Bram Vanderborght

List of Publications by Year in Descending Order

302 papers	7,375 citations	40 h-index	74 g-index
336 ext. papers	9,323 ext. citations	3.2 avg, IF	6.13 L-index

#	Paper	IF	Citations
302	Prismatic gravity compensator for variable payloads. *IEEE Robotics and Automation Letters*, **2022**, 1-1	4.2	0
301	A Healable Resistive Heater as a Stimuli-Providing System in Self-Healing Soft Robots. *IEEE Robotics and Automation Letters*, **2022**, 1-1	4.2	1
300	A Virtual Element-Based Postural Optimization Method for Improved Ergonomics During Human-Robot Collaboration. *IEEE Transactions on Automation Science and Engineering*, **2022**, 1-12	4.9	2
299	Safe, Fast, and Efficient Distributed Receding Horizon Constrained Control of Aerial Robot Swarms. *IEEE Robotics and Automation Letters*, **2022**, 1-1	4.2	
298	Human-Robot Collaboration (HRC) Technologies for Reducing Work-Related Musculoskeletal Diseases in Industry 4.0. *Lecture Notes in Networks and Systems*, **2022**, 335-342	0.5	3
297	Real-time motion control of robotic manipulators for safe human–robot coexistence. *Robotics and Computer-Integrated Manufacturing*, **2022**, 73, 102223	9.2	1
296	Series Parallel Elastic Actuator: Variable Recruitment of Parallel Springs for Partial Gravity Compensation. *Mechanisms and Machine Science*, **2022**, 101-123	0.3	
295	Novel SPECTA Actuator to Improve Energy Recuperation and Efficiency. *Actuators*, **2022**, 11, 64	2.4	0
294	Transparent Interaction Based Learning for Human-Robot Collaboration.. *Frontiers in Robotics and AI*, **2022**, 9, 754955	2.8	0
293	The Role of Robotics in Achieving the United Nations Sustainable Development Goals—The Experts' Meeting at the 2021 IEEE/RSJ IROS Workshop [Industry Activities]. *IEEE Robotics and Automation Magazine*, **2022**, 29, 92-107	3.4	1
292	An industrial exoskeleton user acceptance framework based on a literature review of empirical studies. *Applied Ergonomics*, **2021**, 100, 103615	4.2	1
291	FEA-Based Inverse Kinematic Control: Hyperelastic Material Characterization of Self-Healing Soft Robots. *IEEE Robotics and Automation Magazine*, **2021**, 2-12	3.4	2
290	Processing of Self-Healing Polymers for Soft Robotics. *Advanced Materials*, **2021**, e2104798	24	10
289	Autonomous assembly planning of demonstrated skills with reinforcement learning in simulation. *Autonomous Robots*, **2021**, 45, 1097	3	1
288	Improved Motion Classification With an Integrated Multimodal Exoskeleton Interface. *Frontiers in Neurorobotics*, **2021**, 15, 693110	3.4	
287	SMARCOS: Off-the-Shelf Smart Compliant Actuators for Human-Robot Applications. *Actuators*, **2021**, 10, 289	2.4	1
286	Integration of 3D Printed Flexible Pressure Sensors into Physical Interfaces for Wearable Robots. *Sensors*, **2021**, 21,	3.8	3

285	Overload Clutch Design for Collision Tolerant High-Speed Industrial Robots. *IEEE Robotics and Automation Letters*, **2021**, 6, 863-870	4.2	1
284	In or out? A field observational study on the placement of entertaining robots in retailing. *International Journal of Retail and Distribution Management*, **2021**, ahead-of-print,	3.5	5
283	A Sensorized Soft Pneumatic Actuator Fabricated with Extrusion-Based Additive Manufacturing. *Actuators*, **2021**, 10, 102	2.4	6
282	A Soft Pneumatic Actuator with Integrated Deformation Sensing Elements Produced Exclusively with Extrusion Based Additive Manufacturing. *Engineering Proceedings*, **2021**, 6, 11	0.5	1
281	Invariant Set Distributed Explicit Reference Governors for Provably Safe On-Board Control of Nano-Quadrotor Swarms. *Frontiers in Robotics and AI*, **2021**, 8, 663809	2.8	3
280	A Reinforcement Learning Based Cognitive Empathy Framework for Social Robots. *International Journal of Social Robotics*, **2021**, 13, 1079-1093	4	8
279	Investigating the Effects of Strapping Pressure on Human-Robot Interface Dynamics Using a Soft Robotic Cuff. *IEEE Transactions on Medical Robotics and Bionics*, **2021**, 3, 146-155	3.1	6
278	How using brain-machine interfaces influences the human sense of agency. *PLoS ONE*, **2021**, 16, e0245191	3.7	4
277	Piezoresistive sensor fiber composites based on silicone elastomers for the monitoring of the position of a robot arm. *Sensors and Actuators A: Physical*, **2021**, 318, 112433	3.9	17
276	The Influence of the Furan and Maleimide Stoichiometry on the Thermoreversible Diels-Alder Network Polymerization. *Polymers*, **2021**, 13,	4.5	4
275	A generic algorithm for computing optimal ergonomic postures during working in an industrial environment. *International Journal of Industrial Ergonomics*, **2021**, 84, 103145	2.9	1
274	A review on self-healing polymers for soft robotics. *Materials Today*, **2021**, 47, 187-205	21.8	32
273	Prevalence and incidence of work-related musculoskeletal disorders in secondary industries of 21st century Europe: a systematic review and meta-analysis. *BMC Musculoskeletal Disorders*, **2021**, 22, 751	2.8	9
272	A Novel Wolfrom-Based Gearbox for Robotic Actuators. *IEEE/ASME Transactions on Mechatronics*, **2021**, 26, 1980-1988	5.5	4
271	From stopping to shopping: An observational study comparing a humanoid service robot with a tablet service kiosk to attract and convert shoppers. *Journal of Business Research*, **2021**, 134, 263-274	8.7	11
270	Supramolecular Self-Healing Sensor Fiber Composites for Damage Detection in Piezoresistive Electronic Skin for Soft Robots. *Polymers*, **2021**, 13,	4.5	2
269	Fabrication of a Soft Robotic Gripper With Integrated Strain Sensing Elements Using Multi-Material Additive Manufacturing.. *Frontiers in Robotics and AI*, **2021**, 8, 615991	2.8	1
268	The Sensor-Based Biomechanical Risk Assessment at the Base of the Need for Revising of Standards for Human Ergonomics. *Sensors*, **2020**, 20,	3.8	14

267	Self-Healing and High Interfacial Strength in Multi-Material Soft Pneumatic Robots via Reversible Diels□Alder Bonds. *Actuators*, **2020**, 9, 34	2.4	15
266	Smart Collaborative Systems for Enabling Flexible and Ergonomic Work Practices [Industry Activities]. *IEEE Robotics and Automation Magazine*, **2020**, 27, 169-176	3.4	21
265	Additive Manufacturing for Self-Healing Soft Robots. *Soft Robotics*, **2020**, 7, 711-723	9.2	19
264	Design, Optimization and Energetic Evaluation of an Efficient Fully Powered Ankle-Foot Prosthesis With a Series Elastic Actuator. *IEEE Access*, **2020**, 8, 61491-61503	3.5	3
263	Social Processes: What Determines Industrial Workers' Intention to Use Exoskeletons?. *Human Factors*, **2020**, 62, 337-350	3.8	12
262	Varying mechanical compliance benefits energy efficiency of a knee joint actuator. *Mechatronics*, **2020**, 66, 102318	3	4
261	Improving the performance of industrial machines with variable stiffness springs. *Mechanics Based Design of Structures and Machines*, **2020**, 1-20	1.7	3
260	Opportunities for Women in Robotics [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2020**, 27, 4-21	3.4	1
259	. *IEEE Robotics and Automation Magazine*, **2020**, 27, 44-55	3.4	9
258	An Autonomous Cognitive Empathy Model Responsive to Users□Facial Emotion Expressions. *ACM Transactions on Interactive Intelligent Systems*, **2020**, 10, 1-23	1.8	7
257	. *IEEE Access*, **2020**, 8, 223325-223334	3.5	7
256	A Review of Gait Phase Detection Algorithms for Lower Limb Prostheses. *Sensors*, **2020**, 20,	3.8	24
255	Walking with a powered ankle-foot orthosis: the effects of actuation timing and stiffness level on healthy users. *Journal of NeuroEngineering and Rehabilitation*, **2020**, 17, 98	5.3	8
254	**2020**,		1
253	United Against Racism and a Call for Action [Ethical, Legal, and Societal Issues]. *IEEE Robotics and Automation Magazine*, **2020**, 27, 10-11	3.4	1
252	The DREAM Dataset: Supporting a data-driven study of autism spectrum disorder and robot enhanced therapy. *PLoS ONE*, **2020**, 15, e0236939	3.7	6
251	Novel Lockable and Stackable Compliant Actuation Unit for Modular +SPEA Actuators. *IEEE Robotics and Automation Letters*, **2019**, 4, 4445-4451	4.2	4
250	The influence of stereochemistry on the reactivity of the Diels□Alder cycloaddition and the implications for reversible network polymerization. *Polymer Chemistry*, **2019**, 10, 473-485	4.9	39

249	Kinematically redundant actuators, a solution for conflicting torque–speed requirements. *International Journal of Robotics Research*, **2019**, 38, 612-629	5.7	8
248	Scaling laws of compliant elements for high energy storage capacity in robotics. *Mechanism and Machine Theory*, **2019**, 139, 482-505	4	4
247	Robot-Enhanced Therapy: Development and Validation of Supervised Autonomous Robotic System for Autism Spectrum Disorders Therapy. *IEEE Robotics and Automation Magazine*, **2019**, 26, 49-58	3.4	32
246	A Variable Stiffness Actuator Module With Favorable Mass Distribution for a Bio-inspired Biped Robot. *Frontiers in Neurorobotics*, **2019**, 13, 20	3.4	10
245	Robotic Dreams, Robotic Realities [From the Editor's Desk]. *IEEE Robotics and Automation Magazine* , **2019**, 26, 4-5	3.4	2
244	A Hopping Robot Driven by a Series Elastic Dual-Motor Actuator. *IEEE Robotics and Automation Letters*, **2019**, 4, 2310-2316	4.2	9
243	Cognitive performance and brain dynamics during walking with a novel bionic foot: A pilot study. *PLoS ONE*, **2019**, 14, e0214711	3.7	4
242	Studying Design Aspects for Social Robots Using a Generic Gesture Method. *International Journal of Social Robotics*, **2019**, 11, 651-663	4	7
241	Modeling, Design and Test-Bench Validation of a Semi-Active Propulsive Ankle Prosthesis With a Clutched Series Elastic Actuator. *IEEE Robotics and Automation Letters*, **2019**, 4, 1823-1830	4.2	15
240	Why Children Prefer Extrovert or Introvert Robots: A Pilot Study Using Pairwise Robot Comparison **2019**,		1
239	Scaling laws for robotic transmissions. *Mechanism and Machine Theory*, **2019**, 140, 601-621	4	6
238	A Multi-Material Self-Healing Soft Gripper **2019**,		8
237	Energetic Advantages of Constant Torque Springs in Series Parallel Elastic Actuators **2019**,		1
236	Customizing planetary gear trains for human limb assistance and replication. *MATEC Web of Conferences*, **2019**, 287, 01014	0.3	1
235	Guidelines and Recommendations to Investigate the Efficacy of a Lower-Limb Prosthetic Device: A Systematic Review. *IEEE Transactions on Medical Robotics and Bionics*, **2019**, 1, 279-296	3.1	7
234	Decisions, Decisions [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2019**, 26, 4-13	3.4	
233	Trunk Range of Motion in the Sagittal Plane with and Without a Flexible Back Support Exoskeleton. *Biosystems and Biorobotics*, **2019**, 239-243	0.2	
232	A Series Elastic Dual-Motor Actuator Concept for Wearable Robotics. *Biosystems and Biorobotics*, **2019**, 165-169	0.2	4

231	Failure Mode and Effect Analysis (FMEA)-Driven Design of a Planetary Gearbox for Active Wearable Robotics. *Biosystems and Biorobotics*, **2019**, 460-464	0.2	3
230	Introducing Compound Planetary Gears (C-PGTs): A Compact Way to Achieve High Gear Ratios for Wearable Robots. *Biosystems and Biorobotics*, **2019**, 485-489	0.2	3
229	Task allocation for improved ergonomics in Human-Robot Collaborative Assembly. *Interaction Studies*, **2019**, 20, 102-133	1.3	18
228	Hmm, Did You Hear What I Just Said? Development of a Re-Engagement System for Socially Interactive Robots. *Robotics*, **2019**, 8, 95	2.8	1
227	The Right to Fail [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2019**, 26, 4-19	3.4	1
226	Accelerating Interactive Reinforcement Learning by Human Advice for an Assembly Task by a Cobot. *Robotics*, **2019**, 8, 104	2.8	6
225	Variable stiffness ankle actuator for use in robotic-assisted walking: Control strategy and experimental characterization. *Mechanism and Machine Theory*, **2019**, 134, 604-624	4	29
224	Sensing-Enhanced Therapy System for Assessing Children With Autism Spectrum Disorders: A Feasibility Study. *IEEE Sensors Journal*, **2019**, 19, 1508-1518	4	12
223	DualKeepon: a human obot interaction testbed to study linguistic features of speech. *Intelligent Service Robotics*, **2019**, 12, 45-54	2.6	2
222	A Personalized and Platform-Independent Behavior Control System for Social Robots in Therapy: Development and Applications. *IEEE Transactions on Cognitive and Developmental Systems*, **2019**, 11, 334-346	3	13
221	Metabolic Effects Induced by a Kinematically Compatible Hip Exoskeleton During STS. *IEEE Transactions on Biomedical Engineering*, **2018**, 65, 1399-1409	5	16
220	VUB-CYBERLEGs CYBATHLON 2016 Beta-Prosthesis: case study in control of an active two degree of freedom transfemoral prosthesis. *Journal of NeuroEngineering and Rehabilitation*, **2018**, 15, 3	5.3	10
219	Independent load carrying and measurement manipulator robot arm for improved payload to mass ratio. *Robotics and Computer-Integrated Manufacturing*, **2018**, 53, 135-140	9.2	11
218	Modeling and design of an energy-efficient dual-motor actuation unit with a planetary differential and holding brakes. *Mechatronics*, **2018**, 49, 134-148	3	17
217	Technology Is Not Neutral [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2018**, 25, 4-4	3.4	1
216	. *IEEE Technology and Society Magazine*, **2018**, 37, 30-39	0.8	23
215	EtherCAT Tutorial: An Introduction for Real-Time Hardware Communication on Windows [Tutorial]. *IEEE Robotics and Automation Magazine*, **2018**, 25, 22-122	3.4	23
214	Energetic analysis and optimization of a MACCEPA actuator in an ankle prosthesis. *Autonomous Robots*, **2018**, 42, 147-158	3	12

213	A Pneumatic Artificial Muscle Manufactured Out of Self-Healing Polymers That Can Repair Macroscopic Damages. *IEEE Robotics and Automation Letters*, **2018**, 3, 16-21	4.2	23
212	Generic method for generating blended gestures and affective functional behaviors for social robots. *Autonomous Robots*, **2018**, 42, 569-580	3	5
211	Passive Back Support Exoskeleton Improves Range of Motion Using Flexible Beams. *Frontiers in Robotics and AI*, **2018**, 5, 72	2.8	74
210	Humanoid Robot Pepper at a Belgian Chocolate Shop **2018**,		5
209	Design and evaluation of a torque-controllable knee joint actuator with adjustable series compliance and parallel elasticity. *Mechanism and Machine Theory*, **2018**, 130, 71-85	4	24
208	ED-FNN: A New Deep Learning Algorithm to Detect Percentage of the Gait Cycle for Powered Prostheses. *Sensors*, **2018**, 18,	3.8	36
207	Novel control strategy for the +SPEA: A redundant actuator with reconfigurable parallel elements. *Mechatronics*, **2018**, 53, 28-38	3	7
206	Constrained Control of Robotic Manipulators Using the Explicit Reference Governor **2018**,		2
205	An Overview on Principles for Energy Efficient Robot Locomotion. *Frontiers in Robotics and AI*, **2018** , 5, 129	2.8	22
204	Misalignment Compensation for Full Human-Exoskeleton Kinematic Compatibility: State of the Art and Evaluation. *Applied Mechanics Reviews*, **2018**, 70,	8.6	36
203	Coordinating Conference and Journal Papers [From the Editor]. *IEEE Robotics and Automation Magazine*, **2018**, 25, 4-4	3.4	
202	On Reproducible Research [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2018**, 25, 4-4	3.4	
201	Design and Development of Customized Physical Interfaces to Reduce Relative Motion Between the User and a Powered Ankle Foot Exoskeleton **2018**,		10
200	The Challenges and Achievements of Experimental Implementation of an Active Transfemoral Prosthesis Based on Biological Quasi-Stiffness: The CYBERLEGs Beta-Prosthesis. *Frontiers in Neurorobotics*, **2018**, 12, 80	3.4	15
199	Powered ankle-foot orthoses: the effects of the assistance on healthy and impaired users while walking. *Journal of NeuroEngineering and Rehabilitation*, **2018**, 15, 86	5.3	19
198	The effects of variable mechanical parameters on peak power and energy consumption of ankle-foot prostheses at different speeds. *Advanced Robotics*, **2018**, 32, 1229-1240	1.7	6
197	On the Electrical Energy Consumption of Active Ankle Prostheses with Series and Parallel Elastic Elements **2018**,		6
196	Evaluation and Analysis of Push-Pull Cable Actuation System Used for Powered Orthoses. *Frontiers in Robotics and AI*, **2018**, 5, 105	2.8	5

195	Online Reconfiguration of a Variable-Stiffness Actuator. *IEEE/ASME Transactions on Mechatronics*, **2018**, 23, 1866-1876	5.5	8
194	Working with Walt: How a Cobot Was Developed and Inserted on an Auto Assembly Line. *IEEE Robotics and Automation Magazine*, **2018**, 25, 51-58	3.4	41
193	Humans and Robots Working Together [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2018**, 25, 4-4	3.4	
192	The Ankle Mimicking Prosthetic Foot 3Locking mechanisms, actuator design, control and experiments with an amputee. *Robotics and Autonomous Systems*, **2017**, 91, 327-336	3.5	20
191	Do-It-Yourself Design for Social Robots: An Open-Source Hardware Platform to Encourage Innovation. *IEEE Robotics and Automation Magazine*, **2017**, 24, 86-94	3.4	4
190	A Collaborative Homeostatic-Based Behavior Controller for Social Robots in HumanRobot Interaction Experiments. *International Journal of Social Robotics*, **2017**, 9, 675-690	4	11
189	Attitudes of Factory Workers towards Industrial and Collaborative Robots **2017**,		21
188	Design of Smart Modular Variable Stiffness Actuators for Robotic-Assistive Devices. *IEEE/ASME Transactions on Mechatronics*, **2017**, 22, 1777-1785	5.5	41
187	How to Build a Supervised Autonomous System for Robot-Enhanced Therapy for Children with Autism Spectrum Disorder. *Paladyn*, **2017**, 8, 18-38	2.3	77
186	Reduction of the torque requirements of an active ankle prosthesis using a parallel spring. *Robotics and Autonomous Systems*, **2017**, 92, 187-196	3.5	21
185	Study on electric energy consumed in intermittent series-parallel elastic actuators (iSPEA). *Bioinspiration and Biomimetics*, **2017**, 12, 036008	2.6	4
184	Legged Robots with Bioinspired Morphology **2017**, 457-561		3
183	Design and experimental evaluation of a lightweight, high-torque and compliant actuator for an active ankle foot orthosis. *IEEE International Conference on Rehabilitation Robotics*, **2017**, 2017, 283-288	1.3	9
182	Towards low back support with a passive biomimetic exo-spine. *IEEE International Conference on Rehabilitation Robotics*, **2017**, 2017, 1165-1170	1.3	9
181	A Survey on Behavior Control Architectures for Social Robots in Healthcare Interventions. *International Journal of Humanoid Robotics*, **2017**, 14, 1750021	1.2	7
180	Biarticular elements as a contributor to energy efficiency: biomechanical review and application in bio-inspired robotics. *Bioinspiration and Biomimetics*, **2017**, 12, 061001	2.6	19
179	Self-healing soft pneumatic robots. *Science Robotics*, **2017**, 2,	18.6	224
178	Optimizing the power and energy consumption of powered prosthetic ankles with series and parallel elasticity. *Mechanism and Machine Theory*, **2017**, 116, 419-432	4	28

177	Compliant Lightweight Actuator Designs for Robotic Assistance and Rehabilitation Exoskeletons. *Biosystems and Biorobotics*, **2017**, 1383-1387	0.2	
176	Series and Parallel Elastic Actuation: Influence of Operating Positions on Design and Control. *IEEE/ASME Transactions on Mechatronics*, **2017**, 22, 521-529	5.5	31
175	On the Importance of a Motor Model for the Optimization of SEA-driven Prosthetic Ankles. *Biosystems and Biorobotics*, **2017**, 403-407	0.2	2
174	A Compliant Lightweight and Adaptable Active Ankle Foot Orthosis for Robotic Rehabilitation. *Biosystems and Biorobotics*, **2017**, 45-49	0.2	4
173	Discrete binary muscle-inspired actuation with motor unit overpowering and binary control strategy **2017**,		1
172	**2017**,		16
171	A novel modular compliant knee joint actuator for use in assistive and rehabilitation orthoses **2017**,		4
170	Publication Impact Factors and Submission-to-Decision Times [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2017**, 24, 4-6	3.4	
169	Multi-Axis Force Sensor for Human-Robot Interaction Sensing in a Rehabilitation Robotic Device. *Sensors*, **2017**, 17,	3.8	24
168	Actuation in Legged Locomotion **2017**, 563-622		8
167	Bilateral, Misalignment-Compensating, Full-DOF Hip Exoskeleton: Design and Kinematic Validation. *Applied Bionics and Biomechanics*, **2017**, 2017, 5813154	1.6	17
166	Robot-Enhanced CBT for dysfunctional emotions in social situations for children with ASD. *Journal of Evidence-Based Psychotherapies*, **2017**, 17, 119-132	0.6	15
165	An End-User Interface to Generate Homeostatic Behavior for NAO Robot in Robot-Assisted Social Therapies. *Lecture Notes in Computer Science*, **2017**, 609-619	0.9	1
164	Proxy-based position control of manipulators with passive compliant actuators: Stability analysis and experiments. *Robotics and Autonomous Systems*, **2016**, 75, 398-408	3.5	15
163	Design and evaluation of a DIY construction system for educational robot kits. *International Journal of Technology and Design Education*, **2016**, 26, 521-540	1.1	14
162	Children with Autism Spectrum Disorders Make a Fruit Salad with Probo, the Social Robot: An Interaction Study. *Journal of Autism and Developmental Disorders*, **2016**, 46, 113-126	4.6	54
161	A Survey of Expectations About the Role of Robots in Robot-Assisted Therapy for Children with ASD: Ethical Acceptability, Trust, Sociability, Appearance, and Attachment. *Science and Engineering Ethics*, **2016**, 22, 47-65	3.1	101
160	Multi-level control of zero-moment point-based humanoid biped robots: a review. *Robotica*, **2016**, 34, 2440-2466	2.1	18

159	Mechanical design of a lightweight compliant and adaptable active ankle foot orthosis **2016**,		20
158	Another Five Successful Years [From the Editor's Desk]. *IEEE Robotics and Automation Magazine*, **2016**, 23, 4-4	3.4	
157	Toward Self-Healing Actuators: A Preliminary Concept. *IEEE Transactions on Robotics*, **2016**, 32, 736-743	6.5	12
156	Robot Enhanced Therapy for Children with Autism Disorders: Measuring Ethical Acceptability. *IEEE Technology and Society Magazine*, **2016**, 35, 54-66	0.8	28
155	Enhancing Emotional Facial Expressiveness on NAO. *International Journal of Social Robotics*, **2016**, 8, 513-521	4	8
154	+SPEA introduction: Drastic actuator energy requirement reduction by symbiosis of parallel motors, springs and locking mechanisms **2016**,		12
153	Reaching and pointing gestures calculated by a generic gesture system for social robots. *Robotics and Autonomous Systems*, **2016**, 83, 32-43	3.5	8
152	Energy Consumption of Geared DC Motors in Dynamic Applications: Comparing Modeling Approaches. *IEEE Robotics and Automation Letters*, **2016**, 1, 524-530	4.2	36
151	Variable Stiffness Actuators: Review on Design and Components. *IEEE/ASME Transactions on Mechatronics*, **2016**, 21, 2418-2430	5.5	186
150	Proxy-Based Sliding Mode Control of Compliant Joint Manipulators. *Lecture Notes in Electrical Engineering*, **2016**, 241-257	0.2	3
149	Bi-directional series-parallel elastic actuator and overlap of the actuation layers. *Bioinspiration and Biomimetics*, **2016**, 11, 016005	2.6	10
148	Do infants perceive the social robot Keepon as a communicative partner?. *Research in Social and Administrative Pharmacy*, **2016**, 42, 157-67	2.9	4
147	Can 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
146	The Variable Boundary Layer Sliding Mode Control: A Safe and Performant Control for Compliant Joint Manipulators. *IEEE Robotics and Automation Letters*, **2016**, 1-1	4.2	2
145	What Is the Path Ahead for Soft Robotics?. *Soft Robotics*, **2016**, 3, 159-160	9.2	4
144	Human-like compliant locomotion: state of the art of robotic implementations. *Bioinspiration and Biomimetics*, **2016**, 11, 051002	2.6	60
143	The AMP-Foot 3, new generation propulsive prosthetic feet with explosive motion characteristics: design and validation. *BioMedical Engineering OnLine*, **2016**, 15, 145	4.1	19
142	Series and Parallel Elastic Actuation: Impact of natural dynamics on power and energy consumption. *Mechanism and Machine Theory*, **2016**, 102, 232-246	4	73

141	Proxy-based sliding mode control of a robotic ankle-foot system for post-stroke rehabilitation. *Advanced Robotics*, **2016**, 30, 992-1003	1.7	11
140	Evolutionary method for robot morphology: Case study of social robot Probo **2016**,		4
139	Variable stiffness actuators: The user's point of view. *International Journal of Robotics Research*, **2015**, 34, 727-743	5.7	117
138	Cylindrical cam mechanism for unlimited subsequent spring recruitment in Series-Parallel Elastic Actuators **2015**,		10
137	Development of a self-healing soft pneumatic actuator: a first concept. *Bioinspiration and Biomimetics*, **2015**, 10, 046007	2.6	31
136	A muscle-like recruitment actuator with modular redundant actuation units for soft robotics. *Robotics and Autonomous Systems*, **2015**, 74, 40-50	3.5	13
135	Lock Your Robot: A Review of Locking Devices in Robotics. *IEEE Robotics and Automation Magazine*, **2015**, 22, 106-117	3.4	81
134	Ankle–knee prosthesis with active ankle and energy transfer: Development of the CYBERLEGs Alpha-Prosthesis. *Robotics and Autonomous Systems*, **2015**, 73, 4-15	3.5	46
133	Development of a generic method to generate upper-body emotional expressions for different social robots. *Advanced Robotics*, **2015**, 29, 597-609	1.7	13
132	Instrumenting complex exoskeletons for improved human-robot interaction. *IEEE Instrumentation and Measurement Magazine*, **2015**, 18, 5-10	1.4	16
131	Torque control of a push-pull cable driven powered orthosis for the CORBYS platform **2015**,		2
130	Probolino: A Portable Low-Cost Social Device for Home-Based Autism Therapy. *Lecture Notes in Computer Science*, **2015**, 93-102	0.9	9
129	Investigation of self-healing compliant actuators for robotics **2015**,		8
128	Torsion MACCEPA: A novel compact compliant actuator designed around the drive axis **2015**,		11
127	Conceptual design of a novel variable stiffness actuator for use in lower limb exoskeletons **2015**,		16
126	Modeling and design of geared DC motors for energy efficiency: Comparison between theory and experiments. *Mechatronics*, **2015**, 30, 198-213	3	51
125	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
124	Variable Recruitment of Parallel Elastic Elements: Series–Parallel Elastic Actuators (SPEA) With Dephased Mutilated Gears. *IEEE/ASME Transactions on Mechatronics*, **2015**, 20, 594-602	5.5	72

123	New frontiers in the rubber hand experiment: when a robotic hand becomes one's own. *Behavior Research Methods*, **2015**, 47, 744-55	6.1	43
122	Sliding-Bar MACCEPA for a Powered Ankle Prosthesis. *Journal of Mechanisms and Robotics*, **2015**, 7,	2.2	17
121	CYBERLEGS Beta-Prosthesis active knee system **2015**,		11
120	A selective recruitment strategy for exploiting muscle-like actuator impedance properties **2015**,		1
119	Soft Robotics as an Emerging Academic Field. *Soft Robotics*, **2015**, 2, 131-134	9.2	4
118	Real-time physical layer architecture for CORBYS gait rehabilitation robot **2015**,		2
117	Are Children with ASD more Prone to Test the Intentions of the Robonova Robot Compared to a Human?. *International Journal of Social Robotics*, **2015**, 7, 629-639	4	9
116	Design, development and testing of a lightweight and compact locking mechanism for a passive knee prosthesis **2014**,		4
115	Mechatronic design of a sit-to-stance exoskeleton **2014**,		29
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