Hermano Igo Krebs

List of Publications by Year
in descending order

74 papers	3,911 citations	236612 25 h-index	223531 46 g-index
74 all docs	74 docs citations	74 times ranked	3147 citing authors

#	Article	IF	Citations
1	Movement Smoothness Changes during Stroke Recovery. Journal of Neuroscience, 2002, 22, 8297-8304.	1.7	608
2	Robot-Aided Neurorehabilitation: A Robot for Wrist Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2007, 15, 327-335.	2.7	447
3	Robot-Aided Neurorehabilitation: A Novel Robot for Ankle Rehabilitation. IEEE Transactions on Robotics, 2009, 25, 569-582.	7.3	430
4	Kinematic Robot-Based Evaluation Scales and Clinical Counterparts to Measure Upper Limb Motor Performance in Patients With Chronic Stroke. Neurorehabilitation and Neural Repair, 2010, 24, 62-69.	1.4	234
5	Comparison of Two Techniques of Robot-Aided Upper Limb Exercise Training After Stroke. American Journal of Physical Medicine and Rehabilitation, 2004, 83, 720-728.	0.7	164
6	Multivariable Dynamic Ankle Mechanical Impedance With Active Muscles. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 971-981.	2.7	139
7	Submovements Grow Larger, Fewer, and More Blended during Stroke Recovery. Motor Control, 2004, 8, 472-483.	0.3	131
8	EMG-based pattern recognition approach in post stroke robot-aided rehabilitation: a feasibility study. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 75.	2.4	130
9	Summary of Human Ankle Mechanical Impedance During Walking. IEEE Journal of Translational Engineering in Health and Medicine, 2016, 4, 1-7.	2.2	109
10	A comparison of functional and impairment-based robotic training in severe to moderate chronic stroke: A pilot study. NeuroRehabilitation, 2008, 23, 81-87.	0.5	107
11	Robot-Assisted Therapy in Upper Extremity Hemiparesis: Overview of an Evidence-Based Approach. Frontiers in Neurology, 2019, 10, 412.	1.1	103
12	Multivariable Dynamic Ankle Mechanical Impedance With Relaxed Muscles. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 1104-1114.	2.7	102
13	Therapeutic Robotics: A Technology Push. Proceedings of the IEEE, 2006, 94, 1727-1738.	16.4	100
14	Ankle Training With a Robotic Device Improves Hemiparetic Gait After a Stroke. Neurorehabilitation and Neural Repair, 2011, 25, 369-377.	1.4	97
15	A working model of stroke recovery from rehabilitation robotics practitioners. Journal of NeuroEngineering and Rehabilitation, 2009, 6, 6.	2.4	81
16	Robot-Aided Neurorehabilitation: A Pediatric Robot for Ankle Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 1056-1067.	2.7	76
17	Stochastic Estimation of Arm Mechanical Impedance During Robotic Stroke Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2007, 15, 94-103.	2.7	74
18	A comparison of functional and impairment-based robotic training in severe to moderate chronic stroke: a pilot study. NeuroRehabilitation, 2008, 23, 81-7.	0.5	53

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19	Feasibility Study of a Wearable Exoskeleton for Children: Is the Gait Altered by Adding Masses on Lower Limbs?. PLoS ONE, 2013, 8, e73139.	1.1	52
20	Modular Ankle Robotics Training in Early Subacute Stroke. Neurorehabilitation and Neural Repair, 2014, 28, 678-687.	1.4	42
21	Real-Time Identification of Gait Events in Impaired Subjects Using a Single-IMU Foot-Mounted Device. IEEE Sensors Journal, 2020, 20, 2616-2624.	2.4	37
22	A Soft Pneumatic Actuator as a Haptic Wearable Device for Upper Limb Amputees: Toward a Soft Robotic Liner. IEEE Robotics and Automation Letters, 2019, 4, 17-24.	3.3	36
23	An Electrorheological Fluid Actuator for Rehabilitation Robotics. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2156-2167.	3.7	33
24	Improved grasp function with transcranial direct current stimulation in chronic spinal cord injury. NeuroRehabilitation, 2017, 41, 51-59.	0.5	30
25	Assist-as-needed in lower extremity robotic therapy for children with cerebral palsy. , 2012, , .		29
26	On the Origin of Muscle Synergies: Invariant Balance in the Co-activation of Agonist and Antagonist Muscle Pairs. Frontiers in Bioengineering and Biotechnology, 2015, 3, 192.	2.0	26
27	Robotic Therapy and Botulinum Toxin Type A. American Journal of Physical Medicine and Rehabilitation, 2008, 87, 1022-1026.	0.7	25
28	MIT-Skywalker. , 2009, , .		24
29	MIT-Skywalker: considerations on the Design of a Body Weight Support System. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 88.	2.4	22
30	Pointing with the ankle: the speed-accuracy trade-off. Experimental Brain Research, 2014, 232, 647-657.	0.7	20
31	Serious Games for the Pediatric Anklebot. , 2012, , .		19
32	Macro-Mini Linear Actuator Using Electrorheological-Fluid Brake for Impedance Modulation in Physical Humanâ€"Robot Interaction. IEEE Robotics and Automation Letters, 2022, 7, 2945-2952.	3.3	18
33	A Comparative Analysis of Speed Profile Models for Wrist Pointing Movements. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2013, 21, 756-766.	2.7	16
34	A Comparative Analysis of Speed Profile Models for Ankle Pointing Movements: Evidence that Lower and Upper Extremity Discrete Movements are Controlled by a Single Invariant Strategy. Frontiers in Human Neuroscience, 2014, 8, 962.	1.0	16
35	Pediatric robotic rehabilitation: Current knowledge and future trends in treating children with sensorimotor impairments. NeuroRehabilitation, 2017, 41, 69-76.	0.5	16
36	Intensive seated robotic training of the ankle in patients with chronic stroke differentially improves gait. NeuroRehabilitation, 2017, 41, 61-68.	0.5	15

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37	Static ankle impedance in stroke and multiple sclerosis: A feasibility study. , 2011, 2011, 8523-6.		14
38	Upper limb robot-assisted therapy: A new option for children with hemiplegia1. Technology and Disability, 2010, 22, 193-198.	0.3	13
39	Linear Time-Varying Identification of Ankle Mechanical Impedance During Human Walking. , 2012, , .		13
40	MIT-Skywalker: A novel environment for neural gait rehabilitation. , 2014, , .		13
41	Reaction time in ankle movements: a diffusion model analysis. Experimental Brain Research, 2014, 232, 3475-3488.	0.7	12
42	Robotics: A Rehabilitation Modality. Current Physical Medicine and Rehabilitation Reports, 2015, 3, 243-247.	0.3	11
43	Robotic Therapy and the Paradox of the Diminishing Number of Degrees of Freedom. Physical Medicine and Rehabilitation Clinics of North America, 2015, 26, 691-702.	0.7	11
44	Twenty + years of robotics for upper-extremity rehabilitation following a stroke. , 2018, , 175-192.		11
45	Interlimb coordination in body-weight supported locomotion: A pilot study. Journal of Biomechanics, 2015, 48, 2837-2843.	0.9	10
46	Human-Robot Interaction: Controller Design and Stability. , 2020, , .		10
47	Sleep deprivation affects gait control. Scientific Reports, 2021, 11, 21104.	1.6	10
48	Directional Variation of Active and Passive Ankle Static Impedance. , 2009, , .		9
49	Feasibility of entrainment with ankle mechanical perturbation to treat locomotor deficit of neurologically impaired patients. , 2011, 2011, 7474-7.		9
50	Hand rehabilitation using Soft-Robotics. , 2016, , .		9
51	Robotic Arm Rehabilitation in Chronic Stroke Patients With Aphasia May Promote Speech and Language Recovery (but Effect Is Not Enhanced by Supplementary tDCS). Frontiers in Neurology, 2018, 9, 853.	1.1	9
52	The Multi-Variable Torque-Displacement Relation at the Ankle. , 2009, , .		8
53	A novel characterization method to study multivariable joint mechanical impedance. , 2012, , .		8
54	On the control of the MIT-Skywalker. , 2010, 2010, 1287-91.		7

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55	Multi-directional Dynamic Mechanical Impedance of the Human Ankle; A Key to Anthropomorphism in Lower Extremity Assistive Robots. Trends in Augmentation of Human Performance, 2014, , 157-178.	0.4	7
56	Work in the Time of Covid-19: Actuators and Sensors for Rehabilitation Robotics. IEEJ Journal of Industry Applications, 2022, 11, 256-265.	0.9	7
57	On a unique fellow and a good friend: Celebrating the life of Stefan Hesse and his contributions to rehabilitation robotics, 1960â€“2016. NeuroRehabilitation, 2017, 41, 1-3.	0.5	6
58	Effects of supraspinal feedback on human gait: rhythmic auditory distortion. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 159.	2.4	6
59	Equilibrium point-based control of muscle-driven anthropomorphic legs reveals modularity of human motor control during pedalling. Advanced Robotics, 2020, 34, 328-342.	1.1	6
60	Robotic biomarkers in RETT Syndrome: Evaluating stiffness. , 2016, , .		5
61	Modeling reaction time in the ankle. , 2014, , .		4
62	Interpretation of the Directional Properties of Voluntarily Modulated Human Ankle Mechanical Impedance. , 2010, , .		3
63	Pediatric Anklebot: Pilot clinical trial. , 2016, , .		3
64	Electrical Stimulation to Modulate Human Ankle Impedance: Effects of Intervention on Balance Control in Quiet and Perturbed Stances. , 2020, , .		3
65	Beyond Human or Robot Administered Treadmill Training. , 2016, , 409-433.		3
66	Cycle variance: proposing a novel ensemble-based approach to assess the gait rhythmicity on the MIT-Skywalker. , 2015, , .		2
67	Multivariable passive ankle impedance in stroke patients: A preliminary study. Journal of Biomechanics, 2022, 130, 110829.	0.9	2
68	Experimental assessment of gait with rhythmic auditory perturbations. , 2014, , .		1
69	Analysis of the anklebot training as a method for reducing lower-limb paretic impairment a case study in electromyography. , 2015, , .		1
70	Equilibrium-point-based synergies that encode coordinates in task space: A practical method for translating functional synergies from human to musculoskeletal robot arm. , 2016, , .		1
71	Headset design to accommodate four-pole galvanic vestibular stimulation. , 2016, , .		1
72	Robotic knee orthosis to prevent falling during a standing up assistance. , 2020, , .		1

#	Article	IF	Citations
73	Beyond Human or Robot Administered Treadmill Training. , 2012, , 233-252.		1
74	The effects of galvanic vestibular stimulation and vision on perception of ground inclination. , 2016, , .		0