Bram Vanderborght

List of Publications by Citations

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

302
papers
7,375
citations
40
h-index
g-index

336
ext. papers
9,323
ext. citations
3.2
avg, IF
L-index

#	Paper	IF	Citations
302	Variable impedance actuators: A review. <i>Robotics and Autonomous Systems</i> , 2013 , 61, 1601-1614	3.5	616
301	Compliant actuator designs. IEEE Robotics and Automation Magazine, 2009, 16, 81-94	3.4	514
300	MACCEPA, the mechanically adjustable compliance and controllable equilibrium position actuator: Design and implementation in a biped robot. <i>Robotics and Autonomous Systems</i> , 2007 , 55, 761-768	3.5	270
299	Self-healing soft pneumatic robots. <i>Science Robotics</i> , 2017 , 2,	18.6	224
298	Variable Stiffness Actuators: Review on Design and Components. <i>IEEE/ASME Transactions on Mechatronics</i> , 2016 , 21, 2418-2430	5.5	186
297	A compact soft actuator unit for small scale human friendly robots 2009,		126
296	Using the social robot probo as a social story telling agent for children with ASD. <i>Interaction Studies</i> , 2012 , 13, 348-372	1.3	126
295	The Pneumatic Biped Lucy[Actuated with Pleated Pneumatic Artificial Muscles. <i>Autonomous Robots</i> , 2005 , 18, 201-213	3	120
294	Variable stiffness actuators: The user point of view. <i>International Journal of Robotics Research</i> , 2015 , 34, 727-743	5.7	117
293	Comparison of Mechanical Design and Energy Consumption of Adaptable, Passive-compliant Actuators. <i>International Journal of Robotics Research</i> , 2009 , 28, 90-103	5.7	109
292	A novel actuator with adjustable stiffness (AwAS) 2010 ,		102
291	A Survey of Expectations About the Role of Robots in Robot-Assisted Therapy for Children with ASD: Ethical Acceptability, Trust, Sociability, Appearance, and Attachment. <i>Science and Engineering Ethics</i> , 2016 , 22, 47-65	3.1	101
2 90	Design and Validation of the Ankle Mimicking Prosthetic (AMP-) Foot 2.0. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2014 , 22, 138-48	4.8	101
289	Expressing Emotions with the Social Robot Probo. International Journal of Social Robotics, 2010, 2, 377-	3849	101
288	Proxy-based Sliding Mode Control of a Planar Pneumatic Manipulator. <i>International Journal of Robotics Research</i> , 2009 , 28, 266-284	5.7	82
287	Lock Your Robot: A Review of Locking Devices in Robotics. <i>IEEE Robotics and Automation Magazine</i> , 2015 , 22, 106-117	3.4	81
286	MACCEPA 2.0: compliant actuator used for energy efficient hopping robot Chobino1D. <i>Autonomous Robots</i> , 2011 , 31, 55-65	3	78

(2013-2017)

285	How to Build a Supervised Autonomous System for Robot-Enhanced Therapy for Children with Autism Spectrum Disorder. <i>Paladyn</i> , 2017 , 8, 18-38	2.3	77	
284	Passive Back Support Exoskeleton Improves Range of Motion Using Flexible Beams. <i>Frontiers in Robotics and AI</i> , 2018 , 5, 72	2.8	74	
283	Series and Parallel Elastic Actuation: Impact of natural dynamics on power and energy consumption. <i>Mechanism and Machine Theory</i> , 2016 , 102, 232-246	4	73	
282	Variable Recruitment of Parallel Elastic Elements: Series P arallel Elastic Actuators (SPEA) With Dephased Mutilated Gears. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015 , 20, 594-602	5.5	72	
281	Second generation pleated pneumatic artificial muscle and its robotic applications. <i>Advanced Robotics</i> , 2006 , 20, 783-805	1.7	68	
280	MACCEPA 2.0: Adjustable compliant actuator with stiffening characteristic for energy efficient hopping 2009 ,		65	
279	ThirdCeneration Pleated Pneumatic Artificial Muscles for Robotic Applications: Development and Comparison with McKibben Muscle. <i>Advanced Robotics</i> , 2012 , 26, 1205-1227	1.7	63	
278	Safe and Compliant Guidance by a Powered Knee Exoskeleton for Robot-Assisted Rehabilitation of Gait. <i>Advanced Robotics</i> , 2011 , 25, 513-535	1.7	63	
277	Pleated Pneumatic Artificial Muscle-Based Actuator System as a Torque Source for Compliant Lower Limb Exoskeletons. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014 , 19, 1046-1056	5.5	61	
276	Human-like compliant locomotion: state of the art of robotic implementations. <i>Bioinspiration and Biomimetics</i> , 2016 , 11, 051002	2.6	60	
275	Overview of the Lucy Project: Dynamic Stabilization of a Biped Powered by Pneumatic Artificial Muscles. <i>Advanced Robotics</i> , 2008 , 22, 1027-1051	1.7	58	
274	Development of a compliance controller to reduce energy consumption for bipedal robots. <i>Autonomous Robots</i> , 2008 , 24, 419-434	3	58	
273	Design and control of a lower limb exoskeleton for robot-assisted gait training. <i>Applied Bionics and Biomechanics</i> , 2009 , 6, 229-243	1.6	56	
272	Robot-Assisted Therapy for Autism Spectrum Disorders with (Partially) Autonomous Control: Challenges and Outlook. <i>Paladyn</i> , 2012 , 3,	2.3	55	
271	Children with Autism Spectrum Disorders Make a Fruit Salad with Probo, the Social Robot: An Interaction Study. <i>Journal of Autism and Developmental Disorders</i> , 2016 , 46, 113-126	4.6	54	
270	Modeling and design of geared DC motors for energy efficiency: Comparison between theory and experiments. <i>Mechatronics</i> , 2015 , 30, 198-213	3	51	
269	Anklelinee prosthesis with active ankle and energy transfer: Development of the CYBERLEGs Alpha-Prosthesis. <i>Robotics and Autonomous Systems</i> , 2015 , 73, 4-15	3.5	46	
268	Step Length and Velocity Control of a Dynamic Bipedal Walking Robot With Adaptable Compliant Joints. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013 , 18, 598-611	5.5	45	

267	New frontiers in the rubber hand experiment: when a robotic hand becomes one's own. <i>Behavior Research Methods</i> , 2015 , 47, 744-55	6.1	43
266	CAN THE SOCIAL ROBOT PROBO HELP CHILDREN WITH AUTISM TO IDENTIFY SITUATION-BASED EMOTIONS? A SERIES OF SINGLE CASE EXPERIMENTS. <i>International Journal of Humanoid Robotics</i> , 2013 , 10, 1350025	1.2	43
265	Design of Smart Modular Variable Stiffness Actuators for Robotic-Assistive Devices. <i>IEEE/ASME Transactions on Mechatronics</i> , 2017 , 22, 1777-1785	5.5	41
264	Working with Walt: How a Cobot Was Developed and Inserted on an Auto Assembly Line. <i>IEEE Robotics and Automation Magazine</i> , 2018 , 25, 51-58	3.4	41
263	The influence of stereochemistry on the reactivity of the DielsAlder cycloaddition and the implications for reversible network polymerization. <i>Polymer Chemistry</i> , 2019 , 10, 473-485	4.9	39
262	Strategies for Humanoid Robots to Dynamically Walk Over Large Obstacles. <i>IEEE Transactions on Robotics</i> , 2009 , 25, 960-967	6.5	39
261	Controlling a bipedal walking robot actuated by pleated pneumatic artificial muscles. <i>Robotica</i> , 2006 , 24, 401-410	2.1	39
260	Reversal Learning Task in Children with Autism Spectrum Disorder: A Robot-Based Approach. Journal of Autism and Developmental Disorders, 2015 , 45, 3715-25	4.6	38
259	Estimating robot end-effector force from noisy actuator torque measurements 2011,		38
258	MECHANICAL DESIGN OF THE HUGGABLE ROBOT PROBO. <i>International Journal of Humanoid Robotics</i> , 2011 , 08, 481-511	1.2	38
257	HyQ - Hydraulically actuated quadruped robot: Hopping leg prototype 2008,		37
256	Energy Consumption of Geared DC Motors in Dynamic Applications: Comparing Modeling Approaches. <i>IEEE Robotics and Automation Letters</i> , 2016 , 1, 524-530	4.2	36
255	ED-FNN: A New Deep Learning Algorithm to Detect Percentage of the Gait Cycle for Powered Prostheses. <i>Sensors</i> , 2018 , 18,	3.8	36
254	Misalignment Compensation for Full Human-Exoskeleton Kinematic Compatibility: State of the Art and Evaluation. <i>Applied Mechanics Reviews</i> , 2018 , 70,	8.6	36
253	Social Robots vs. Computer Display: Does the Way Social Stories are Delivered Make a Difference for Their Effectiveness on ASD Children?. <i>Journal of Educational Computing Research</i> , 2013 , 49, 381-401	3.8	35
252	Design and Control of a Lower Limb Exoskeleton for Robot-Assisted Gait Training. <i>Applied Bionics and Biomechanics</i> , 2009 , 6, 229-243	1.6	35
251	A biomechatronical transtibial prosthesis powered by pleated pneumatic artificial muscles. <i>International Journal of Modelling, Identification and Control</i> , 2008 , 4, 394	0.6	35
250	Robot-Enhanced Therapy: Development and Validation of Supervised Autonomous Robotic System for Autism Spectrum Disorders Therapy. <i>IEEE Robotics and Automation Magazine</i> , 2019 , 26, 49-58	3.4	32

(2006-2014)

249	Advances in Propulsive Bionic Feet and Their Actuation Principles. <i>Advances in Mechanical Engineering</i> , 2014 , 6, 984046	1.2	32	
248	How do typically developing children and children with autism perceive different social robots?. <i>Computers in Human Behavior</i> , 2014 , 41, 268-277	7.7	32	
247	A review on self-healing polymers for soft robotics. <i>Materials Today</i> , 2021 , 47, 187-205	21.8	32	
246	Development of a self-healing soft pneumatic actuator: a first concept. <i>Bioinspiration and Biomimetics</i> , 2015 , 10, 046007	2.6	31	
245	Enhancing play skills, engagement and social skills in a play task in ASD children by using robot-based interventions. A pilot study. <i>Interaction Studies</i> , 2014 , 15, 292-320	1.3	31	
244	Series and Parallel Elastic Actuation: Influence of Operating Positions on Design and Control. <i>IEEE/ASME Transactions on Mechatronics</i> , 2017 , 22, 521-529	5.5	31	
243	Mechatronic design of a sit-to-stance exoskeleton 2014 ,		29	
242	The Effects of Robot-Enhanced Psychotherapy: A Meta-Analysis. <i>Review of General Psychology</i> , 2014 , 18, 127-136	3.9	29	
241	Variable stiffness ankle actuator for use in robotic-assisted walking: Control strategy and experimental characterization. <i>Mechanism and Machine Theory</i> , 2019 , 134, 604-624	4	29	
240	Robot Enhanced Therapy for Children with Autism Disorders: Measuring Ethical Acceptability. <i>IEEE Technology and Society Magazine</i> , 2016 , 35, 54-66	0.8	28	
239	Optimizing the power and energy consumption of powered prosthetic ankles with series and parallel elasticity. <i>Mechanism and Machine Theory</i> , 2017 , 116, 419-432	4	28	
238	Ankle-Knee prosthesis with powered ankle and energy transfer for CYBERLEGs prototype. <i>IEEE International Conference on Rehabilitation Robotics</i> , 2013 , 2013, 6650352	1.3	28	
237	The Safety of a Robot Actuated by Pneumatic Muscles A Case Study. <i>International Journal of Social Robotics</i> , 2010 , 2, 289-303	4	28	
236	An exoskeleton for gait rehabilitation: Prototype design and control principle 2008,		28	
235	Concept of a Series-Parallel Elastic Actuator for a Powered Transtibial Prosthesis. <i>Actuators</i> , 2013 , 2, 59-73	2.4	27	
234	Variable impedance actuators: Moving the robots of tomorrow 2012 ,		27	
233	Proxy-Based Sliding Mode Control of a Manipulator Actuated by Pleated Pneumatic Artificial Muscles. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007 ,		27	
232	Dynamically Stepping Over Obstacles by the Humanoid Robot HRP-2 2006 ,		26	

231	The AMP-Foot 2.0: Mimicking intact ankle behavior with a powered transtibial prosthesis 2012,		25
230	The MACCEPA actuation system as torque actuator in the gait rehabilitation robot ALTACRO 2010 ,		25
229	Design and evaluation of a torque-controllable knee joint actuator with adjustable series compliance and parallel elasticity. <i>Mechanism and Machine Theory</i> , 2018 , 130, 71-85	4	24
228	Multi-Axis Force Sensor for Human-Robot Interaction Sensing in a Rehabilitation Robotic Device. <i>Sensors</i> , 2017 , 17,	3.8	24
227	A Review of Gait Phase Detection Algorithms for Lower Limb Prostheses. Sensors, 2020, 20,	3.8	24
226	. IEEE Technology and Society Magazine, 2018 , 37, 30-39	0.8	23
225	EtherCAT Tutorial: An Introduction for Real-Time Hardware Communication on Windows [Tutorial]. <i>IEEE Robotics and Automation Magazine</i> , 2018 , 25, 22-122	3.4	23
224	A Pneumatic Artificial Muscle Manufactured Out of Self-Healing Polymers That Can Repair Macroscopic Damages. <i>IEEE Robotics and Automation Letters</i> , 2018 , 3, 16-21	4.2	23
223	The AMP-Foot 2.1: actuator design, control and experiments with an amputee. <i>Robotica</i> , 2014 , 32, 134	I7⊴1 3 61	22
222	How to achieve the huggable behavior of the social robot Probo? A reflection on the actuators. <i>Mechatronics</i> , 2011 , 21, 490-500	3	22
221	An Overview on Principles for Energy Efficient Robot Locomotion. <i>Frontiers in Robotics and AI</i> , 2018 , 5, 129	2.8	22
220	Attitudes of Factory Workers towards Industrial and Collaborative Robots 2017,		21
219	Reduction of the torque requirements of an active ankle prosthesis using a parallel spring. <i>Robotics and Autonomous Systems</i> , 2017 , 92, 187-196	3.5	21
218	Smart Collaborative Systems for Enabling Flexible and Ergonomic Work Practices [Industry Activities]. <i>IEEE Robotics and Automation Magazine</i> , 2020 , 27, 169-176	3.4	21
217	The Ankle Mimicking Prosthetic Foot 3 Locking mechanisms, actuator design, control and experiments with an amputee. <i>Robotics and Autonomous Systems</i> , 2017 , 91, 327-336	3.5	20
216	Mechanical design of a lightweight compliant and adaptable active ankle foot orthosis 2016,		20
215	Stabilization for the compliant humanoid robot COMAN exploiting intrinsic and controlled compliance 2012 ,		20
214	MACCEPA: the mechanically adjustable compliance and controllable equilibrium position actuator for 'controlled passive walking'		20

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213	Additive Manufacturing for Self-Healing Soft Robots. Soft Robotics, 2020, 7, 711-723	9.2	19
212	Biarticular elements as a contributor to energy efficiency: biomechanical review and application in bio-inspired robotics. <i>Bioinspiration and Biomimetics</i> , 2017 , 12, 061001	2.6	19
211	Passive Ankle-Foot Prosthesis Prototype with Extended Push-Off. <i>International Journal of Advanced Robotic Systems</i> , 2013 , 10, 101	1.4	19
210	Dynamic Stabilisation of the Biped Lucy Powered by Actuators with Controllable Stiffness. <i>Springer Tracts in Advanced Robotics</i> , 2010 ,	0.5	19
209	INTEGRATING WALKING AND VISION TO INCREASE HUMANOID AUTONOMY. <i>International Journal of Humanoid Robotics</i> , 2008 , 05, 287-310	1.2	19
208	Control architecture for the pneumatically actuated dynamic walking biped <code>I</code> ucy <code>I</code> <i>Mechatronics</i> , 2005 , 15, 703-729	3	19
207	The AMP-Foot 3, new generation propulsive prosthetic feet with explosive motion characteristics: design and validation. <i>BioMedical Engineering OnLine</i> , 2016 , 15, 145	4.1	19
206	Powered ankle-foot orthoses: the effects of the assistance on healthy and impaired users while walking. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2018 , 15, 86	5.3	19
205	Multi-level control of zero-moment point-based humanoid biped robots: a review. <i>Robotica</i> , 2016 , 34, 2440-2466	2.1	18
204	A Motion System for Social and Animated Robots. <i>International Journal of Advanced Robotic Systems</i> , 2014 , 11, 72	1.4	18
203	Design of a modular add-on compliant actuator to convert an orthosis into an assistive exoskeleton 2014 ,		18
202	Trajectory Planning for the Walking Biped 🛭 ucy 🖺 <i>International Journal of Robotics Research</i> , 2006 , 25, 867-887	5.7	18
201	Task allocation for improved ergonomics in Human-Robot Collaborative Assembly. <i>Interaction Studies</i> , 2019 , 20, 102-133	1.3	18
200	Modeling and design of an energy-efficient dual-motor actuation unit with a planetary differential and holding brakes. <i>Mechatronics</i> , 2018 , 49, 134-148	3	17
199	Bilateral, Misalignment-Compensating, Full-DOF Hip Exoskeleton: Design and Kinematic Validation. <i>Applied Bionics and Biomechanics</i> , 2017 , 2017, 5813154	1.6	17
198	Sliding-Bar MACCEPA for a Powered Ankle Prosthesis. <i>Journal of Mechanisms and Robotics</i> , 2015 , 7,	2.2	17
197	Mobility of Humanoid Robots: Stepping over Large Obstacles Dynamically 2006,		17
196	Piezoresistive sensor fiber composites based on silicone elastomers for the monitoring of the position of a robot arm. <i>Sensors and Actuators A: Physical</i> , 2021 , 318, 112433	3.9	17

195	Instrumenting complex exoskeletons for improved human-robot interaction. <i>IEEE Instrumentation and Measurement Magazine</i> , 2015 , 18, 5-10	1.4	16
194	Conceptual design of a novel variable stiffness actuator for use in lower limb exoskeletons 2015,		16
193	Metabolic Effects Induced by a Kinematically Compatible Hip Exoskeleton During STS. <i>IEEE Transactions on Biomedical Engineering</i> , 2018 , 65, 1399-1409	5	16
192	2017,		16
191	Successful preliminary walking experiments on a transtibial amputee fitted with a powered prosthesis. <i>Prosthetics and Orthotics International</i> , 2009 , 33, 368-77	1.5	16
190	Modeling Hysteresis in Pleated Pneumatic Artificial Muscles 2008,		16
189	Objective locomotion parameters based inverted pendulum trajectory generator. <i>Robotics and Autonomous Systems</i> , 2008 , 56, 738-750	3.5	16
188	Proxy-based position control of manipulators with passive compliant actuators: Stability analysis and experiments. <i>Robotics and Autonomous Systems</i> , 2016 , 75, 398-408	3.5	15
187	Modeling, Design and Test-Bench Validation of a Semi-Active Propulsive Ankle Prosthesis With a Clutched Series Elastic Actuator. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 1823-1830	4.2	15
186	Self-Healing and High Interfacial Strength in Multi-Material Soft Pneumatic Robots via Reversible Diels Alder Bonds. <i>Actuators</i> , 2020 , 9, 34	2.4	15
185	Exploiting adaptable passive behaviour to influence natural dynamics applied to legged robots. <i>Robotica</i> , 2005 , 23, 149-158	2.1	15
184	Robot-Enhanced CBT for dysfunctional emotions in social situations for children with ASD. <i>Journal of Evidence-Based Psychotherapies</i> , 2017 , 17, 119-132	0.6	15
183	The Challenges and Achievements of Experimental Implementation of an Active Transfemoral Prosthesis Based on Biological Quasi-Stiffness: The CYBERLEGs Beta-Prosthesis. <i>Frontiers in Neurorobotics</i> , 2018 , 12, 80	3.4	15
182	Design and evaluation of a DIY construction system for educational robot kits. <i>International Journal of Technology and Design Education</i> , 2016 , 26, 521-540	1.1	14
181	The Sensor-Based Biomechanical Risk Assessment at the Base of the Need for Revising of Standards for Human Ergonomics. <i>Sensors</i> , 2020 , 20,	3.8	14
180	Torque-stiffness-controlled dynamic walking with central pattern generators. <i>Biological Cybernetics</i> , 2014 , 108, 803-23	2.8	14
179	A muscle-like recruitment actuator with modular redundant actuation units for soft robotics. <i>Robotics and Autonomous Systems</i> , 2015 , 74, 40-50	3.5	13
178	Development of a generic method to generate upper-body emotional expressions for different social robots. <i>Advanced Robotics</i> , 2015 , 29, 597-609	1.7	13

(2015-2014)

177	Developing new frontiers in the Rubber Hand Illusion: Design of an open source robotic hand to better understand prosthetics 2014 ,		13
176	A Personalized and Platform-Independent Behavior Control System for Social Robots in Therapy: Development and Applications. <i>IEEE Transactions on Cognitive and Developmental Systems</i> , 2019 , 11, 334-346	3	13
175	Social Processes: What Determines Industrial Workers' Intention to Use Exoskeletons?. <i>Human Factors</i> , 2020 , 62, 337-350	3.8	12
174	Energetic analysis and optimization of a MACCEPA actuator in an ankle prosthesis. <i>Autonomous Robots</i> , 2018 , 42, 147-158	3	12
173	Toward Self-Healing Actuators: A Preliminary Concept. <i>IEEE Transactions on Robotics</i> , 2016 , 32, 736-743	6.5	12
172	+SPEA introduction: Drastic actuator energy requirement reduction by symbiosis of parallel motors, springs and locking mechanisms 2016 ,		12
171	Water/air performance analysis of a fluidic muscle 2010 ,		12
170	Sliding mode control of a Boft[2-DOF Planar Pneumatic Manipulator. <i>International Applied Mechanics</i> , 2008 , 44, 1191-1199	1	12
169	Sensing-Enhanced Therapy System for Assessing Children With Autism Spectrum Disorders: A Feasibility Study. <i>IEEE Sensors Journal</i> , 2019 , 19, 1508-1518	4	12
168	A Collaborative Homeostatic-Based Behavior Controller for Social Robots in Human R obot Interaction Experiments. <i>International Journal of Social Robotics</i> , 2017 , 9, 675-690	4	11
167	Torsion MACCEPA: A novel compact compliant actuator designed around the drive axis 2015,		11
166	Independent load carrying and measurement manipulator robot arm for improved payload to mass ratio. <i>Robotics and Computer-Integrated Manufacturing</i> , 2018 , 53, 135-140	9.2	11
165	CYBERLEGS Beta-Prosthesis active knee system 2015 ,		11
164	Benchmarking Human-Like Posture and Locomotion of Humanoid Robots: A Preliminary Scheme. <i>Lecture Notes in Computer Science</i> , 2014 , 320-331	0.9	11
163	Proxy-based sliding mode control of a robotic ankle-foot system for post-stroke rehabilitation. <i>Advanced Robotics</i> , 2016 , 30, 992-1003	1.7	11
162	From stopping to shopping: An observational study comparing a humanoid service robot with a tablet service kiosk to attract and convert shoppers. <i>Journal of Business Research</i> , 2021 , 134, 263-274	8.7	11
161	A Variable Stiffness Actuator Module With Favorable Mass Distribution for a Bio-inspired Biped Robot. <i>Frontiers in Neurorobotics</i> , 2019 , 13, 20	3.4	10
160	Cylindrical cam mechanism for unlimited subsequent spring recruitment in Series-Parallel Elastic Actuators 2015 ,		10

159	VUB-CYBERLEGs CYBATHLON 2016 Beta-Prosthesis: case study in control of an active two degree of freedom transfemoral prosthesis. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2018 , 15, 3	5.3	10
158	Bi-directional series-parallel elastic actuator and overlap of the actuation layers. <i>Bioinspiration and Biomimetics</i> , 2016 , 11, 016005	2.6	10
157	Trajectory generation of straightened knee walking for humanoid robot iCub 2010,		10
156	MACCEPA, The mechanically adjustable compliance and controllable equilibrium position actuator: A 3DOF joint with two independent compliances. <i>International Applied Mechanics</i> , 2007 , 43, 467-474	1	10
155	Torque and compliance control of the pneumatic artificial muscles in the biped "Lucy"		10
154	Processing of Self-Healing Polymers for Soft Robotics. <i>Advanced Materials</i> , 2021 , e2104798	24	10
153	Design and Development of Customized Physical Interfaces to Reduce Relative Motion Between the User and a Powered Ankle Foot Exoskeleton 2018 ,		10
152	A Hopping Robot Driven by a Series Elastic Dual-Motor Actuator. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 2310-2316	4.2	9
151	Probolino: A Portable Low-Cost Social Device for Home-Based Autism Therapy. <i>Lecture Notes in Computer Science</i> , 2015 , 93-102	0.9	9
150	Design and experimental evaluation of a lightweight, high-torque and compliant actuator for an active ankle foot orthosis. <i>IEEE International Conference on Rehabilitation Robotics</i> , 2017 , 2017, 283-288	1.3	9
149	Towards low back support with a passive biomimetic exo-spine. <i>IEEE International Conference on Rehabilitation Robotics</i> , 2017 , 2017, 1165-1170	1.3	9
148	Are Children with ASD more Prone to Test the Intentions of the Robonova Robot Compared to a Human?. <i>International Journal of Social Robotics</i> , 2015 , 7, 629-639	4	9
147	Enhancing My Keepon robot: A simple and low-cost solution for robot platform in Human-Robot Interaction studies 2014 ,		9
146	A pneumatic biped: experimental walking results and compliance adaptation experiments		9
145	. IEEE Robotics and Automation Magazine, 2020 , 27, 44-55	3.4	9
144	Prevalence and incidence of work-related musculoskeletal disorders in secondary industries of 21st century Europe: a systematic review and meta-analysis. <i>BMC Musculoskeletal Disorders</i> , 2021 , 22, 751	2.8	9
143	Kinematically redundant actuators, a solution for conflicting torquespeed requirements. <i>International Journal of Robotics Research</i> , 2019 , 38, 612-629	5.7	8
142	Investigation of self-healing compliant actuators for robotics 2015,		8

141	Enhancing Emotional Facial Expressiveness on NAO. <i>International Journal of Social Robotics</i> , 2016 , 8, 513-521	4	8
140	Reaching and pointing gestures calculated by a generic gesture system for social robots. <i>Robotics and Autonomous Systems</i> , 2016 , 83, 32-43	3.5	8
139	A Multi-Material Self-Healing Soft Gripper 2019 ,		8
138	Actuation in Legged Locomotion 2017 , 563-622		8
137	Series-parallel elastic actuation (SPEA) with intermittent mechanism for reduced motor torque and increased efficiency 2013 ,		8
136	The mechanical design of the new lower body for the child humanoid robot [Cub[2009,		8
135	Is the social robot probo an added value for social story intervention for children with autism spectrum disorders? 2012 ,		8
134	MOTION GENERATION AND CONTROL FOR THE PNEUMATIC BIPED "LUCY". <i>International Journal of Humanoid Robotics</i> , 2006 , 03, 67-103	1.2	8
133	Systems Overview of Ono. Lecture Notes in Computer Science, 2013, 311-320	0.9	8
132	Walking with a powered ankle-foot orthosis: the effects of actuation timing and stiffness level on healthy users. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2020 , 17, 98	5.3	8
131	A Reinforcement Learning Based Cognitive Empathy Framework for Social Robots. <i>International Journal of Social Robotics</i> , 2021 , 13, 1079-1093	4	8
130	Online Reconfiguration of a Variable-Stiffness Actuator. <i>IEEE/ASME Transactions on Mechatronics</i> , 2018 , 23, 1866-1876	5.5	8
129	Studying Design Aspects for Social Robots Using a Generic Gesture Method. <i>International Journal of Social Robotics</i> , 2019 , 11, 651-663	4	7
128	Novel control strategy for the +SPEA: A redundant actuator with reconfigurable parallel elements. <i>Mechatronics</i> , 2018 , 53, 28-38	3	7
127	Guidelines and Recommendations to Investigate the Efficacy of a Lower-Limb Prosthetic Device: A Systematic Review. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2019 , 1, 279-296	3.1	7
126	A Survey on Behavior Control Architectures for Social Robots in Healthcare Interventions. <i>International Journal of Humanoid Robotics</i> , 2017 , 14, 1750021	1.2	7
125	A Two-Degree of Freedom Variable Stiffness Actuator Based on the MACCEPA Concept. <i>Actuators</i> , 2014 , 3, 20-40	2.4	7
124	Dynamic Control of a Bipedal Walking Robot actuated with Pneumatic Artificial Muscles		7

123	A real-time joint trajectory planner for dynamic walking bipeds in the sagittal plane. <i>Robotica</i> , 2005 , 23, 669-680	2.1	7
122	An Autonomous Cognitive Empathy Model Responsive to Users Facial Emotion Expressions. <i>ACM Transactions on Interactive Intelligent Systems</i> , 2020 , 10, 1-23	1.8	7
121	. IEEE Access, 2020 , 8, 223325-223334	3.5	7
120	Scaling laws for robotic transmissions. <i>Mechanism and Machine Theory</i> , 2019 , 140, 601-621	4	6
119	Case Study on Human Walking during Wearing a Powered Prosthetic Device: Effectiveness of the System Human-Robot Advances in Mechanical Engineering, 2014 , 6, 365265	1.2	6
118	Use of Compliant Actuators in Prosthetic Feet and the Design of the AMP-Foot 2.0. <i>Cognitive Systems Monographs</i> , 2013 , 17-30	0.2	6
117	Enhanced Physical Interaction Performance for Compliant Joint Manipulators using Proxy-based Sliding Mode Control 2014 ,		6
116	PROPULSION SYSTEM WITH PNEUMATIC ARTIFICIAL MUSCLES FOR POWERING ANKLE-FOOT ORTHOSIS. <i>Journal of Theoretical and Applied Mechanics (Bulgaria</i>), 2013 , 43, 3-16	5.8	6
115	Using the Torso to Compensate for Non-Minimum Phase Behaviour in ZMP Bipedal Walking 2009 , 191-	202	6
114	EMOGIB: Emotional Gibberish Speech Database for Affective Human-Robot Interaction. <i>Lecture Notes in Computer Science</i> , 2011 , 163-172	0.9	6
113	The DREAM Dataset: Supporting a data-driven study of autism spectrum disorder and robot enhanced therapy. <i>PLoS ONE</i> , 2020 , 15, e0236939	3.7	6
112	A Sensorized Soft Pneumatic Actuator Fabricated with Extrusion-Based Additive Manufacturing. <i>Actuators</i> , 2021 , 10, 102	2.4	6
111	Accelerating Interactive Reinforcement Learning by Human Advice for an Assembly Task by a Cobot. <i>Robotics</i> , 2019 , 8, 104	2.8	6
110	Investigating the Effects of Strapping Pressure on Human-Robot Interface Dynamics Using a Soft Robotic Cuff. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2021 , 3, 146-155	3.1	6
109	The effects of variable mechanical parameters on peak power and energy consumption of ankle-foot prostheses at different speeds. <i>Advanced Robotics</i> , 2018 , 32, 1229-1240	1.7	6
108	On the Electrical Energy Consumption of Active Ankle Prostheses with Series and Parallel Elastic Elements 2018 ,		6
107	Generic method for generating blended gestures and affective functional behaviors for social robots. <i>Autonomous Robots</i> , 2018 , 42, 569-580	3	5
106	Humanoid Robot Pepper at a Belgian Chocolate Shop 2018 ,		5

(2015-2014)

105	Design of a novel intermittent self-closing mechanism for a MACCEPA-based Series-Parallel Elastic Actuator (SPEA) 2014 ,		5	
104	On the use of adaptable compliant actuators in prosthetics, rehabilitation and assistive robotics 2013 ,		5	
103	Modular Architecture for Humanoid Walking Pattern Prototyping and Experiments. <i>Advanced Robotics</i> , 2008 , 22, 589-611	1.7	5	
102	Fast and Accurate Pressure Control using On-Off Valves. <i>International Journal of Fluid Power</i> , 2005 , 6, 53-58		5	
101	In or out? A field observational study on the placement of entertaining robots in retailing. <i>International Journal of Retail and Distribution Management</i> , 2021 , ahead-of-print,	3.5	5	
100	Evaluation and Analysis of Push-Pull Cable Actuation System Used for Powered Orthoses. <i>Frontiers in Robotics and AI</i> , 2018 , 5, 105	2.8	5	
99	Trajectory Planning for the Walking Biped 🛭 ucyl 2005 , 665-676		5	
98	Do-It-Yourself Design for Social Robots: An Open-Source Hardware Platform to Encourage Innovation. <i>IEEE Robotics and Automation Magazine</i> , 2017 , 24, 86-94	3.4	4	
97	Study on electric energy consumed in intermittent series-parallel elastic actuators (iSPEA). <i>Bioinspiration and Biomimetics</i> , 2017 , 12, 036008	2.6	4	
96	Novel Lockable and Stackable Compliant Actuation Unit for Modular +SPEA Actuators. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 4445-4451	4.2	4	
95	Scaling laws of compliant elements for high energy storage capacity in robotics. <i>Mechanism and Machine Theory</i> , 2019 , 139, 482-505	4	4	
94	Cognitive performance and brain dynamics during walking with a novel bionic foot: A pilot study. <i>PLoS ONE</i> , 2019 , 14, e0214711	3.7	4	
93	Varying mechanical compliance benefits energy efficiency of a knee joint actuator. <i>Mechatronics</i> , 2020 , 66, 102318	3	4	
92	Do infants perceive the social robot Keepon as a communicative partner?. <i>Research in Social and Administrative Pharmacy</i> , 2016 , 42, 157-67	2.9	4	
91	Design, development and testing of a lightweight and compact locking mechanism for a passive knee prosthesis 2014 ,		4	
90	A Compliant Lightweight and Adaptable Active Ankle Foot Orthosis for Robotic Rehabilitation. <i>Biosystems and Biorobotics</i> , 2017 , 45-49	0.2	4	
89	A novel modular compliant knee joint actuator for use in assistive and rehabilitation orthoses 2017,		4	
88	Soft Robotics as an Emerging Academic Field. <i>Soft Robotics</i> , 2015 , 2, 131-134	9.2	4	

87	Toward motor-unit-recruitment actuators for soft robotics 2014,		4
86	Symbiotic Wearable Robotic Exoskeletons: The Concept of the BioMot Project. <i>Lecture Notes in Computer Science</i> , 2014 , 72-83	0.9	4
85	Fast bipedal walk using large strides by modulating hip posture and toe-heel motion 2010,		4
84	Adaptable compliance or variable stiffness for robotic applications [From the Guest Editors]. <i>IEEE Robotics and Automation Magazine</i> , 2008 , 15, 8-9	3.4	4
83	From conventional prosthetic feet to bionic feet: A review study 2008,		4
82	Treadmill walking of the pneumatic biped Lucy: Walking at different speeds and step-lengths. <i>International Applied Mechanics</i> , 2008 , 44, 830-837	1	4
81	Novel Compliant Actuator for Safe and Ergonomic Rehabilitation Robots - Design of a Powered Elbow Orthosis 2007 ,		4
80	A Series Elastic Dual-Motor Actuator Concept for Wearable Robotics. <i>Biosystems and Biorobotics</i> , 2019 , 165-169	0.2	4
79	What Is the Path Ahead for Soft Robotics?. Soft Robotics, 2016, 3, 159-160	9.2	4
78	Evolutionary method for robot morphology: Case study of social robot Probo 2016,		4
77	How using brain-machine interfaces influences the human sense of agency. <i>PLoS ONE</i> , 2021 , 16, e0245	519 ₃ 1 ₇	4
76	The Influence of the Furan and Maleimide Stoichiometry on the Thermoreversible Diels-Alder Network Polymerization. <i>Polymers</i> , 2021 , 13,	4.5	4
75	A Novel Wolfrom-Based Gearbox for Robotic Actuators. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021 , 26, 1980-1988	5.5	4
74	MACCEPA: the Actuator with Adaptable Compliance for Dynamic Walking Bipeds 2006 , 759-766		4
7473	MACCEPA: the Actuator with Adaptable Compliance for Dynamic Walking Bipeds 2006 , 759-766 Design, Optimization and Energetic Evaluation of an Efficient Fully Powered Ankle-Foot Prosthesis With a Series Elastic Actuator. <i>IEEE Access</i> , 2020 , 8, 61491-61503	3.5	3
	Design, Optimization and Energetic Evaluation of an Efficient Fully Powered Ankle-Foot Prosthesis	3.5	
73	Design, Optimization and Energetic Evaluation of an Efficient Fully Powered Ankle-Foot Prosthesis With a Series Elastic Actuator. <i>IEEE Access</i> , 2020 , 8, 61491-61503 Improving the performance of industrial machines with variable stiffness springs. <i>Mechanics Based</i>		3

69	ROBEE: A homeostatic-based social behavior controller for robots in Human-Robot Interaction experiments 2014 ,		3	
68	Controlling a Social Robot - Performing Nonverbal Communication through Facial Expressions. <i>Advanced Materials Research</i> , 2013 , 837, 525-530	0.5	3	
67	Design of a Boft[12-DOF Planar Pneumatic Manipulator 2006 , 559-566		3	
66	Failure Mode and Effect Analysis (FMEA)-Driven Design of a Planetary Gearbox for Active Wearable Robotics. <i>Biosystems and Biorobotics</i> , 2019 , 460-464	0.2	3	
65	Introducing Compound Planetary Gears (C-PGTs): A Compact Way to Achieve High Gear Ratios for Wearable Robots. <i>Biosystems and Biorobotics</i> , 2019 , 485-489	0.2	3	
64	Integration of 3D Printed Flexible Pressure Sensors into Physical Interfaces for Wearable Robots. <i>Sensors</i> , 2021 , 21,	3.8	3	
63	Invariant Set Distributed Explicit Reference Governors for Provably Safe On-Board Control of Nano-Quadrotor Swarms. <i>Frontiers in Robotics and AI</i> , 2021 , 8, 663809	2.8	3	
62	Human-Robot Collaboration (HRC) Technologies for Reducing Work-Related Musculoskeletal Diseases in Industry 4.0. <i>Lecture Notes in Networks and Systems</i> , 2022 , 335-342	0.5	3	
61	Robotic Dreams, Robotic Realities [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2019 , 26, 4-5	3.4	2	
60	Torque control of a push-pull cable driven powered orthosis for the CORBYS platform 2015,		2	
59	On the Importance of a Motor Model for the Optimization of SEA-driven Prosthetic Ankles. <i>Biosystems and Biorobotics</i> , 2017 , 403-407	0.2	2	
58	Real-time physical layer architecture for CORBYS gait rehabilitation robot 2015,		2	
57	Prototype design of a novel modular two-degree-of-freedom variable stiffness actuator 2014,		2	
56	Sliding Mode Control of a 2DOF Planar Pneumatic Manipulator. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME,</i> 2009 , 131,	1.6	2	
55	The emergence of YMDD mutants precedes biochemical flare by 19 weeks in lamivudine-treated chronic hepatitis B patients: an opportunity for therapy reevaluation. <i>Brazilian Journal of Medical and Biological Research</i> , 2007 , 40, 1605-14	2.8	2	
54	Integrating Walking and Vision to Increase Humanoid Robot Autonomy. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007 ,		2	
53	A Virtual Element-Based Postural Optimization Method for Improved Ergonomics During Human-Robot Collaboration. <i>IEEE Transactions on Automation Science and Engineering</i> , 2022 , 1-12	4.9	2	
52	FEA-Based Inverse Kinematic Control: Hyperelastic Material Characterization of Self-Healing Soft Robots. <i>IEEE Robotics and Automation Magazine</i> , 2021 , 2-12	3.4	2	

51	Finite Difference-Based Suboptimal Trajectory Planning of Biped Robot with Continuous Dynamic Response. <i>International Journal of Modeling and Optimization</i> , 2013 , 337-343	0.9	2
50	☑an You Cure me? Children With Autism Spectrum Disorders Playing a Doctor Game With a Social Robot□International Journal of School Health, 2016, Inpress,	0.6	2
49	The Variable Boundary Layer Sliding Mode Control: A Safe and Performant Control for Compliant Joint Manipulators. <i>IEEE Robotics and Automation Letters</i> , 2016 , 1-1	4.2	2
48	DualKeepon: a humanfobot interaction testbed to study linguistic features of speech. <i>Intelligent Service Robotics</i> , 2019 , 12, 45-54	2.6	2
47	Constrained Control of Robotic Manipulators Using the Explicit Reference Governor 2018,		2
46	Supramolecular Self-Healing Sensor Fiber Composites for Damage Detection in Piezoresistive Electronic Skin for Soft Robots. <i>Polymers</i> , 2021 , 13,	4.5	2
45	Opportunities for Women in Robotics [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2020 , 27, 4-21	3.4	1
44	Technology Is Not Neutral [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2018 , 25, 4-4	3.4	1
43	Why Children Prefer Extrovert or Introvert Robots: A Pilot Study Using Pairwise Robot Comparison 2019 ,		1
42	Energetic Advantages of Constant Torque Springs in Series Parallel Elastic Actuators 2019 ,		1
41	Customizing planetary gear trains for human limb assistance and replication. <i>MATEC Web of Conferences</i> , 2019 , 287, 01014	0.3	1
40	Discrete binary muscle-inspired actuation with motor unit overpowering and binary control strategy 2017 ,		1
39	A selective recruitment strategy for exploiting muscle-like actuator impedance properties 2015,		1
38	Human-like walking with straightened knees, toe-off and heel-strike for the humanoid robot iCub 2010 ,		1
37	A strategy to combine active trajectory control with the exploitation of the natural dynamics to reduce energy consumption for bipedal robots 2007 ,		1
36	Controlled Passive Walker Veronica Powered by Actuators with Independent Control of Equilibrium Position and Compliance 2006 ,		1
35	A Healable Resistive Heater as a Stimuli-Providing System in Self-Healing Soft Robots. <i>IEEE Robotics and Automation Letters</i> , 2022 , 1-1	4.2	1
34	An industrial exoskeleton user acceptance framework based on a literature review of empirical studies. <i>Applied Ergonomics</i> , 2021 , 100, 103615	4.2	1

33	Autonomous assembly planning of demonstrated skills with reinforcement learning in simulation. <i>Autonomous Robots</i> , 2021 , 45, 1097	3	1
32	SMARCOS: Off-the-Shelf Smart Compliant Actuators for Human-Robot Applications. <i>Actuators</i> , 2021 , 10, 289	2.4	1
31	Conceptual Design of an Expressive Robotic Head. Mechanisms and Machine Science, 2014, 51-58	0.3	1
30	An End-User Interface to Generate Homeostatic Behavior for NAO Robot in Robot-Assisted Social Therapies. <i>Lecture Notes in Computer Science</i> , 2017 , 609-619	0.9	1
29	2020,		1
28	United Against Racism and a Call for Action [Ethical, Legal, and Societal Issues]. <i>IEEE Robotics and Automation Magazine</i> , 2020 , 27, 10-11	3.4	1
27	Overload Clutch Design for Collision Tolerant HighBpeed Industrial Robots. <i>IEEE Robotics and Automation Letters</i> , 2021 , 6, 863-870	4.2	1
26	A Soft Pneumatic Actuator with Integrated Deformation Sensing Elements Produced Exclusively with Extrusion Based Additive Manufacturing. <i>Engineering Proceedings</i> , 2021 , 6, 11	0.5	1
25	⊞mm, Did You Hear What I Just Said?⊡Development of a Re-Engagement System for Socially Interactive Robots. <i>Robotics</i> , 2019 , 8, 95	2.8	1
24	The Right to Fail [From the Editor's Desk]. IEEE Robotics and Automation Magazine, 2019, 26, 4-19	3.4	1
23	A generic algorithm for computing optimal ergonomic postures during working in an industrial environment. <i>International Journal of Industrial Ergonomics</i> , 2021 , 84, 103145	2.9	1
22	Real-time motion control of robotic manipulators for safe humanEobot coexistence. <i>Robotics and Computer-Integrated Manufacturing</i> , 2022 , 73, 102223	9.2	1
21	The Role of Robotics in Achieving the United Nations Sustainable Development GoalsThe Experts[Meeting at the 2021 IEEE/RSJ IROS Workshop [Industry Activities]. <i>IEEE Robotics and Automation Magazine</i> , 2022 , 29, 92-107	3.4	1
20	Fabrication of a Soft Robotic Gripper With Integrated Strain Sensing Elements Using Multi-Material Additive Manufacturing <i>Frontiers in Robotics and AI</i> , 2021 , 8, 615991	2.8	1
19	Prismatic gravity compensator for variable payloads. IEEE Robotics and Automation Letters, 2022, 1-1	4.2	О
18	Should I be Introvert or Extrovert? A Pairwise Robot Comparison Assessing the Perception of Personality-Based Social Robot Behaviors. <i>International Journal of Social Robotics</i> ,1	4	O
17	Novel SPECTA Actuator to Improve Energy Recuperation and Efficiency. <i>Actuators</i> , 2022 , 11, 64	2.4	0
16	Transparent Interaction Based Learning for Human-Robot Collaboration <i>Frontiers in Robotics and AI</i> , 2022 , 9, 754955	2.8	O

15	Another Five Successful Years [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2016 , 23, 4-4	3.4
14	Decisions, Decisions [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2019 , 26, 4-13	3.4
13	Compliant Lightweight Actuator Designs for Robotic Assistance and Rehabilitation Exoskeletons. <i>Biosystems and Biorobotics</i> , 2017 , 1383-1387	0.2
12	Publication Impact Factors and Submission-to-Decision Times [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2017 , 24, 4-6	3.4
11	Neck Design Solution Adopted in the Development of a New Social Robot. <i>Applied Mechanics and Materials</i> , 2013 , 371, 436-440	0.3
10	Safe, Fast, and Efficient Distributed Receding Horizon Constrained Control of Aerial Robot Swarms. <i>IEEE Robotics and Automation Letters</i> , 2022 , 1-1	4.2
9	Improved Motion Classification With an Integrated Multimodal Exoskeleton Interface. <i>Frontiers in Neurorobotics</i> , 2021 , 15, 693110	3.4
8	Control Architecture of LUCY, a Biped with Pneumatic Artificial Muscles 2005 , 713-722	
7	Experimental Walking Results of LUCY, a Biped with Pneumatic Artificial Muscles 2006, 189-196	
6	Trunk Range of Motion in the Sagittal Plane with and Without a Flexible Back Support Exoskeleton. <i>Biosystems and Biorobotics</i> , 2019 , 239-243	0.2
5	Body Mass Index as a Parameter in a Motor Adaptation Process. <i>Biosystems and Biorobotics</i> , 2013 , 289-	2932
4	Coordinating Conference and Journal Papers [From the Editor]. <i>IEEE Robotics and Automation Magazine</i> , 2018 , 25, 4-4	3.4
3	On Reproducible Research [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2018 , 25, 4-4	3.4
2	Humans and Robots Working Together [From the Editor's Desk]. <i>IEEE Robotics and Automation Magazine</i> , 2018 , 25, 4-4	3.4
1	Series Parallel Elastic Actuator: Variable Recruitment of Parallel Springs for Partial Gravity Compensation. <i>Mechanisms and Machine Science</i> , 2022 , 101-123	0.3