Hossein Rouhani

List of Publications by Year
in descending order

64 papers	1,383 citations	361045 20 h-index	360668 35 g-index
66 all docs	66 docs citations	66 times ranked	1415 citing authors

#	Article	IF	Citations
1	Foot angular kinematics measured with inertial measurement units: A reliable criterion for real-time gait event detection. Journal of Biomechanics, 2022, 130, 110880.	0.9	8
2	Instrumented Functional Test for Objective Outcome Evaluation of Balance Rehabilitation in Elderly Fallers: A Clinical Study. Gerontology, 2022, 68, 1233-1245.	1.4	3
3	Assessment of countermovement jump with and without arm swing using a single inertial measurement unit. Sports Biomechanics, 2022, , 1-18.	0.8	7
4	Nonlinear response of human trunk musculature explains neuromuscular stabilization mechanisms in sitting posture. Journal of Neural Engineering, 2022, 19, 026045.	1.8	2
5	K-score: A novel scoring system to quantify fatigue-related ergonomic risk based on joint angle measurements via wearable inertial measurement units. Applied Ergonomics, 2022, 102, 103757.	1.7	8
6	Accurate Tissue Deformation Modeling Using a Kalman Filter and ADMM-Based Projective Dynamics. IEEE/ASME Transactions on Mechatronics, 2022, 27, 2194-2203.	3.7	4
7	A novel instrumented shoulder functional test using wearable sensors in patients with brachial plexus injury. Journal of Shoulder and Elbow Surgery, 2021, 30, e493-e502.	1.2	10
8	40 years of sensor fusion for orientation tracking via magnetic and inertial measurement units: Methods, lessons learned, and future challenges. Information Fusion, 2021, 68, 67-84.	11.7	66
9	Using wearable sensors to characterize gait after spinal cord injury: evaluation of test–retest reliability and construct validity. Spinal Cord, 2021, 59, 675-683.	0.9	9
10	Characterization of standing balance after incomplete spinal cord injury: Alteration in integration of sensory information in ambulatory individuals. Gait and Posture, 2021, 83, 152-159.	0.6	11
11	Use of the extended feasible stability region for assessing stability of perturbed walking. Scientific Reports, 2021, 11, 1026.	1.6	5
12	A Full-State Robust Extended Kalman Filter for Orientation Tracking During Long-Duration Dynamic Tasks Using Magnetic and Inertial Measurement Units. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1280-1289.	2.7	10
13	In-field instrumented ergonomic risk assessment: Inertial measurement units versus Kinect V2. International Journal of Industrial Ergonomics, 2021, 84, 103147.	1.5	33
14	Predicted Threshold for Seated Stability: Estimation of Margin of Stability Using Wearable Inertial Sensors. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 3361-3372.	3.9	8
15	Virtual Energy Regulator: A Time-Independent Solution for Control of Lower Limb Exoskeletons. IEEE Robotics and Automation Letters, 2021, 6, 7699-7705.	3.3	7
16	Investigating the validity of a single tri-axial accelerometer mounted on the head for monitoring the activities of daily living and the timed-up and go test. Gait and Posture, 2021, 90, 137-140.	0.6	7
17	Sensor fusion algorithms for orientation tracking via magnetic and inertial measurement units: An experimental comparison survey. Information Fusion, 2021, 76, 8-23.	11.7	28
18	Instrumented Ergonomic Risk Assessment Using Wearable Inertial Measurement Units: Impact of Joint Angle Convention. IEEE Access, 2021, 9, 7293-7305.	2.6	18

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19	Adaptive Gain Regulation of Sensor Fusion Algorithms for Orientation Estimation with Magnetic and Inertial Measurement Units. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-13.	2.4	4
20	Validity of using wearable inertial sensors for assessing the dynamics of standing balance. Medical Engineering and Physics, 2020, 77, 53-59.	0.8	51
21	Instrumented triple single-leg hop test: A validated method for ambulatory measurement of ankle and knee angles using inertial sensors. Clinical Biomechanics, 2020, 80, 105134.	0.5	5
22	Postural control strategy after incomplete spinal cord injury: effect of sensory inputs on trunk–leg movement coordination. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 141.	2.4	13
23	Quantification of Triple Single-Leg Hop Test Temporospatial Parameters: A Validated Method Using Body-Worn Sensors for Functional Evaluation after Knee Injury. Sensors, 2020, 20, 3464.	2.1	21
24	A Novel Testing Device to Assess the Effect of Neck Strength on Risk of Concussion. Annals of Biomedical Engineering, 2020, 48, 2310-2322.	1.3	3
25	Predicted threshold against forward and backward loss of balance for perturbed walking. Journal of Biomechanics, 2019, 95, 109315.	0.9	7
26	Effects of water immersion on gait initiation: part II of a case series after incomplete spinal cord injury. Spinal Cord Series and Cases, 2019, 5, 84.	0.3	3
27	Semi-Automatic Sensor-to-Body Calibration of Inertial Sensors on Lower Limb Using Gait Recording. IEEE Sensors Journal, 2019, 19, 12465-12474.	2.4	39
28	Sensor-to-body calibration procedure for clinical motion analysis of lower limb using magnetic and inertial measurement units. Journal of Biomechanics, 2019, 85, 224-229.	0.9	39
29	A method to estimate inertial properties and force plate inertial components for instrumented platforms. Medical Engineering and Physics, 2019, 66, 96-101.	0.8	5
30	Effects of water immersion on quasi-static standing exploring center of pressure sway and trunk acceleration: a case series after incomplete spinal cord injury. Spinal Cord Series and Cases, 2019, 5, 5.	0.3	4
31	A Therapist-Taught Robotic System for Assistance During Gait Therapy Targeting Foot Drop. IEEE Robotics and Automation Letters, 2019, 4, 407-413.	3.3	29
32	Detection of daily postures and walking modalities using a single chest-mounted tri-axial accelerometer. Medical Engineering and Physics, 2018, 57, 75-81.	0.8	28
33	Design and Evaluation of an Instrumented Wobble Board for Assessing and Training Dynamic Seated Balance. Journal of Biomechanical Engineering, 2018, 140, .	0.6	8
34	Knee Implant Loosening Detection: A Vibration Analysis Investigation. Annals of Biomedical Engineering, 2018, 46, 97-107.	1.3	19
35	Quantification of multi-segment trunk kinetics during multi-directional trunk bending. Gait and Posture, 2018, 64, 205-212.	0.6	8
36	Optimal Estimation of Anthropometric Parameters for Quantifying Multisegment Trunk Kinetics. Journal of Biomechanical Engineering, 2018, 140, .	0.6	7

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37	The influence of the aquatic environment on the center of pressure, impulses and upper and lower trunk accelerations during gait initiation. Gait and Posture, 2017, 58, 469-475.	0.6	7
38	The influence of the aquatic environment on the control of postural sway. Gait and Posture, 2017, 51, 70-76.	0.6	21
39	An instrumented wobble board for assessing and training dynamic sitting balance. , 2017, , .		1
40	Closed-loop control of standing neuroprosthesis using PID controller. , 2017, , .		2
41	PID Controller Design for FES Applied to Ankle Muscles in Neuroprosthesis for Standing Balance. Frontiers in Neuroscience, 2017, 11, 347.	1.4	25
42	Minimizing muscle fatigue through optimization of electrical stimulation parameters. Journal of Biomedical Engineering and Informatics, 2016, 3, 33.	0.2	2
43	Multisegment Kinematics of the Spinal Column: Soft Tissue Artifacts Assessment. Journal of Biomechanical Engineering, 2016, 138, .	0.6	16
44	Identification of ankle plantar-flexors dynamics in response to electrical stimulation. Medical Engineering and Physics, 2016, 38, 1166-1171.	0.8	7
45	Outcome of ankle arthrodesis and total ankle replacement for ankle arthrosis in terms of gait variability. Journal of Biomedical Engineering and Informatics, 2015, 2, 31.	0.2	0
46	Sensitivity of Intersegmental Angles of the Spinal Column to Errors Due to Marker Misplacement. Journal of Biomechanical Engineering, 2015, 137, .	0.6	4
47	Heel strike detection using split force-plate treadmill. Gait and Posture, 2015, 41, 863-866.	0.6	4
48	Trunk control impairment is responsible for postural instability during quiet sitting in individuals with cervical spinal cord injury. Clinical Biomechanics, 2015, 30, 507-512.	0.5	53
49	A wearable system for multi-segment foot kinetics measurement. Journal of Biomechanics, 2014, 47, 1704-1711.	0.9	34
50	Outcome of unilateral ankle arthrodesis and total ankle replacement in terms of bilateral gait mechanics. Journal of Orthopaedic Research, 2014, 32, 377-384.	1.2	43
51	Quantitative estimation of foot-flat and stance phase of gait using foot-worn inertial sensors. Gait and Posture, 2013, 37, 229-234.	0.6	209
52	Closed-loop control of ankle plantarflexors and dorsiflexors using an inverted pendulum apparatus: A pilot study. Journal of Automatic Control, 2013, 21, 31-36.	1.0	9
53	Measurement of Multi-segment Foot Joint Angles During Gait Using a Wearable System. Journal of Biomechanical Engineering, 2012, 134, 061006.	0.6	55
54	Combined use of transcranial magnetic stimulation and metal electrode implants: a theoretical assessment of safety considerations. Physics in Medicine and Biology, 2012, 57, 7813-7827.	1.6	19

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55	A comparison between joint coordinate system and attitude vector for multi-segment foot kinematics. Journal of Biomechanics, 2012, 45, 2041-2045.	0.9	8
56	Multi-segment foot kinematics after total ankle replacement and ankle arthrodesis during relatively long-distance gait. Gait and Posture, 2012, 36, 561-566.	0.6	60
57	Segmentation of foot and ankle complex based on kinematic criteria. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 773-781.	0.9	17
58	Outcome evaluation of ankle osteoarthritis treatments: Plantar pressure analysis during relatively long-distance walking. Clinical Biomechanics, 2011, 26, 397-404.	0.5	24
59	Ambulatory measurement of ankle kinetics for clinical applications. Journal of Biomechanics, 2011, 44, 2712-2718.	0.9	29
60	Ambulatory assessment of 3D ground reaction force using plantar pressure distribution. Gait and Posture, 2010, 32, 311-316.	0.6	70
61	Brain emotional learning based intelligent controller applied to neurofuzzy model of micro-heat exchanger. Expert Systems With Applications, 2007, 32, 911-918.	4.4	95
62	Lumped thermal model for switched reluctance motor applied to mechanical design optimization. Mathematical and Computer Modelling, 2007, 45, 625-638.	2.0	29
63	NEUROFUZZY MODELING OF NATURAL FREQUENCIES OF CYLINDRICAL SHELLS APPLIED TO EVOLUTIONARY BASED OPTIMAL DESIGN OF SR MOTORS. International Journal of Computational Methods, 2006, 03, 263-277.	0.8	2
64	Optimal design of a flexible transferring system in press automation using fuzzy clustering. Assembly Automation, 2005, 25, 53-58.	1.0	1