. <b>2018</b> , 17, 122		6
222	Pre-Habilitation and Wellness through Gait Analysis using Body Worn Sensors. <b>2018</b> ,		2
221	Pre-operative sensor-based gait parameters predict functional outcome after total knee arthroplasty. <i>Gait and Posture</i> , <b>2018</b> , 66, 194-200	2.6	14
220	Gait analysis by using Smart Socks system. <b>2018</b> , 459, 012037		4
219	Biomechanical Gait Variable Estimation Using Wearable Sensors after Unilateral Total Knee Arthroplasty. <i>Sensors</i> , <b>2018</b> , 18,	3.8	7
218	Coextrusion of Multifunctional Smart Sensors. <b>2018</b> , 20, 1800206		12
217	Estimation of spatio-temporal parameters of gait from magneto-inertial measurement units: multicenter validation among Parkinson, mildly cognitively impaired and healthy older adults. <b>2018</b> , 17, 58		34
216	From Static Spinal Alignment to Dynamic Body Balance: Utilizing Motion Analysis in Spinal Deformity Surgery. <b>2018</b> , 6, e3		16
215	Introduction to the Special Section: Convergence of Automation Technology, Biomedical Engineering, and Health Informatics Toward the Healthcare 4.0. <b>2018</b> , 11, 249-259		56

214	From Research to Practice. <b>2018,</b>		16
213	Automatic characterization of stride parameters in canines with a single wearable inertial sensor. <b>2018, 13, e0198893</b>		9
212	A Gait Character Analyzing System for Osteoarthritis Pre-diagnosis Using RGB-D Camera and Supervised Classifier. <b>2019, 297-301</b>		6
211	Extracting Body Landmarks from Videos for Parkinson Gait Analysis. <b>2019,</b>		3
210	3-D Canonical Pose Estimation and Abnormal Gait Recognition With a Single RGB-D Camera. <i>IEEE Robotics and Automation Letters</i> , <b>2019, 4, 3617-3624</b>	4.2	19
209	Systematic Analysis of a Military Wearable Device Based on a Multi-Level Fusion Framework: Research Directions. <i>Sensors</i> , <b>2019, 19,</b>	3.8	18
208	Development and clinical validation of inertial sensor-based gait-clustering methods in Parkinson's disease. <b>2019, 16, 77</b>		13
207	Augmented Walking Suit for Elderly Farmers in Agricultural Environment. <b>2019, 564-574</b>		
206	Does the Femoral Head Size in Hip Arthroplasty Influence Lower Body Movements during Squats, Gait and Stair Walking? A Clinical Pilot Study Based on Wearable Motion Sensors. <i>Sensors</i> , <b>2019, 19,</b>	3.8	6
205	Gait analysis with the Kinect v2: normative study with healthy individuals and comprehensive study of its sensitivity, validity, and reliability in individuals with stroke. <b>2019, 16, 97</b>		29
204	Detection of Gait Asymmetry Using Indoor Doppler Radar. <b>2019,</b>		16
203	IMU-based Assessment of Ankle Inversion Kinematics and Orthosis Migration. <b>2019, 2019, 6395-6400</b>		
202	Augmenting Clinical Outcome Measures of Gait and Balance with a Single Inertial Sensor in Age-Ranged Healthy Adults. <i>Sensors</i> , <b>2019, 19,</b>	3.8	9
201	Gait stability indicators as extracted by a single wearable inertial sensor in young adolescents during smartphone use. <b>2019,</b>		
200	From Emotions to Mood Disorders: A Survey on Gait Analysis Methodology. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2019, 23, 2302-2316</b>	7.2	14
199	Mobile Gait Analysis Using Foot-Mounted UWB Sensors. <b>2019, 3, 1-22</b>		11
198	Which osteoarthritic gait features recover following total knee replacement surgery?. <b>2019, 14, e0203417</b>		7
197	Assessing the potential of the qualitative trajectory calculus to detect gait pathologies: a case study of children with developmental coordination disorder. <b>2019, 22, 64-70</b>		

196	Assessing the concurrent validity of a gait analysis system integrated into a smart walker in older adults with gait impairments. <b>2019</b> , 33, 1682-1687		9
195	Development of Wearable Gait Assistive Device Using Recurrent Neural Network. <b>2019</b> ,		6
194	Physical Therapy and Rehabilitation. <b>2019</b> , 333-372		1
193	The Classification of Minor Gait Alterations Using Wearable Sensors and Deep Learning. <b>2019</b> , 66, 3136-3145		16
192	The Algorithm for Automatic Determination of Human Step Phases. <b>2019</b> , 84-100		0
191	Using Inertial Sensors to Quantify Postural Sway and Gait Performance during the Tandem Walking Test. <i>Sensors</i> , <b>2019</b> , 19,	3.8	5
190	Joint Gait Kinematic and Kinetic Analysis using Inertial Measurement Units and Plantar Pressure Sensor System. <b>2019</b> ,		0
189	Temporal Variables Disorder of The Gait Cycle in Parkinson's Disease. <b>2019</b> ,		0
188	Validation of a Gait Analysis Algorithm for Wearable Sensors. <b>2019</b> ,		3
187	Quantifying Functional Difference in Centre of Pressure Post Achilles Tendon Rupture using Sensor Insoles. <b>2019</b> , 2019, 3155-3158		2
186	A Robust and Sequential Approach for Detecting Gait Asymmetry Based on Radar Micro-Doppler Signatures. <b>2019</b> ,		3
185	Flexible Insole Sensors with Stably Connected Electrodes for Gait Phase Detection. <i>Sensors</i> , <b>2019</b> , 19,	3.8	15
184	Walking in a smart city: Investigating the gait stabilization effect for biometric recognition via wearable sensors. <b>2019</b> , 80, 106501		9
183	Step by Step Towards Effective Human Activity Recognition: A Balance between Energy Consumption and Latency in Health and Wellbeing Applications. <i>Sensors</i> , <b>2019</b> , 19,	3.8	1
182	A Personalized Approach to Improve Walking Detection in Real-Life Settings: Application to Children with Cerebral Palsy. <i>Sensors</i> , <b>2019</b> , 19,	3.8	3
181	Performance Characterization of Foot-Mounted Gait Analysis Systems and Related Systems*. <b>2019</b> ,		
180	Unusual gait disorders: a phenomenological approach and classification. <b>2019</b> , 19, 119-132		3
179	Towards Inertial Sensor Based Mobile Gait Analysis: Event-Detection and Spatio-Temporal Parameters. <i>Sensors</i> , <b>2018</b> , 19,	3.8	68

178	Specificity and variability of trunk kinematics on a mechanical horse. <b>2019</b> , 63, 82-95		2
177	Real-World Gait Speed Estimation Using Wrist Sensor: A Personalized Approach. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2020</b> , 24, 658-668	7.2	16
176	Falls Risk Classification of Older Adults Using Deep Neural Networks and Transfer Learning. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2020</b> , 24, 144-150	7.2	10
175	A Framework for Interpretable Full-Body Kinematic Description Using Geometric and Functional Analysis. <b>2020</b> , 67, 1761-1774		1
174	Bringing spatiotemporal gait analysis into clinical practice: Instrument validation and pilot study of a commercial sensorized carpet. <b>2020</b> , 188, 105292		1
173	Derivative Based Gait Event Detection Algorithm Using Unfiltered Accelerometer Signals. <b>2020</b> , 2020, 4487-4490		0
172	Gait acquisition and analysis system for osteoarthritis based on hybrid prediction model. <b>2020</b> , 85, 101782		6
171	Analysis of Patterns of Gait Deterioration in Patients with Lumbar Spinal Stenosis. <b>2020</b> , 141, e55-e59		9
170	A database of human gait performance on irregular and uneven surfaces collected by wearable sensors. <b>2020</b> , 7, 219		19
169	. <b>2020</b> ,		
168	Portable Gait Lab: Estimating Over-Ground 3D Ground Reaction Forces Using Only a Pelvis IMU. <i>Sensors</i> , <b>2020</b> , 20,	3.8	
167	EMG-based Abnormal Gait Detection and Recognition. <b>2020</b> ,		1
166	An Objective Methodology for the Selection of a Device for Continuous Mobility Assessment. <i>Sensors</i> , <b>2020</b> , 20,	3.8	5
165	Relationship between tendon structure, stiffness, gait patterns and patient reported outcomes during the early stages of recovery after an Achilles tendon rupture. <b>2020</b> , 10, 20757		4
164	Percentiles and Reference Values for Accelerometric Gait Assessment in Women Aged 50-80 Years. <b>2020</b> , 10,		2
163	Validity and sensitivity of instrumented postural and gait assessment using low-cost devices in Parkinson's disease. <b>2020</b> , 17, 149		4
162	Concurrent validity and within-session reliability of gait kinematics measured using an inertial motion capture system with repeated calibration. <b>2020</b> , 24, 251-260		8
161	Kinematics and temporospatial parameters during gait from inertial motion capture in adults with and without HIV: a validity and reliability study. <b>2020</b> , 19, 57		2

160	Radar-Based Non-Contact Continuous Identity Authentication. <b>2020</b> , 12, 2279		17
159	Accuracy Evaluation and Clinical Application of an Optimized Solution for Measuring Spatio-Temporal Gait Parameters. <b>2020</b> ,		0
158	Throughput Improvement in Backscatter-based Wireless Body Area Network. <b>2020</b> ,		
157	Self-Reported and Performance-Based Outcome Measures Estimation Using Wearables After Unilateral Total Knee Arthroplasty. <b>2020</b> , 2, 569932		1
156	Wearable computing of Freezing of Gait in Parkinson's disease: A survey. <i>Smart Health</i> , <b>2020</b> , 18, 1001432.		0
155	. <b>2020</b> , 8, 193966-193980		11
154	Automatic clinical gait test detection from inertial sensor data. <b>2020</b> , 2020, 789-792		1
153	Concurrent Validity, Test-Retest Reliability, and Sensitivity to Change of a Single Body-Fixed Sensor for Gait Analysis during Rollator-Assisted Walking in Acute Geriatric Patients. <i>Sensors</i> , <b>2020</b> , 20,	3.8	5
152	Complementing Clinical Gait Assessments of Spinal Cord Injured Individuals using Wearable Movement Sensors. <b>2020</b> , 2020, 3142-3145		2
151	. <b>2020</b> , 8, 167830-167864		19
150	Unsupervised Domain Adaptation for Position-Independent IMU Based Gait Analysis. <b>2020</b> ,		1
149	Modeling and Prediction of Wearable Energy Harvesting Sliding Shoes for Metabolic Cost and Energy Rate Outside of the Lab. <i>Sensors</i> , <b>2020</b> , 20,	3.8	3
148	Evaluation and Application of a Customizable Wireless Platform: A Body Sensor Network for Unobtrusive Gait Analysis in Everyday Life. <i>Sensors</i> , <b>2020</b> , 20,	3.8	2
147	Comparison of wearable sensor to traditional methods in functional outcome measures: A systematic review. <b>2021</b> , 39, 2093-2102		2
146	Validity and reliability of wearable inertial sensors in healthy adult walking: a systematic review and meta-analysis. <b>2020</b> , 17, 62		42
145	Gait Analysis in a Box: A System Based on Magnetometer-Free IMUs or Clusters of Optical Markers with Automatic Event Detection. <i>Sensors</i> , <b>2020</b> , 20,	3.8	9
144	Physical, Physiological, and Biological Measurements. <b>2020</b> , 35-57		
143	Automated gait event detection for a variety of locomotion tasks using a novel gyroscope-based algorithm. <i>Gait and Posture</i> , <b>2020</b> , 81, 102-108	2.6	7

142	Sensor-to-Segment Calibration Methodologies for Lower-Body Kinematic Analysis with Inertial Sensors: A Systematic Review. <i>Sensors</i> , <b>2020</b> , 20,	3.8	15
141	Applications of MEMS Gyroscope for Human Gait Analysis. <b>2020</b> ,		
140	Two Shank-Mounted IMUs-Based Gait Analysis and Classification for Neurological Disease Patients. <i>IEEE Robotics and Automation Letters</i> , <b>2020</b> , 5, 1970-1976	4.2	19
139	Optimization for Energy-Harvesting Wearable IoT Devices. <i>Sensors</i> , <b>2020</b> , 20,	3.8	11
138	Quantitative coordination evaluation for screening children with Duchenne muscular dystrophy. <b>2020</b> , 30, 023116		1
137	A Random Forest Approach for Quantifying Gait Ataxia With Truncal and Peripheral Measurements Using Multiple Wearable Sensors. <b>2020</b> , 20, 723-734		12
136	Internet of things (IoT) applications for elderly care: a reflective review. <b>2021</b> , 33, 855-867		53
135	IMU-Based Gait Normalcy Index Calculation for Clinical Evaluation of Impaired Gait. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , 25, 3-12	7.2	8
134	Doppler Radar for the Extraction of Biomechanical Parameters in Gait Analysis. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , 25, 547-558	7.2	9
133	Cross-Subject and Cross-Modal Transfer for Generalized Abnormal Gait Pattern Recognition. <b>2021</b> , 32, 546-560		12
132	Wearable muscle movement information measuring device based on acceleration sensor. <b>2021</b> , 167, 108274		4
131	Gait analysis in neurological populations: Progression in the use of wearables. <b>2021</b> , 87, 9-29		18
130	User Independent Estimations of Gait Events With Minimal Sensor Data. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , 25, 1583-1590	7.2	0
129	Variations in Patterns of Muscle Activity Observed in Participants Walking in Everyday Environments: Effect of Different Surfaces. <b>2021</b> , 73, 268-275		
128	Risk of Falling in a Timed Up and Go Test Using an UWB Radar and an Instrumented Insole. <i>Sensors</i> , <b>2021</b> , 21,	3.8	2
127	Towards Semantic Data Integration in Resource-Limited Settings for Decision Support on Gait-Related Diseases. <b>2021</b> , 236-256		0
126	Ward, rehabilitation, and clinic-based wearable devices. <b>2021</b> , 61-72		0
125	Systematic Review of Intelligent Algorithms in Gait Analysis and Prediction for Lower Limb Robotic Systems. <b>2021</b> , 9, 113788-113812		5



124	Introduction. <b>2021</b> , 1-15		
123	Instrumenting traditional approaches to physical assessment. <b>2021</b> , 27-42		
122	Telerehabilitation Prototype for Postural Disorder Monitoring in Parkinson Disease. <b>2021</b> , 129-142		
121	Human Gait Analysis in Neurodegenerative Diseases: a Review. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , PP,	7.2	10
120	Estimation of stride-by-stride spatial gait parameters using inertial measurement unit attached to the shank with inverted pendulum model. <b>2021</b> , 11, 1391		8
119	DAid pressure socks system: Performance evaluation. <i>Gait and Posture</i> , <b>2021</b> , 84, 368-376	2.6	
118	Assessing elderly's functional balance and mobility via analyzing data from waist-mounted tri-axial wearable accelerometers in timed up and go tests. <b>2021</b> , 21, 108		2
117	. <b>2021</b> , 21, 8593-8603		2
116	Deep ConvLSTM With Self-Attention for Human Activity Decoding Using Wearable Sensors. <b>2021</b> , 21, 8575-8582		20
115	Multiple Person Detection by Footsteps Sounds Using GMRS. <b>2021</b> , 21, 6543-6554		0
114	. <b>2021</b> , 21, 8421-8431		2
113	The Smart-Insole Dataset: Gait Analysis Using Wearable Sensors with a Focus on Elderly and Parkinson's Patients. <i>Sensors</i> , <b>2021</b> , 21,	3.8	9
112	Accuracy and Repeatability of Spatiotemporal Gait Parameters Measured with an Inertial Measurement Unit. <b>2021</b> , 10,		1
111	Nanocomposite Piezoresistive Pressure Sensor in Gait Monitoring for Arthritis Patient. 1-9		0
110	Assessment of Spatio-Temporal Parameters of Human Gait Using Fiber Bragg Grating Sensor-Based Devices. <b>2021</b> , 21, 9186-9193		
109	Wearable Sensor-Based Real-Time Gait Detection: A Systematic Review. <i>Sensors</i> , <b>2021</b> , 21,	3.8	26
108	Quantitative characterization of walking on sand inecological conditions: Speed, temporal segmentation, and variability. <i>Gait and Posture</i> , <b>2021</b> , 86, 211-216	2.6	3
107	Validity Evaluation of an Inertial Measurement Unit (IMU) in Gait Analysis Using Statistical Parametric Mapping (SPM). <i>Sensors</i> , <b>2021</b> , 21,	3.8	0

106	Wearable Devices for Gait Analysis in Intelligent Healthcare. <b>2021</b> , 3,		8
105	Asymmetric Gait Analysis Using a DTW Algorithm with Combined Gyroscope and Pressure Sensor. <i>Sensors</i> , <b>2021</b> , 21,	3.8	3
104	Biomedical signals and machine learning in amyotrophic lateral sclerosis: a systematic review. <b>2021</b> , 20, 61		5
103	Measuring Spatiotemporal Parameters on Treadmill Walking Using Wearable Inertial System. <i>Sensors</i> , <b>2021</b> , 21,	3.8	3
102	Orientation-Invariant Spatio-Temporal Gait Analysis Using Foot-Worn Inertial Sensors. <i>Sensors</i> , <b>2021</b> , 21,	3.8	2
101	A Fully Wireless Wearable Motion Tracking System with 3D Human Model for Gait Analysis. <i>Sensors</i> , <b>2021</b> , 21,	3.8	1
100	Wearable sensors in the diagnosis and study of Parkinson's disease symptoms: a systematic review. <b>2021</b> , 45, 532-545		3
99	Development of a Self-Powered Piezo-Resistive Smart Insole Equipped with Low-Power BLE Connectivity for Remote Gait Monitoring. <i>Sensors</i> , <b>2021</b> , 21,	3.8	6
98	A review of multimodal human activity recognition with special emphasis on classification, applications, challenges and future directions. <b>2021</b> , 223, 106970		25
97	Design and validation of a novel 3D-printed wearable device for monitoring knee joint kinematics. <b>2021</b> , 94, 1-7		1
96	A Clinically Interpretable Computer-Vision Based Method for Quantifying Gait in Parkinson's Disease. <i>Sensors</i> , <b>2021</b> , 21,	3.8	6
95	Predicting Multiple Sclerosis From Gait Dynamics Using an Instrumented Treadmill: A Machine Learning Approach. <b>2021</b> , 68, 2666-2677		6
94	An adaptive framework of real-time continuous gait phase variable estimation for lower-limb wearable robots. <b>2021</b> , 143, 103842		6
93	The Assessment of Cognitive and Physical Well-Being Through Ambient Sensor Measures of Movement Towards Longitudinal Monitoring of Activities of Daily Living. <b>2021</b> , 24, 79-88		
92	Applying deep neural networks and inertial measurement unit in recognizing irregular walking differences in the real world. <b>2021</b> , 96, 103414		3
91	RELIABILITY OF WIRELESS INSOLE BAROPODOMETRY OF NORMAL INDIVIDUAL'S GAIT. <b>2021</b> , 29, 238-241		
90	Cross-Domain Self-Supervised Complete Geometric Representation Learning for Real-Scanned Point Cloud Based Pathological Gait Analysis. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , PP,	7.2	0
89	Methodologies for vision-based automatic pathological gait detection. <b>2021</b> , 71-80		

88	A Novel Accelerometer Mounting Method for Sensing Performance Improvement in Acoustic Measurements From the Knee. <b>2021</b> , 143, 031006		4
87	Active Passive Nature of Assistive Wearable Gait Augment Suit for Enhanced Mobility. <b>2018</b> , 30, 717-728		7
86	A Multi-modal Gait Analysis-based Depression Detection System. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2021</b> , PP,	7.2	6
85	Gait metrics analysis utilizing single-point inertial measurement units: a systematic review.. <b>2022</b> , 8, 9		2
84	Real-Time Human Lower Limbs Motion Estimation and Feedback for Potential Applications in Robotic Gait Aid and Training. <b>2021</b> ,		
83	Differential Soft Sensor-Based Measurement of Interactive Force and Assistive Torque for a Robotic Hip Exoskeleton. <i>Sensors</i> , <b>2021</b> , 21,	3.8	2
82	Estimation of Walking Speed and Its Spatiotemporal Determinants Using a Single Inertial Sensor Worn on the Thigh: From Healthy to Hemiparetic Walking. <i>Sensors</i> , <b>2021</b> , 21,	3.8	2
81	State-of-the-Art Wearable Sensors and Possibilities for Radar in Fall Prevention. <i>Sensors</i> , <b>2021</b> , 21,	3.8	2
80	Sensors for Context-Aware Smart Healthcare: A Security Perspective. <i>Sensors</i> , <b>2021</b> , 21,	3.8	2
79	Which osteoarthritic gait features recover following Total Knee Replacement surgery?.		
78	Gait Analysis for Physical Rehabilitation via Body-Worn Sensors and Multi-information Fusion. <b>2019</b> , 139-148		2
77	Optimal sensor placement for estimation of center of plantar pressure based on the improved genetic algorithms. <b>2021</b> , 1-1		2
76	A Feasible Fall Evaluation System via Artificial Intelligence Gesture Detection of Gait and Balance for Sub-Healthy Community- Dwelling Older Adults in Taiwan. <b>2021</b> , 9, 146404-146413		
75	Calibration-Free Gait Assessment by Foot-Worn Inertial Sensors. <b>2021</b> , 3, 736418		2
74	Computer Vision and Abnormal Patient Gait: A Comparison of Methods. <b>2020</b> , 6, 29-34		1
73	Estimating Walking Speed in the Wild. <b>2020</b> , 2, 583848		3
72	A Gait Events Detection Algorithm Based on the Invariant Characteristic of Hip Joint Kinematics. <b>2021</b> ,		1
71	A Deep Learning Approach for Foot Trajectory Estimation in Gait Analysis Using Inertial Sensors. <i>Sensors</i> , <b>2021</b> , 21,	3.8	1

70	Cybersecurity of Robotic Systems: Leading Challenges and Robotic System Design Methodology. <b>2021</b> , 10, 2850	2
69	Gait and Axial Spondyloarthritis: Comparative Gait Analysis Study Using Foot-Worn Inertial Sensors. <b>2021</b> , 9, e27087	1
68	Gait and Axial Spondyloarthritis: Comparative Gait Analysis Study Using Foot-Worn Inertial Sensors (Preprint).	1
67	Skeleton-based abnormal gait recognition with spatio-temporal attention enhanced gait-structural graph convolutional networks. <b>2022</b> , 473, 116-126	0
66	Analysis of the effect of muscle fatigue on gait characteristics using data acquired by wearable sensors. <b>2020</b> ,	
65	Machine Learning Recognition of Gait Identity via Shoe Embedded Accelerometer. <b>2020</b> ,	0
64	Gait Analysis. <b>2021</b> , 219-255	
63	Transductive Learning Models for Accurate Ambulatory Gait Analysis in Elderly Residents of Assisted Living Facilities.. <b>2022</b> , PP,	0
62	Video-Based Pose Estimation for Gait Analysis in Stroke Survivors during Clinical Assessments: A Proof-of-Concept Study.. <b>2022</b> , 6, 9-18	1
61	The application of artificial intelligence and custom algorithms with inertial wearable devices for gait analysis and detection of gait-altering pathologies in adults: A scoping review of literature.. <b>2022</b> , 8, 20552076221074128	1
60	Automated Prescreening of Mild Cognitive Impairment Using Shank-Mounted Inertial Sensors Based Gait Biomarkers. <b>2022</b> , 10, 15835-15844	2
59	Parkinson's Disease Management via Wearable Sensors: A Systematic Review. <b>2022</b> , 10, 35219-35237	6
58	Validation of Inertial Measurement Unit-Based Motion Capture with a Single Calibration File for Assessing Gait in Healthy Young Adults. <i>SSRN Electronic Journal</i> ,	1
57	Leveraging the Potential of Digital Technology for Better Individualized Treatment of Parkinson's Disease.. <b>2022</b> , 13, 788427	1
56	Sensor-based gait analyses of the six-minute walk test identify qualitative improvement in gait parameters of people with multiple sclerosis after rehabilitation.. <b>2022</b> , 1	0
55	Applications and limitations of current markerless motion capture methods for clinical gait biomechanics.. <b>2022</b> , 10, e12995	6
54	Wearable gait analysis systems: ready to be used by medical practitioners in geriatric wards?. <b>2022</b> , 1	
53	The reliability test of a smart insole for gait analysis in stroke patients. <b>2022</b> , 29, 30-40	

52	Ideal Combinations of Acceleration-Based Intensity Metrics and Sensor Positions to Monitor Exercise Intensity under Different Types of Sports.. <i>Sensors</i> , <b>2022</b> , 22,	3.8	3
51	Detection of Human Gait Phases Using Textile Pressure Sensors: A Low Cost and Pervasive Approach.. <i>Sensors</i> , <b>2022</b> , 22,	3.8	
50	Detecting and Correcting IMU Movements During Joint Angle Estimation. <b>2022</b> , 1-1		0
49	Ground Contact Time Estimating Wearable Sensor to Measure Spatio-Temporal Aspects of Gait.. <i>Sensors</i> , <b>2022</b> , 22,	3.8	0
48	mVEGAS [Mobile Smartphone-Based Spatiotemporal Gait Analysis in Healthy and Ataxic Gait Disorders. <i>SSRN Electronic Journal</i> ,	1	
47	A comprehensive survey on gait analysis: History, parameters, approaches, pose estimation, and future work. <i>Artificial Intelligence in Medicine</i> , <b>2022</b> , 102314	7.4	1
46	Machine Learning Approach to Support the Detection of Parkinson's Disease in IMU-Based Gait Analysis. <i>Sensors</i> , <b>2022</b> , 22, 3700	3.8	2
45	Review of Human-Body Powered Biosensing Textiles: Body-Power Generating Wearables Based on Textiles for Human Biomonitoring. <i>Journal of the Electrochemical Society</i> ,	3.9	1
44	Agreement, Reliability, and Concurrent Validity of an Outdoor, Wearable-Based Walk Ratio Assessment in Healthy Adults and Chronic Stroke Survivors. <i>Frontiers in Physiology</i> , 13,	4.6	0
43	A Vision-Based System for Stage Classification of Parkinsonian Gait Using Machine Learning and Synthetic Data. <i>Sensors</i> , <b>2022</b> , 22, 4463	3.8	1
42	Ecological Validation of Machine Learning Models for Spatiotemporal Gait Analysis in Free-Living Environments Using Instrumented Insoles. <i>IEEE Robotics and Automation Letters</i> , <b>2022</b> , 1-8	4.2	0
41	IMU-Based Monitoring for Assistive Diagnosis and Management of IoT: A Review. <i>Healthcare (Switzerland)</i> , <b>2022</b> , 10, 1210	3.4	0
40	Involuntary breathing movement pattern recognition and classification via force based sensors.		
39	Smart insoles review over the last two decade: Applications, potentials, and future. <i>Smart Health</i> , <b>2022</b> , 100301	2.1	2
38	mVEGAS [mobile smartphone-based spatiotemporal gait analysis in healthy and ataxic gait disorders. <i>Gait and Posture</i> , <b>2022</b> ,	2.6	
37	Zero-Power Wireless Pressure Sensor based on Backscatterer Harmonic Transponder in a WPT context. <b>2022</b> ,		1
36	The Classification of Multiple Interacting Gait Abnormalities Using Insole Sensors and Machine Learning. <b>2022</b> ,		1
35	A Review on Recent Advances of Cerebral Palsy. <b>2022</b> , 2022, 1-20		0

34	A Multi-Modal Gait Database of Natural Everyday-Walk in an Urban Environment. <b>2022</b> , 9,	1
33	MaD GUI: An Open-Source Python Package for Annotation and Analysis of Time-Series Data. <b>2022</b> , 22, 5849	
32	Detection and assessment of Parkinson's disease based on gait analysis: A survey. 14,	1
31	Inertial measurement unit-based motion capture to replace camera-based systems for assessing gait in healthy young adults: Proceed with caution. <b>2022</b> , 23, 100396	0
30	Sensor Combination Selection for Human Gait Phase Segmentation Based on Lower Limb Motion Capture With Body Sensor Network. <b>2022</b> , 71, 1-14	0
29	Using Synthesized IMU Data to Train a Long-Short Term Memory-based Neural Network for Unobtrusive Gait Analysis with a Sparse Sensor Setup. <b>2022</b> ,	0
28	Deep learning based markerless motion tracking as a clinical tool for movement disorders: Utility, feasibility and early experience. 2,	0
27	Ecological Validation of Machine Learning Models for Spatiotemporal Gait Analysis in Free-living Environments Using Instrumented Insoles. <b>2022</b> ,	0
26	Very Simple System for Walking-Speed Measurement in Geriatric Patients. <b>2022</b> , 11, 3159	0
25	Involuntary Breathing Movement Pattern Recognition and Classification via Force-Based Sensors. <b>2022</b> , 2, 525-537	0
24	Automatic extraction of upper-limb kinematic activity using deep learning-based markerless tracking during deep brain stimulation implantation for Parkinson's disease: A proof of concept study. <b>2022</b> , 17, e0275490	0
23	Telerehabilitation Technology. <b>2022</b> , 563-594	0
22	Threshold-Free Phase Segmentation and Zero Velocity Detection for Gait Analysis Using Foot-Mounted Inertial Sensors. <b>2022</b> , 1-11	2
21	Should We Look at Curvature or Velocity to Extract a Motor Program?. <b>2022</b> , 203-216	0
20	Microphone Mechanomyography Sensors for Movement Analysis and Identification. <b>2022</b> ,	0
19	Methods for Gastrointestinal Endoscopy Quantification: A Focus on Hands and Fingers Kinematics. <b>2022</b> , 22, 9253	0
18	Suitability of a Low-Cost Wearable Sensor to Assess Turning in Healthy Adults. <b>2022</b> , 22, 9322	0
17	OA-Pain-Sense: Machine Learning Prediction of Hip and Knee Osteoarthritis Pain from IMU Data. <b>2022</b> , 9, 97	0

- 16 A 3D-Printed Capacitive Smart Insole for Plantar Pressure Monitoring. **2022**, 22, 9725
- 15 Walking Step Monitoring with a Millimeter-Wave Radar in Real-Life Environment for Disease and Fall Prevention for the Elderly. **2022**, 22, 9901
- 14 Multi-Speed Transformer Network for Neurodegenerative disease assessment and activity recognition. **2023**, 107344
- 13 Joint Angle Analysis with IMU Sensors for Gait. **2022**,
- 12 A Rapid Detection of Parkinson's Disease using Smart Insoles: A Statistical and Machine Learning Approach. **2022**,
- 11 Impact of Gait Events Identification through Wearable Inertial Sensors on Clinical Gait Analysis of Children with Idiopathic Toe Walking. **2023**, 14, 277
- 10 Spatiotemporal gait parameter fluctuations in older adults affected by mild cognitive impairment: comparisons among three cognitive dual-task tests.
- 9 Classifying Changes in Amputee Gait following Physiotherapy Using Machine Learning and Continuous Inertial Sensor Signals. **2023**, 23, 1412
- 8 Smartwatch-based prediction of single-stride and stride-to-stride gait outcomes using regression-based machine learning.
- 7 A Neural Network Approach to Estimate Lower Extremity Muscle Activity during Walking. **2022**,
- 6 Automatic Assessments of Parkinsonian Gait with Wearable Sensors for Human Assistive Systems. **2023**, 23, 2104
- 5 Estimating ground reaction force with novel carbon nanotube-based textile insole pressure sensors. **2023**, 4,
- 4 A Portable Device for Supporting Autonomous and Healthy Urban Ageing: The PROLONG System. **2023**, 1598-1610
- 3 STJA-GCN: A Multi-Branch Spatial-Temporal Joint Attention Graph Convolutional Network for Abnormal Gait Recognition. **2023**, 13, 4205
- 2 Early Identification of Gait Asymmetry Using a Dual-Channel Hybrid Deep Learning Model Based on a Wearable Sensor. **2023**, 15, 897
- 1 Validity of an inertial sensor-based system for the assessment of spatio-temporal parameters in people with multiple sclerosis. 14,