

Elizabeth T Hsiao-Wecksler

List of Publications by Year in descending order

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106
papers

2,424
citations

218592

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107
all docs

107
docs citations

107
times ranked

2393
citing authors

#	ARTICLE	IF	CITATIONS
1	Control Design and Preliminary Evaluation of a Medical Education Simulator for Ankle Tendon Reflex Assessment Training. , 2022, , .		0
2	Clinical Validation Testing Of An Upper Limb Robotic Medical Education Training Simulator For Rigidity Assessment. , 2022, , .		1
3	Scaling of linear anthropometric dimensions in living humans. American Journal of Physical Anthropology, 2021, 176, 134-143.	2.1	5
4	Design and Clinical Validation of a Robotic Ankle-Foot Simulator With Series Elastic Actuator for Ankle Clonus Assessment Training. IEEE Robotics and Automation Letters, 2021, 6, 3793-3800.	3.3	6
5	Design Framework and Clinical Evaluation of a Passive Hydraulic Patient Simulator for Biceps Spasticity Assessment Training. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	2
6	Development of a Series Elastic Elbow Neurological Exam Training Simulator for Lead-pipe Rigidity. , 2021, , .		1
7	A Soft Robotic Simulator for Transseptal Puncture Training. , 2021, , .		2
8	User Centered Approach to the Supra-Functional Needs of People Living with Amyotrophic Lateral Sclerosis (ALS). , 2021, , .		0
9	Can People with Parkinsonâ€™s Disease Self-Trigger Gait Initiation? A Comparison of Cueing Strategies. Journal of Parkinson's Disease, 2021, , 1-13.	1.5	3
10	Passive Hydraulic Training Simulator for Upper Arm Spasticity. Journal of Mechanisms and Robotics, 2020, 12, .	1.5	5
11	A comparison of glenohumeral joint kinematics and muscle activation during standard and geared manual wheelchair mobility. Medical Engineering and Physics, 2019, 70, 1-8.	0.8	4
12	Modulation of anticipatory postural adjustments using a powered ankle orthosis in people with Parkinsonâ€™s disease and freezing of gait. Gait and Posture, 2019, 72, 188-194.	0.6	8
13	Glenohumeral joint dynamics and shoulder muscle activity during geared manual wheelchair propulsion on carpeted floor in individuals with spinal cord injury. Journal of Electromyography and Kinesiology, 2019, 62, 102318.	0.7	3
14	Effects of simulated firefighting and asymmetric load carriage on firefighter obstacle crossing performance. Applied Ergonomics, 2018, 70, 59-67.	1.7	8
15	Design and analysis of coiled fiber reinforced soft pneumatic actuator. Bioinspiration and Biomimetics, 2018, 13, 036010.	1.5	17
16	Assessing gait changes in firefighters after firefighting activities and while carrying asymmetric loads. Applied Ergonomics, 2018, 70, 44-50.	1.7	18
17	Impact of SCBA size and firefighting work cycle on firefighter functional balance. Applied Ergonomics, 2018, 69, 112-119.	1.7	15
18	Impact of SCBA size and fatigue from different firefighting work cycles on firefighter gait. Ergonomics, 2018, 61, 1208-1215.	1.1	8

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19	Physiological response to firefighting activities of various work cycles using extended duration and prototype SCBA. <i>Ergonomics</i> , 2018, 61, 390-403.	1.1	19
20	Six-Minute Walk Test Performance in Persons With Multiple Sclerosis While Using Passive or Powered Ankle-Foot Orthoses. <i>Archives of Physical Medicine and Rehabilitation</i> , 2018, 99, 484-490.	0.5	18
21	Augmented Joint Stiffness and Actuation Using Architectures of Soft Pneumatic Actuators. , 2018, , .		6
22	A Neuromechanical Model of Reduced Dorsiflexor Torque During the Anticipatory Postural Adjustments of Gait Initiation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2018, 26, 2210-2216.	2.7	7
23	Validation of a Wearable Position, Velocity, and Resistance Meter for Assessing Spasticity and Rigidity. , 2018, , .		4
24	Revised Design of a Passive Hydraulic Training Simulator of Biceps Spasticity. , 2018, , .		1
25	Design and Evaluation of the PosturSense Cushion. , 2018, , .		0
26	Egress Efficacy of Persons with Multiple Sclerosis During Simulated Evacuations. <i>Fire Technology</i> , 2017, 53, 2007-2021.	1.5	3
27	Design of a Portable Position, Velocity, and Resistance Meter (PVRM) for Convenient Clinical Evaluation of Spasticity or Rigidity. , 2017, , .		5
28	Design and Biomechanical Evaluation Methodology of Pneumatic Ergonomic Crutch. , 2017, , .		4
29	Validation of an Instrumented Wheelchair Hand Rim. , 2017, , .		1
30	Detection of Gait Modes Using an Artificial Neural Network during Walking with a Powered Ankle-Foot Orthosis. <i>Journal of Biophysics</i> , 2016, 2016, 1-9.	0.8	24
31	Quantifying Dynamic Changes in Plantar Pressure Gradient in Diabetics with Peripheral Neuropathy. <i>Frontiers in Bioengineering and Biotechnology</i> , 2016, 4, 54.	2.0	28
32	Developing a Classification Algorithm for Plantarflexor Actuation Timing of a Powered Ankle-Foot Orthosis1. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2016, 10, .	0.4	2
33	Design and Analysis of Soft Pneumatic Sleeve for Arm Orthosis. , 2016, , .		5
34	Design of a Compact High-Torque Actuation System for Portable Powered Ankle-Foot Orthosis1. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2016, 10, .	0.4	2
35	Design of a Universal Instrumented Wheelchair Hand Rim1. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2016, 10, .	0.4	2
36	Gait State Estimation for a Powered Ankle Orthosis Using Modified Fractional Timing and Artificial Neural Network1. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2016, 10, .	0.4	3

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37	Inaccuracy of Affordance Judgments for Firefighters Wearing Personal Protective Equipment. <i>Ecological Psychology</i> , 2016, 28, 108-126.	0.7	17
38	Smoothing spline analysis of variance models: A new tool for the analysis of cyclic biomechanical data. <i>Journal of Biomechanics</i> , 2016, 49, 3216-3222.	0.9	18
39	Evaluation of a wrist orthosis on lofstrand crutch-assisted gait. , 2016, 2016, 5042-5045.		1
40	Design and Modeling of a Passive Hydraulic Device for Muscle Spasticity Simulation1. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2016, 10, .	0.4	2
41	Pneumatic Sleeve Orthosis for Lofstrand Crutches: Application of Soft Pneumatic FREE Actuator1. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2016, 10, .	0.4	2
42	Effects of aging and Parkinson's disease on joint coupling, symmetry, complexity and variability of lower limb movements during gait. <i>Clinical Biomechanics</i> , 2016, 33, 92-97.	0.5	24
43	Analysis of foot clearance in firefighters during ascent and descent of stairs. <i>Applied Ergonomics</i> , 2016, 52, 18-23.	1.7	22
44	Variability in Wheelchair Propulsion: A New Window into an Old Problem. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 105.	2.0	16
45	A modified SCBA facepiece for accurate metabolic data collection from firefighters. <i>Ergonomics</i> , 2015, 58, 148-159.	1.1	5
46	Physiological responses to simulated firefighter exercise protocols in varying environments. <i>Ergonomics</i> , 2015, 58, 1012-1021.	1.1	42
47	Effects of air bottle design on postural control of firefighters. <i>Applied Ergonomics</i> , 2015, 48, 49-55.	1.7	20
48	Fighting Fires Without Falling: Effects of Equipment Design and Fatigue on Firefighter's Balance and Gait. <i>Ecological Psychology</i> , 2014, 26, 167-175.	0.7	13
49	Relationship Between Shoulder Pain and Kinetic and Temporal-Spatial Variability in Wheelchair Users. <i>Archives of Physical Medicine and Rehabilitation</i> , 2014, 95, 699-704.	0.5	28
50	Shoulder Pain and Cycle to Cycle Kinematic Spatial Variability during Recovery Phase in Manual Wheelchair Users: A Pilot Investigation. <i>PLoS ONE</i> , 2014, 9, e89794.	1.1	12
51	Footfall Placement Variability and Falls in Multiple Sclerosis. <i>Annals of Biomedical Engineering</i> , 2013, 41, 1740-1747.	1.3	32
52	Technologies for Powered Ankle-Foot Orthotic Systems: Possibilities and Challenges. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013, 18, 337-347.	3.7	78
53	Modulation of anticipatory postural adjustments of gait using a portable powered ankle-foot orthosis. , 2013, 2013, 6650450.		8
54	Gait mode recognition and control for a portable-powered ankle-foot orthosis. , 2013, 2013, 6650373.		52

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55	Variability of peak shoulder force during wheelchair propulsion in manual wheelchair users with and without shoulder pain. <i>Clinical Biomechanics</i> , 2013, 28, 967-972.	0.5	35
56	Fuel efficiency of a Portable Powered Ankle-Foot Orthosis. , 2013, , .		6
57	Modeling Control Adaptations During Recovery From Anterior Cruciate Ligament Reconstruction. , 2013, , .		0
58	Kinetic and kinematic analysis of the right hind limb during trotting on a treadmill in Labrador Retrievers presumed predisposed or not predisposed to cranial cruciate ligament disease. <i>American Journal of Veterinary Research</i> , 2012, 73, 1171-1177.	0.3	16
59	Filtering with rhythms: Application to estimation of gait cycle. , 2012, , .		18
60	An Evaluation of an Automatic Gear-shifting System for Manual Wheelchairs. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2012, 6, .	0.4	1
61	Gait Mode Recognition Using an Inertial Measurement Unit to Control an Ankle-Foot Orthosis During Stair Ascent and Descent. , 2012, , .		5
62	Portable Pneumatically-Powered Ankle-Foot Orthosis. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2012, 6, .	0.4	2
63	Fluid-Power Harvesting by Under-Foot Bellows During Human Gait. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2012, 134, .	0.8	2
64	Improving Regions of Deviation Gait Symmetry Analysis With Pointwise t Tests. <i>Journal of Applied Biomechanics</i> , 2012, 28, 210-214.	0.3	4
65	Characterization of spatiotemporally complex gait patterns using cross-correlation signatures. <i>Gait and Posture</i> , 2012, 36, 120-126.	0.6	21
66	Pelvic Limb Kinetic and Kinematic Analysis in Labrador Retrievers Predisposed or at a Low Risk for Cranial Cruciate Ligament Disease. <i>Veterinary Surgery</i> , 2012, 41, 973-982.	0.5	10
67	Modeling, control, and analysis of a robotic assist device. <i>Mechatronics</i> , 2012, 22, 1067-1077.	2.0	6
68	Invariant Density Analysis: Modeling and Analysis of the Postural Control System Using Markov Chains. <i>IEEE Transactions on Biomedical Engineering</i> , 2012, 59, 1094-1100.	2.5	12
69	Simulation and Experimental Analysis of a Portable Powered Ankle-Foot Orthosis Control. , 2011, , .		1
70	Estimating System State During Human Walking With a Powered Ankle-Foot Orthosis. <i>IEEE/ASME Transactions on Mechatronics</i> , 2011, 16, 835-844.	3.7	30
71	Methods to temporally align gait cycle data. <i>Journal of Biomechanics</i> , 2011, 44, 561-566.	0.9	65
72	Assessing gait changes in firefighters due to fatigue and protective clothing. <i>Safety Science</i> , 2011, 49, 719-726.	2.6	61

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73	Experimental evaluation of a portable powered ankle-foot orthosis. , 2011, 2011, 624-7.		14
74	Actuation Timing Strategies for a Portable Powered Ankle Foot Orthosis. , 2011, , .		0
75	Tiny hydraulics for powered orthotics. , 2011, 2011, 5975473.		10
76	A portable powered ankle-foot orthosis for rehabilitation. Journal of Rehabilitation Research and Development, 2011, 48, 459.	1.6	136
77	Measuring Robustness of the Postural Control System to a Mild Impulsive Perturbation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2010, 18, 461-467.	2.7	32
78	Inverse Dynamics Analysis of the Pelvic Limbs in Labrador Retrievers With and Without Cranial Cruciate Ligament Disease. Veterinary Surgery, 2010, 39, 513-522.	0.5	52
79	A Review of New Analytic Techniques for Quantifying Symmetry in Locomotion. Symmetry, 2010, 2, 1135-1155.	1.1	28
80	Effect of load carriage on gait due to firefighting air bottle configuration. Ergonomics, 2010, 53, 882-891.	1.1	62
81	Quantifying complexity and variability in phase portraits of gait. Clinical Biomechanics, 2010, 25, 552-556.	0.5	22
82	Improving Net Joint Torque Calculations Through a Two-Step Optimization Method for Estimating Body Segment Parameters. Journal of Biomechanical Engineering, 2009, 131, 011007.	0.6	16
83	A pneumatic power harvesting ankle-foot orthosis to prevent foot-drop. Journal of NeuroEngineering and Rehabilitation, 2009, 6, 19.	2.4	66
84	Examining Quiet Standing Center of Pressure Data Using Invariant Density Analysis. , 2009, , .		0
85	Quantifying Complexity and Variability of Gait Phase Portraits. , 2009, , .		0
86	Improving joint torque calculations: Optimization-based inverse dynamics to reduce the effect of motion errors. Journal of Biomechanics, 2008, 41, 1503-1509.	0.9	14
87	Design and optimization of a biomechanical energy harvesting device. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	14
88	Biomechanical and age-related differences in balance recovery using the tether-release method. Journal of Electromyography and Kinesiology, 2008, 18, 179-187.	0.7	64
89	Generalizability of Stabilogram Diffusion Analysis of center of pressure measures. Gait and Posture, 2008, 27, 223-230.	0.6	33
90	Uncertainties in inverse dynamics solutions: A comprehensive analysis and an application to gait. Gait and Posture, 2008, 27, 578-588.	0.6	107

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91	A new approach to detecting asymmetries in gait. <i>Clinical Biomechanics</i> , 2008, 23, 459-467.	0.5	67
92	Balance (perceived and actual) and preferred stance width during pregnancy. <i>Clinical Biomechanics</i> , 2008, 23, 468-476.	0.5	89
93	Noninvasive determination of body segment parameters of the hind limb in Labrador Retrievers with and without cranial cruciate ligament disease. <i>American Journal of Veterinary Research</i> , 2008, 69, 1188-1196.	0.3	15
94	Fluid-Power Harvesting by Pneumatic Bellow During Human Gait. , 2008, , .		1
95	Portable Pneumatic Power-Harvesting Ankle-Foot-Orthosis. , 2008, , .		1
96	Biomechanics of aggressive inline skating: Landing and balancing on a grind rail. <i>Journal of Sports Sciences</i> , 2007, 25, 1411-1422.	1.0	3
97	The effect of step length on young and elderly women's ability to recover balance. <i>Clinical Biomechanics</i> , 2007, 22, 574-580.	0.5	91
98	Generalizability of center of pressure measures of quiet standing. <i>Gait and Posture</i> , 2007, 25, 166-171.	0.6	152
99	Effect of Tai Chi on gait and obstacle crossing behaviors in middle-aged adults. <i>Gait and Posture</i> , 2007, 26, 248-255.	0.6	34
100	Effect of combined Taiji and Qigong training on balance mechanisms: a randomized controlled trial of older adults. <i>Medical Science Monitor</i> , 2007, 13, CR339-48.	0.5	25
101	Postural and eye-blink indices of the defensive startle reflex. <i>International Journal of Psychophysiology</i> , 2005, 55, 45-49.	0.5	21
102	Tai Chi Affects Gait and Obstacle Crossing Behaviors. <i>Medicine and Science in Sports and Exercise</i> , 2004, 36, S46.	0.2	0
103	Tai Chi Affects Gait and Obstacle Crossing Behaviors. <i>Medicine and Science in Sports and Exercise</i> , 2004, 36, S46.	0.2	0
104	Predicting the dynamic postural control response from quiet-stance behavior in elderly adults. <i>Journal of Biomechanics</i> , 2003, 36, 1327-1333.	0.9	51
105	Biomechanical influences on balance recovery by stepping. <i>Journal of Biomechanics</i> , 1999, 32, 1099-1106.	0.9	82
106	Common protective movements govern unexpected falls from standing height. <i>Journal of Biomechanics</i> , 1997, 31, 1-9.	0.9	194