Sunil Agrawal

List of Publications by Year
in descending order

208 papers	4,359 citations	182225 30 h-index	182931 54 g-index
210 all docs	210 docs citations	210 times ranked	3320 citing authors

#	Article	IF	Citations
1	Robotic upright stand trainer (RobUST) and postural control in individuals with spinal cord injury. Journal of Spinal Cord Medicine, 2023, 46, 889-899.	0.7	3
2	A Bioinspired Soft Swallowing Gripper for Universal Adaptable Grasping. Soft Robotics, 2022, 9, 36-56.	4.6	25
3	Transductive Learning Models for Accurate Ambulatory Gait Analysis in Elderly Residents of Assisted Living Facilities. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2022, 30, 124-134.	2.7	13
4	Active Soft Brace for Scoliotic Spine: A Finite Element Study to Evaluate in-Brace Correction. Robotics, 2022, 11, 37.	2.1	3
5	The Effect of Transcutaneous Spinal Cord Stimulation on Standing Postural Control in Healthy Adults. IEEE Robotics and Automation Letters, 2022, 7, 8268-8275.	3.3	2
6	Changes in Gait Parameters Due to Visual and Head Oscillations in Football Players and Non-Athletes. IEEE Robotics and Automation Letters, 2022, 7, 7171-7176.	3.3	4
7	Change in Muscle Synergies During Stairmill Ascent With External Forces on the Pelvis. IEEE Robotics and Automation Letters, 2022, 7, 7247-7254.	3.3	1
8	Effects of Localized Leg Muscle Vibration Timed to Gait Cycle Percentage During Overground Walking. IEEE Robotics and Automation Letters, 2022, 7, 7156-7162.	3.3	0
9	Reactive Postural Control During Sit-to-Stand Motion. IEEE Robotics and Automation Letters, 2022, 7, 7185-7192.	3.3	2
10	Throwing Strategy in a Dual-Motor-Task of Aiming at the Bullseye While Walking in Virtual Reality. IEEE Robotics and Automation Letters, 2022, 7, 9091-9098.	3.3	2
11	Phase I <scp>Single‐Blinded</scp> Randomized Controlled Trial Comparing Balance and Aerobic Training in Degenerative Cerebellar Disease. PM and R, 2021, 13, 364-371.	0.9	5
12	Postural Control Strategies in Standing With Handrail Support and Active Assistance From Robotic Upright Stand Trainer (RobUST). IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1424-1431.	2.7	5
13	Cable-driven systems for robotic rehabilitation. , 2021, , 135-163.		1
14	Hearing Loss Is Associated with Increased Variability in Double Support Period in the Elderly. Sensors, 2021, 21, 278.	2.1	7
15	Stability During Stairmill Ascent With Upward and Downward Applied Forces on the Pelvis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1504-1512.	2.7	2
16	RATS: A Robotic Arm Training System Designed for Rats. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	0
17	Geometric Constraint-Based Reconfiguration and Self-Motions of a Four-CRU Parallel Mechanism. Journal of Mechanisms and Robotics, 2021, 13, .	1.5	6
18	Overground gait training using virtual reality aimed at gait symmetry. Human Movement Science, 2021, 76, 102770.	0.6	8

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19	Evaluating the Accuracy of Virtual Reality Trackers for Computing Spatiotemporal Gait Parameters. Sensors, 2021, 21, 3325.	2.1	7
20	Acute Effects of a Perturbation-Based Balance Training on Cognitive Performance in Healthy Older Adults: A Pilot Study. Frontiers in Sports and Active Living, 2021, 3, 688519.	0.9	4
21	Continuous Identification of Freezing of Gait in Parkinsonâ€™s Patients Using Artificial Neural Networks and Instrumented Shoes. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 554-562.	2.1	4
22	Artificial intelligence application versus physical therapist for squat evaluation: a randomized controlled trial. Scientific Reports, 2021, 11, 18109.	1.6	6
23	A dynamic model for the optimization of rotary feeding devices. Mechanism and Machine Theory, 2021, 166, 104479.	2.7	3
24	A novel neck brace to characterize neck mobility impairments following neck dissection in head and neck cancer patients. Wearable Technologies, 2021, 2, .	1.6	1
25	Passive knee exoskeletons in functional tasks: Biomechanical effects of a *SpringExo* coil-spring on squats. Wearable Technologies, 2021, 2, .	1.6	10
26	Artificial Neural Networks to Solve Forward Kinematics of a Wearable Parallel Robot with Semi-rigid Links. , 2021, , .		2
27	Feasibility and tolerance of a robotic postural training to improve standing in a person with ambulatory spinal cord injury. Spinal Cord Series and Cases, 2021, 7, 94.	0.3	3
28	Optimal time lags from causal prediction model help stratify and forecast nervous system pathology. Scientific Reports, 2021, 11, 20904.	1.6	7
29	Systematic Review of Back-Support Exoskeletons and Soft Robotic Suits. Frontiers in Bioengineering and Biotechnology, 2021, 9, 765257.	2.0	37
30	Exploring New Potential Applications for Hand Exoskeletons: Power Grip to Assist Human Standing. Sensors, 2021, 21, 30.	2.1	6
31	Wireless monitoring and artificial intelligence: A bright future in cardiothoracic surgery. Journal of Thoracic and Cardiovascular Surgery, 2020, 160, 809-812.	0.4	6
32	Validation of a Forward Kinematics Based Controller for a mobile Tethered Pelvic Assist Device to Augment Pelvic Forces during Walking. , 2020, , .		8
33	Age-related differences in gait adaptations during overground walking with and without visual perturbations using a virtual reality headset. Scientific Reports, 2020, 10, 15376.	1.6	24
34	Gait Adaptation Using a Cable-Driven Active Leg Exoskeleton (C-ALEX) With Post-Stroke Participants. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1984-1993.	2.7	37
35	Identification of Freezing of Gait in Parkinsonâ€™s Patients Using Instrumented Shoes and Artificial Neural Networks. , 2020, , .		3
36	Bio-Inspired Gaze-Driven Robotic Neck Brace. , 2020, , .		3

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37	Human Activity Recognition Using Recurrent Neural Network Classifiers on Raw Signals from Insole Piezoresistors. , 2020, , .		6
38	Promoting Functional and Independent Sitting in Children With Cerebral Palsy Using the Robotic Trunk Support Trainer. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 2995-3004.	2.7	18
39	Prediction of Gait Cycle Percentage Using Instrumented Shoes with Artificial Neural Networks. , 2020, , .		12
40	Introducing Wearable Technologies: An open access journal focused on the design, control and mechanics of wearable devices. Wearable Technologies, 2020, 1, .	1.6	0
41	Control Mechanisms in Standing while Simultaneously Receiving Perturbations and Active Assistance from the Robotic Upright Stand Trainer (RobUST). , 2020, , .		8
42	Lower-Limb Strategy Assessment during a Virtual Reality based Dual-Motor-Task. , 2020, , .		3
43	Dual-Motor-Task of Catching and Throwing a Ball During Overground Walking in Virtual Reality. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 1661-1667.	2.7	7
44	Biomechanical differences during ascent on regular stairs and on a stairmill. Journal of Biomechanics, 2020, 104, 109758.	0.9	8
45	Characterizing Torso Stiffness in Female Adolescents With and Without Scoliosis. IEEE Robotics and Automation Letters, 2020, 5, 1634-1641.	3.3	11
46	Optimal Design of a Novel 3-DOF Orientational Parallel Mechanism for Pelvic Assistance on a Wheelchair: An Approach Based on Kinematic Geometry and Screw Theory. IEEE Robotics and Automation Letters, 2020, 5, 3315-3322.	3.3	10
47	Phase I randomized single-blinded controlled study investigating the potential benefit of aerobic exercise in degenerative cerebellar disease. Clinical Rehabilitation, 2020, 34, 584-594.	1.0	10
48	Inertial sensors-based torso motion mode recognition for an active postural support brace. Advanced Robotics, 2020, 34, 57-67.	1.1	4
49	The robotic Trunk-Support-Trainer (TruST) to measure and increase postural workspace during sitting in people with spinal cord injury. Spinal Cord Series and Cases, 2020, 6, 1.	0.3	24
50	Energy Regeneration From Electromagnetic Induction by Human Dynamics for Lower Extremity Robotic Prostheses. IEEE Transactions on Robotics, 2020, 36, 1442-1451.	7.3	18
51	Applying Force Perturbations Using a Wearable Robotic Neck Brace. , 2020, , .		5
52	Effects of a Person-Following Light-Touch Device During Overground Walking With Visual Perturbations in a Virtual Reality Environment. IEEE Robotics and Automation Letters, 2019, 4, 4139-4146.	3.3	14
53	Stand Trainer With Applied Forces at the Pelvis and Trunk: Response to Perturbations and Assist-As-Needed Support. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1855-1864.	2.7	17
54	A robotic neck brace to characterize head–neck motion and muscle electromyography in subjects with amyotrophic lateral sclerosis. Annals of Clinical and Translational Neurology, 2019, 6, 1671-1680.	1.7	12

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55	Walking With Augmented Reality: A Preliminary Assessment of Visual Feedback With a Cable-Driven Active Leg Exoskeleton (C-ALEX). IEEE Robotics and Automation Letters, 2019, 4, 3948-3954.	3.3	12
56	Walking With a Weighted Pelvic Belt or With an Equivalent Pure Downward Force on the Pelvis: Are These Different?. IEEE Robotics and Automation Letters, 2019, 4, 309-314.	3.3	0
57	Development of a Virtual Floor Maze Test - Effects of Distal Visual Cues and Correlations With Executive Function in Healthy Adults. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 2229-2236.	2.7	11
58	Using a Robotic Neck Brace for Movement Training of the Head–Neck. IEEE Robotics and Automation Letters, 2019, 4, 846-853.	3.3	11
59	Human Evaluation of Wheelchair Robot for Active Postural Support (WRAPS). Robotica, 2019, 37, 2132-2146.	1.3	8
60	Effects of repeated waist-pull perturbations on gait stability in subjects with cerebellar ataxia. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 50.	2.4	10
61	Gait Segmentation of Data Collected by Instrumented Shoes Using a Recurrent Neural Network Classifier. Physical Medicine and Rehabilitation Clinics of North America, 2019, 30, 355-366.	0.7	20
62	Simulating Hemiparetic Gait in Healthy Subjects Using TPAD With a Closed-Loop Controller. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 974-983.	2.7	5
63	Design of a Wheelchair Robot for Active Postural Support. Journal of Mechanisms and Robotics, 2019, 11, .	1.5	11
64	Using the Motion of the Head-Neck as a Joystick for Orientation Control. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 236-243.	2.7	6
65	Special Issue on Wearable Robotics: Dynamics, Control and Applications. Robotica, 2019, 37, 2011-2013.	1.3	1
66	Gait adaptations during overground walking and multidirectional oscillations of the visual field in a virtual reality headset. Gait and Posture, 2019, 67, 251-256.	0.6	38
67	Robotic Spine Exoskeleton (RoSE): Characterizing the 3-D Stiffness of the Human Torso in the Treatment of Spine Deformity. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1026-1035.	2.7	23
68	A spring-loaded compliant neck brace with adjustable supports. Mechanism and Machine Theory, 2018, 125, 34-44.	2.7	14
69	Retraining of Human Gait - Are Lightweight Cable-Driven Leg Exoskeleton Designs Effective?. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 847-855.	2.7	40
70	Improving Trunk-Pelvis Stability Using Active Force Control at the Trunk and Passive Resistance at the Pelvis. IEEE Robotics and Automation Letters, 2018, 3, 2569-2576.	3.3	10
71	Force tracking control of an electro-hydraulic control loading system on a flight simulator using inverse model control and a damping compensator. Transactions of the Institute of Measurement and Control, 2018, 40, 135-147.	1.1	13
72	An Active Neck Brace Controlled by a Joystick to Assist Head Motion. IEEE Robotics and Automation Letters, 2018, 3, 37-43.	3.3	26

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73	Effects of Viscous Damping on Differential Flatness-Based Control for a Class of Under-Actuated Planar Manipulators. , 2018, 2, 67-72.		5
74	Design and implementation of a novel modal space active force control concept for spatial multi-DOF parallel robotic manipulators actuated by electrical actuators. ISA Transactions, 2018, 72, 273-286.	3.1	18
75	Modal Decoupled Dynamics-Velocity Feed-Forward Motion Control of Multi-DOF Robotic Spine Brace. IEEE Access, 2018, 6, 65286-65297.	2.6	3
76	PD CONTROL WITH DESIRED GRAVITY COMPENSATION FOR A NOVEL DYNAMIC BRACE. Journal of Mechanics in Medicine and Biology, 2018, 18, 1840005.	0.3	1
77	Concept design of a novel robotic spinal brace for the treatment of scoliosis. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2018, 232, 1230-1244.	1.0	2
78	Comparing the Performance of a Cable-Driven Active Leg Exoskeleton (C-ALEX) Over-Ground and on a Treadmill. , 2018, , .		9
79	A Perturbation-based Gait Training with Multidirectional Waist-Pulls Generalizes to Split-Belt Treadmill Slips. , 2018, , .		8
80	Smart Crutches: Towards Instrumented Crutches for Rehabilitation and Exoskeletons-Assisted Walking. , 2018, , .		11
81	Walking with a Weighted Pelvic Belt or with an Equivalent Pure Downward Force on the Pelvis: Are These Different?. , 2018, , .		0
82	Emotion Rendering in Plantar Vibro-Tactile Simulations of Imagined Walking Styles. IEEE Transactions on Affective Computing, 2017, 8, 340-354.	5.7	13
83	A novel functional calibration method for real-time elbow joint angles estimation with magnetic-inertial sensors. Journal of Biomechanics, 2017, 54, 106-110.	0.9	35
84	Design and Optimal Control of an Underactuated Cable-Driven Micro–Macro Robot. IEEE Robotics and Automation Letters, 2017, 2, 896-903.	3.3	25
85	Variable Damping Force Tunnel for Gait Training Using ALEX III. IEEE Robotics and Automation Letters, 2017, 2, 1495-1501.	3.3	18
86	On the Adaptation of Pelvic Motion by Applying 3-dimensional Guidance Forces Using TPAD. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1558-1567.	2.7	17
87	Kinematic Design of a Dynamic Brace for Measurement of Head/Neck Motion. IEEE Robotics and Automation Letters, 2017, 2, 1428-1435.	3.3	30
88	Gait assessment with solesound instrumented footwear in spinal muscular atrophy. Muscle and Nerve, 2017, 56, 230-236.	1.0	20
89	Dizziness Handicap Inventory Score Is Highly Correlated With Markers of Gait Disturbance. Otology and Neurotology, 2017, 38, 1490-1499.	0.7	25
90	Robot-driven downward pelvic pull to improve crouch gait in children with cerebral palsy. Science Robotics, 2017, 2, .	9.9	45

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91	Effects of exoskeleton weight and inertia on human walking. , 2017, , .		28
92	Estimating CoP Trajectories and Kinematic Gait Parameters in Walking and Running Using Instrumented Insoles. IEEE Robotics and Automation Letters, 2017, 2, 2159-2165.	3.3	40
93	Robustness of a flatness based controller against parametric uncertainties for a class of under-actuated planar manipulators. , 2017, , .		2
94	Effects of Virtual Reality Training With Trunk Support Trainer (TruST) on Postural Kinematics. IEEE Robotics and Automation Letters, 2017, 2, 2240-2247.	3.3	9
95	Enhancing Seated Stability Using Trunk Support Trainer (TruST). IEEE Robotics and Automation Letters, 2017, 2, 1609-1616.	3.3	20
96	Exploration of Two Training Paradigms Using Forced Induced Weight Shifting With the Tethered Pelvic Assist Device to Reduce Asymmetry in Individuals After Stroke. American Journal of Physical Medicine and Rehabilitation, 2017, 96, S135-S140.	0.7	18
97	Walking With aBackpack Using Load Distribution and Dynamic Load Compensation Reduces Metabolic Cost and Adaptations to Loads. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1419-1430.	2.7	28
98	Adaptation of Stability during Perturbed Walking in Parkinson's Disease. Scientific Reports, 2017, 7, 17875.	1.6	33
99	Performance evaluation of a new design of cable-suspended camera system. , 2017, , .		4
100	Robotic Assist-As-Needed as an Alternative to Therapist-Assisted Gait Rehabilitation. International Journal of Physical Medicine & Rehabilitation, 2016, 4, .	0.5	24
101	Configuration Robustness Analysis of the Optimal Design of Cable-Driven Manipulators. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	3
102	Optimal Design of Cable-Driven Manipulators Using Particle Swarm Optimization. Journal of Mechanisms and Robotics, 2016, 8, 0410031-410038.	1.5	23
103	Reducing Dynamic Loads From a Backpack During Load Carriage Using an Upper Body Assistive Device. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	5
104	Motion Guidance for a Passive Robot Walking Helper via User's Applied Hand Forces. IEEE Transactions on Human-Machine Systems, 2016, 46, 869-881.	2.5	12
105	Robot-Enhanced Mobility Training of Children With Cerebral Palsy: Short-Term and Long-Term Pilot Studies. IEEE Systems Journal, 2016, 10, 1098-1106.	2.9	4
106	A Novel Approach to Apply Gait Synchronized External Forces on the Pelvis Using A-TPAD to Reduce Walking Effort. IEEE Robotics and Automation Letters, 2016, 1, 1118-1124.	3.3	20
107	Validation of a Footwear-Based Gait Analysis System With Action-Related Feedback. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 971-980.	2.7	33
108	Locomotor Adaptation to an Asymmetric Force on the Human Pelvis Directed Along the Right Leg. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 872-881.	2.7	16

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109	Direction-Dependent Adaptation of Dynamic Gait Stability Following Waist-Pull Perturbations. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 1304-1313.	2.7	39
110	Exploring laparoscopic surgery training with Cable-driven ARm EXoskeleton (CAREX-M). , 2015, , .		2
111	Second Spine: Upper Body Assistive Device for Human Load Carriage. Journal of Mechanisms and Robotics, 2015, 7, .	1.5	10
112	A human-robot interaction modeling approach for hand rehabilitation exoskeleton using biomechanical technique. , 2015, , .		7
113	Dynamic Modeling of Cable-Driven Parallel Manipulators With Distributed Mass Flexible Cables. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.0	43
114	Effect on wrench-feasible workspace of cable-driven parallel robots by adding springs. Mechanism and Machine Theory, 2015, 86, 201-210.	2.7	29
115	Assist-as-Needed Robot-Aided Gait Training Improves Walking Function in Individuals Following Stroke. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 956-963.	2.7	119
116	Design of a cable-driven active leg exoskeleton (C-ALEX) and gait training experiments with human subjects. , 2015, , .		74
117	Knee Joint Misalignment in Exoskeletons for the Lower Extremities: Effects on User's Gait. IEEE Transactions on Robotics, 2015, 31, 978-987.	7.3	134
118	A novel assist-as-needed control method to guide pelvic trajectory for gait rehabilitation. , 2015, , .		8
119	A passive swing-assistive planar external orthosis for gait training on treadmill. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2015, 37, 1-10.	0.8	12
120	Human Movement Training With a Cable Driven ARm EXoskeleton (CAREX). IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 84-92.	2.7	118
121	Short-term Performance-based Error-augmentation versus Error-reduction Robotic Gait Training for Individuals with Chronic Stroke: A Pilot Study. Physical Medicine and Rehabilitation International, 2015, 2, .	0.1	2
122	Guidance and obstacle avoidance of passive robot walking helper based on receding horizon control. , 2014, , .		2
123	Real-Time Estimation of Glenohumeral Joint Rotation Center With Cable-Driven Arm Exoskeleton (CAREX)â€"A Cable-Based Arm Exoskeleton. Journal of Mechanisms and Robotics, 2014, 6, 0145021-145025.	1.5	12
124	Active Tethered Pelvic Assist Device (A-TPAD) to study force adaptation in human walking. , 2014, , .		37
125	Second Spine: A device to relieve stresses on the upper body during loaded walking. , 2014, , .		4
126	SoleSound: Towards a novel portable system for audio-tactile underfoot feedback. , 2014, , .		22

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127	Parameter Design in Optimal Control Problems for Linear Dynamic Systems Using a Canonical Form. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2014, 136, .	0.9	0
128	Muscle Synergies of Untrained Subjects during 6 min Maximal Rowing on Slides and Fixed Ergometer. Journal of Sports Science and Medicine, 2014, 13, 793-800.	0.7	12
129	Walk-Assist Robot: A Novel Approach to Gain Selection of a Braking Controller Using Differential Flatness. IEEE Transactions on Control Systems Technology, 2013, 21, 2299-2305.	3.2	16
130	Differentially Flat Design of a Closed-Chain Planar Underactuated $\hbox{2}$ -DOF System. IEEE Transactions on Robotics, 2013, 29, 277-282.	7.3	7
131	Asymmetric adaptation in human walking using the Tethered Pelvic Assist Device (TPAD). , 2013, 2013, 6650385.		9
132	Force Adaptation in Human Walking With Symmetrically Applied Downward Forces on the Pelvis. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2013, 21, 969-978.	2.7	13
133	Design of a passive transfemoral prosthesis using differential flatness theory. , 2013, , .		2
134	Case studies of a robot enhanced walker for training of children with cerebral palsy. , 2013, , .		1
135	ALEX III: A novel robotic platform with 12 DOFs for human gait training. , 2013, , .		31
136	Differential flatness of a class of n–DOF planar manipulators driven by an arbitrary number of actuators. , 2013, , .		4
137	Robot-assisted gait training with complementary auditory feedback: Results on short-term motor adaptation. , 2012, , .		1
138	Kinematic design of an asymmetric in-phase flapping mechanism for MAVs. , 2012, , .		7
139	Transition from mechanical arm to human arm with CAREX: A cable driven ARm EXoskeleton (CAREX) for neural rehabilitation. , 2012, , .		21
140	Training Toddlers Seated on Mobile Robots to Steer Using Force-Feedback Joystick. IEEE Transactions on Haptics, 2012, 5, 376-383.	1.8	16
141	Feasibility study of robot enhanced mobility in children with cerebral palsy. , 2012, , .		9
142	Control of longitudinal or torsional vibration in a drill pipe/BHA using infinite dimensional techniques. , 2011, , .		1
143	Detection, motion planning and control of human tracking mobile robots. , 2011, , .		1
144	A cable driven upper arm exoskeleton for upper extremity rehabilitation. , 2011, , .		40

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145	Gravity Balancing of a Human Leg Using an External Orthosis. Journal of Medical Devices, Transactions of the ASME, 2011, 5, .	0.4	1
146	Differential-Flatness-Based Planning and Control of a Wheeled Mobile Manipulatorâ€"Theory and Experiment. IEEE/ASME Transactions on Mechatronics, 2011, 16, 768-773.	3.7	70
147	Modeling and Control of a 3-DOF pendulum-like manipulator. , 2011, , .		23
148	Design of a differentially flat 3R planar under-actuated manipulator with a single input at the second joint. , 2011, , .		0
149	Gait Recovery in Healthy Subjects: Perturbations to the Knee Motion with a Smart Knee Brace. Advanced Robotics, 2011, 25, 1857-1877.	1.1	6
150	Design of a Novel Mobility Interface for Infants on a Mobile Robot by Kicking. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	15
151	Robot-assisted modifications of gait in healthy individuals. Experimental Brain Research, 2010, 202, 809-824.	0.7	69
152	Planning and control of under-actuated mobile manipulators using differential flatness. Autonomous Robots, 2010, 29, 35-52.	3.2	29
153	Differentially flat mobile manipulators mounted with an under-actuated vertical arm. , 2010, , .		0
154	Wearable cable-driven upper arm exoskeleton - motion with transmitted joint force and moment minimization. , 2010, , .		8
155	An approach to posture control of free-falling twin bodies using differential flatness. , 2010, , .		0
156	Walk-assist robot: A novel approach to gain selection of a braking controller using differential flatness. , 2010, , .		3
157	A novel passive pelvic device for assistance during locomotion. , 2010, , .		11
158	Design of a Bio-Inspired Spherical Four-Bar Mechanism for Flapping-Wing Micro Air-Vehicle Applications. Journal of Mechanisms and Robotics, 2010, 2, .	1.5	25
159	Differentially Flat Designs of Underactuated Mobile Manipulators. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2010, 132, .	0.9	6
160	An Advanced Patient Lift and Transfer Device for the Home. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	15
161	Differential Flatness of a Class of n-DOF Planar Manipulators Driven by 1 or 2 Actuators. IEEE Transactions on Automatic Control, 2010, 55, 548-554.	3.6	22
162	Novel Gait Adaptation and Neuromotor Training Results Using an Active Leg Exoskeleton. IEEE/ASME Transactions on Mechatronics, 2010, 15, 216-225.	3.7	131

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163	Dynamic simulation and experimental validation of an upper extremity powered orthosis. , 2010, , .		5
164	On sufficient conditions to keep differential flatness under the addition of new inputs. International Journal of Control, 2010, 83, 829-836.	1.2	4
165	Control and path planning of a walk-assist robot using differential flatness. , 2010, , .		3
166	Development of insect thorax based flapping mechanism. , 2009, , .		14
167	Modeling and control of two-wheeled vehicles using active caster wheels. , 2009, , .		3
168	Design and Optimization of a Cable Driven Upper Arm Exoskeleton. Journal of Medical Devices, Transactions of the ASME, 2009, 3, .	0.4	38
169	Robot Assisted Gait Training With Active Leg Exoskeleton (ALEX). IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2009, 17, 2-8.	2.7	629
170	Dynamics and control of a 4-dof wearable cable-driven upper arm exoskeleton. , 2009, , .		56
171	Differentially Flat Designs of Underactuated Open-Chain Planar Robots. IEEE Transactions on Robotics, 2008, 24, 1445-1451.	7.3	41
172	Robot assisted gait training with active leg exoskeleton (ALEX). , 2008, , .		52
173	Design of differentially flat planar space robots and their planning and control. International Journal of Control, 2008, 81, 407-416.	1.2	2
174	Differentially flat design of under-actuated planar robots: Experimental results. , 2008, , .		6
175	Dynamic Modeling of Satellite Tether Systems Using Newton's Laws and Hamilton's Principle. Journal of Vibration and Acoustics, Transactions of the ASME, 2008, 130, .	1.0	13
176	Passive Swing Assistive Exoskeletons for Motor-Incomplete Spinal Cord Injury Patients. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	8
177	Design of a Novel Two Degree-of-Freedom Ankle-Foot Orthosis. Journal of Mechanical Design, Transactions of the ASME, 2007, 129, 1137-1143.	1.7	31
178	Differentially Flat Design of Bipeds Ensuring Limit-Cycles. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	11
179	Gravity Balancing of a Human Leg using an External Orthosis. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	3
180	An Energy Efficient Manipulator Design Approach: Application to a Leg in Swing Phase. Journal of Mechanical Design, Transactions of the ASME, 2007, 129, 512-519.	1.7	8

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181	Control of Longitudinal Flight Dynamics of a Flapping-Wing Micro Air Vehicle Using Time-Averaged Model and Differential Flatness Based Controller. Proceedings of the American Control Conference, 2007, , .	0.0	42
182	A Powered Leg Orthosis for Gait Rehabilitation of Motor-Impaired Patients. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	53
183	Exoskeletons for Gait Assistance and Training of the Motor-Impaired. , 2007, , .		14
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