Carlos Balaguer

List of Publications by Year
in descending order

137	1,935	331538 21	302012 39
papers	citations	h-index	g-index

138	138	138	1620
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Anti-Swinging Input Shaping Control of an Automatic Construction Crane. IEEE Transactions on Automation Science and Engineering, 2008, 5, 549-557.	3.4	147
2	A climbing autonomous robot for inspection applications in 3D complex environments. Robotica, 2000, 18, 287-297.	1.3	146
3	Past, present and future of robotic tunnel inspection. Automation in Construction, 2015, 59, 99-112.	4.8	144
4	Tunnel structural inspection and assessment using an autonomous robotic system. Automation in Construction, 2018, 87, 117-126.	4.8	123
5	Climbing Robots? Mobility for Inspection and Maintenance of 3D Complex Environments. Autonomous Robots, 2005, 18, 157-169.	3.2	97
6	Robotic autonomous systems for earthmoving in military applications. Automation in Construction, 2019, 107, 102934.	4.8	61
7	Autonomous robotic system for tunnel structural inspection and assessment. International Journal of Intelligent Robotics and Applications, 2018, 2, 43-66.	1.6	58
8	Robot-aided tunnel inspection and maintenance system by vision and proximity sensor integration. Automation in Construction, 2011, 20, 629-636.	4.8	56
9	Robot assembly system for computer-integrated construction. Automation in Construction, 2000, 9, 479-487.	4.8	54
10	A mechatronics security system for the construction site. Automation in Construction, 2005, 14, 460-466.	4.8	50
11	Robotics in Health Care: Perspectives of Robot-Aided Interventions in Clinical Practice for Rehabilitation of Upper Limbs. Applied Sciences (Switzerland), 2019, 9, 2586.	1.3	42
12	Review of Automated Systems for Upper Limbs Functional Assessment in Neurorehabilitation. IEEE Access, 2019, 7, 32352-32367.	2.6	42
13	Effectiveness of Serious Games for Leap Motion on the Functionality of the Upper Limb in Parkinsonâ€™s Disease: A Feasibility Study. Computational Intelligence and Neuroscience, 2018, 2018, 1-17.	1.1	41
14	FutureHome: An integrated construction automation approach. IEEE Robotics and Automation Magazine, 2002, 9, 55-66.	2.2	39
15	Validity of a Fully-Immersive VR-Based Version of the Box and Blocks Test for Upper Limb Function Assessment in Parkinsonâ€™s Disease. Sensors, 2020, 20, 2773.	2.1	39
16	Flexible field factory for construction industry. Assembly Automation, 2013, 33, 175-183.	1.0	38
17	Cryptobotics: Why Robots Need Cyber Safety. Frontiers in Robotics and AI, 2015, 2, .	2.0	35
18	DE-based tuning of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0006.gif" overflow="scroll"><mml:msup><mml:mrow><mml:mi mathvariant="italic">PI</mml:mi></mml:mrow><mml:mrow><mml:mi>Î»</mml:mi></mml:mrow></mml:msup><mml:msup><mml:mrow controllers. ISA Transactions, 2015, 59, 398-407.	3.1	35

#	Article	IF	Citations
19	Service Robots in Catering Applications: A Review and Future Challenges. Electronics (Switzerland), 2021, 10, 47.	1.8	33
20	Robotics and Automation in Construction [Guest Editors]. IEEE Robotics and Automation Magazine, 2002, 9, 4-6.	2.2	28
21	TEO: FULL-SIZE HUMANOID ROBOT DESIGN POWERED BY A FUEL CELL SYSTEM. Cybernetics and Systems, 2012, 43, 163-180.	1.6	26
22	Robot-Aided Systems for Improving the Assessment of Upper Limb Spasticity: A Systematic Review. Sensors, 2020, 20, 5251.	2.1	21
23	Usability assessment of ASIBOT: a portable robot to aid patients with spinal cord injury. Disability and Rehabilitation: Assistive Technology, 2011, 6, 320-330.	1.3	20
24	Generation and Processing of Simulated Underwater Images for Infrastructure Visual Inspection with UUVs. Sensors, 2019, 19, 5497.	2.1	17
25	3D Exploration and Navigation with Optimal-RRT Planners for Ground Robots in Indoor Incidents. Sensors, 2020, 20, 220.	2.1	16
26	A MODEL-FREE APPROACH FOR ACCURATE JOINT MOTION CONTROL IN HUMANOID LOCOMOTION. International Journal of Humanoid Robotics, 2011, 08, 27-46.	0.6	15
27	UAVs mission planning with flight level constraint using Fast Marching Square Method. Robotics and Autonomous Systems, 2017, 94, 162-171.	3.0	15
28	Computerâ€Aided Architectural Design Oriented to Robotized Facade Panels Manufacturing. Computer-Aided Civil and Infrastructure Engineering, 2001, 16, 216-227.	6.3	13
29	Robots de servicio. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2008, 5, 6-13.	0.6	13
30	Full-Body Postural Control of a Humanoid Robot with Both Imitation Learning and Skill Innovation. International Journal of Humanoid Robotics, 2014, 11, 1450012.	0.6	13
31	A graphical tuning method for fractional order controllers based on iso-slope phase curves. ISA Transactions, 2020, 105, 296-307.	3.1	13
32	Fast Marching Square Method for UAVs Mission Planning with consideration of Dubins Model Constraints. IFAC-PapersOnLine, 2016, 49, 164-169.	0.5	12
33	Proprio and Teleoperation of a Robotic System for Disabled Personsâ€™ Assistance in Domestic Environments. Springer Tracts in Advanced Robotics, 2007, , 415-427.	0.3	12
34	Experimental Robot Model Adjustments Based on Forceâ€“Torque Sensor Information. Sensors, 2018, 18, 836.	2.1	11
35	Sign Language Representation by TEO Humanoid Robot: End-User Interest, Comprehension and Satisfaction. Electronics (Switzerland), 2019, 8, 57.	1.8	11
36	A new approach on humanâ€“robot collaboration with humanoid robot RH-2. Robotica, 2011, 29, 949-957.	1.3	10

#	Article	IF	Citations
37	Distributed and Adaptive Shared Control Systems: Methodology for the Replication of Experiments. IEEE Robotics and Automation Magazine, 2015, 22, 137-146.	2.2	10
38	Automatic Outcome in Manual Dexterity Assessment Using Colour Segmentation and Nearest Neighbour Classifier. Sensors, 2018, 18, 2876.	2.1	10
39	Forceâ€"torque sensor-based strategy for precise assembly using a SCARA robot. Robotics and Autonomous Systems, 1991, 8, 203-212.	3.0	9
40	Real-time gait planning for Rh-1 humanoid robot, using Local Axis Gait algorithm. , 2007, , .		9
41	Behavior sequencing based on demonstrations: a case of a humanoid opening a door while walking. Advanced Robotics, 2015, 29, 315-329.	1.1	9
42	Robotic ironing with 3D perception and force/torque feedback in household environments. , 2017, , .		9
43	Balance Computation of Objects Transported on a Tray by a Humanoid Robot Based on 3D Dynamic Slopes. , 2018, , .		9
44	Low-energy structures embedded with smart dampers. Energy and Buildings, 2018, 177, 375-384.	3.1	9
45	Enabling garment-agnostic laundry tasks for a Robot Household Companion. Robotics and Autonomous Systems, 2020, 123, 103330.	3.0	9
46	REAL-TIME GAIT PLANNING FOR THE HUMANOID ROBOT Rh-1 USING THE LOCAL AXIS GAIT ALGORITHM. International Journal of Humanoid Robotics, 2009, 06, 71-91.	0.6	8
47	Task-Oriented Kinematic Design of a Symmetric Assistive Climbing Robot. , 2011, 27, 1132-1137.		8
48	Experience acquisition simulator for operating microtuneling boring machines. Automation in Construction, 2012, 23, 33-46.	4.8	8
49	A humanoid robot standing up through learning from demonstration using a multimodal reward function. , 2013, , .		8
50	Action effect generalization, recognition and execution through Continuous Goal-Directed Actions. , 2014, , .		8
51	Developing Educational Printable Robots to Motivate University Students Using Open Source Technologies. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 81, 25-39.	2.0	8
52	Robust Motion Control of a Soft Robotic System Using Fractional Order Control. Mechanisms and Machine Science, 2018, , 147-155.	0.3	8
53	Towards a framework for rehabilitation and assessment of upper limb motor function based on Serious Games. , 2018, , .		8
54	Correction of Visual Perception Based on Neuro-Fuzzy Learning for the Humanoid Robot TEO. Sensors, 2018, 18, 972.	2.1	8

#	Article	IF	Citations
55	AUTMOD3: The Integration of Design and Planning Tools for Automatic Modular Construction. International Journal of Advanced Robotic Systems, 2007, 4, 45.	1.3	7
56	Modelling and control of the humanoid robot RH-1 for collaborative tasks. , 2008, , .		7
57	Robust motion control for humanoid robot flexible joints. , 2010, , .		7
58	The Automated Box and Blocks Test an Autonomous Assessment Method of Gross Manual Dexterity in Stroke Rehabilitation. Lecture Notes in Computer Science, 2017, , 101-114.	1.0	7
59	Adaptive collision-limitation behavior for an assistive manipulator. , 2013, , .		6
60	Humanoid robot imitation through continuous goal-directed actions: an evolutionary approach. Advanced Robotics, 2015, 29, 303-314.	1.1	6
61	Joint Position Control Based on Fractional-Order PD and PI Controllers for the Arm of the Humanoid Robot TEO. International Journal of Humanoid Robotics, 2019, 16, 1950042.	0.6	6
62	Modular and Self-Scalable Origami Robot: A First Approach. Mathematics, 2021, 9, 1324.	1.1	6
63	User perception of usability aspects in indirect HRI - a chain of translations. , 2010, , .		5
64	Automatic demonstration and feature selection for robot learning. , 2015, , .		5
65	Design and characterization of a novel mechanism of multiple joint stiffness(MMJS). , 2016, , .		5
66	Towards Robotic Garment Folding: A Vision Approach for Fold Detection. , 2016, , .		5
67	Fractional Control of a Humanoid Robot Reduced Model with Model Disturbances. Cybernetics and Systems, 2016, 47, 445-459.	1.6	5
68	Improving and evaluating robotic garment unfolding: A garment-agnostic approach. , 2017, , .		5
69	A Study on Machine Vision Techniques for the Inspection of Health Personnelsâ€™ Protective Suits for the Treatment of Patients in Extreme Isolation. Electronics (Switzerland), 2019, 8, 743.	1.8	5
70	Test Bench for Evaluation of a Soft Robotic Link. Frontiers in Robotics and AI, 2020, 7, 27.	2.0	5
71	A New Approach of Soft Joint Based on a Cable-Driven Parallel Mechanism for Robotic Applications. Mathematics, 2021, 9, 1468.	1.1	5
72	Earthmoving Construction Automation with Military Applications: Past, Present and Future. , 2018, , .		5

#	Article	IF	Citations
73	Introduction to Advances in Telerobotics. , 2007, , 1-7.		4
74	Humanoid Robot RH-1 for Collaborative Tasks: A Control Architecture for Human-Robot Cooperation. Applied Bionics and Biomechanics, 2008, 5, 225-234.	0.5	4
75	The Rh-1 full-size humanoid robot: Design, walking pattern generation and control. Applied Bionics and Biomechanics, 2009, 6, 301-344.	0.5	4
76	Full-size humanoid robot TEO: Design attending mechanical robustness and energy consumption. , 2011, , .		4
77	Benchmarking shared control for assistive manipulators: From controllability to the speed-accuracy trade-off. , 2012, , .		4
78	Sensorless friction and gravity compensation. , 2014, , .		4
79	Intelligent robotic system for autonomous crack detection and caracterization in concrete tunnels. , 2017, , .		4
80	Real Evaluations Tractability using Continuous Goal-Directed Actions in Smart City Applications. Sensors, 2018, 18, 3818.	2.1	4
81	Modeling, Gait Sequence Design, and Control Architecture of BADGER Underground Robot. IEEE Robotics and Automation Letters, 2021, 6, 1160-1167.	3.3	4
82	Light Weight Autonomous Climbing Robot for Elderly and Disabled Personsâ€™ Services. , 0, , 407-416.		4
83	Robot Devastation: Using DIY Low-Cost Platforms for Multiplayer Interaction in an Augmented Reality Game. , 2015, , .		4
84	Assessment of Manual Dexterity in VR: Towards a Fully Automated Version of the Box and Blocks Test. Studies in Health Technology and Informatics, 2019, 266, 57-62.	0.2	4
85	On using guided motor primitives to execute Continuous Goal-Directed Actions. , 2014, , .		3
86	Knowledge Base Representation for Humanoid Robot Skills. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 3042-3047.	0.4	3
87	Adaptive Aid on Targeted Robot Manipulator Movements in Tele-Assistance. Paladyn, 2016, 7, .	1.9	3
88	Whole-Body Balance Control of a Humanoid Robot in Real Time Based on ZMP Stability Regions Approach. Cybernetics and Systems, 2018, 49, 521-538.	1.6	3
89	Underwater Robot Navigation for Maintenance and Inspection of Flooded Mine Shafts. , 2018, , .		3
90	Towards an Affordable Assistive Device for Personal Autonomy Recovery in Tasks Required of Manual Dexterity. IEEE Access, 2018, 6, 26338-26349.	2.6	3

#	Article	IF	Citations
91	Principios bÃ¡sicos para el desarrollo de una aplicaciÃ³n de bi-manipulaciÃ³n de cajas por un robot humanoide. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2021, 18, 129.	0.6	3
92	Assistive Robot Multi-modal Interaction with Augmented 3D Vision and Dialogue. Advances in Intelligent Systems and Computing, 2014, , 209-217.	0.5	3
93	Force-Sensorless Friction and Gravity Compensation for Robots. Advances in Intelligent Systems and Computing, 2016, , 57-68.	0.5	3
94	An Algebraic Approach for Accurate Motion Control of Humanoid Robot Joints. Lecture Notes in Computer Science, 2009, , 723-732.	1.0	3
95	A Review of Eight Years of CEABOT Contest: A National Wide Mini Humanoids Competition. Advances in Intelligent Systems and Computing, 2014, , 41-52.	0.5	3
96	Mechatronic design and control of a critical biped robot joint. , 2009, , .		2
97	Facial gesture recognition using active appearance models based on neural evolution. , 2012, , .		2
98	Online learning of sensorimotor interactions using a neural network with time-delayed inputs. , 2012, , .		2
99	MODELING AND SIMULATION OF THE HUMANOID ROBOT HOAP-3 IN THE OPENHRP3 PLATFORM. Cybernetics and Systems, 2013, 44, 663-680.	1.6	2
100	Towards robot imagination through object feature inference. , 2013, , .		2
101	Predictive Hebbian association of time-delayed inputs with actions in a developmental robot platform. , 2014, , .		2
102	Adaptation of Robot Skills Models to New Task Contraints. International Journal of Humanoid Robotics, 2015, 12, 1550024.	0.6	2
103	Open Solution for Humanoid Attitude Estimation through Sensory Integration and Extended Kalman Filtering. Automatika, 2015, 56, 9-20.	1.2	2
104	UAVs Mission Planning with Imposition of Flight Level through Fast Marching Square. Cybernetics and Systems, 2017, 48, 102-113.	1.6	2
105	Robotic ironing with a humanoid robot using human tools. , 2017, , .		2
106	Waiter Robot Application: Balance Control for Transporting Objects. , 2018, , .		2
107	Development of Applications for Humanoid Robots Using Multiple Platforms, Tools, and Cloud Data Sharing. International Journal of Humanoid Robotics, 2019, 16, 1950043.	0.6	2
108	Design of an Active Vision System for High-Level Isolation Units through Q-Learning. Applied Sciences (Switzerland), 2020, 10, 5927.	1.3	2

#	Article	IF	Citations
109	Framework for Learning and Adaptation of Humanoid Robot Skills to Task Constraints. Advances in Intelligent Systems and Computing, 2014, , 557-572.	0.5	2
110	CREATING A GESTURE RECOGNITION SYSTEM BASED ON SHIRT SHAPES. , 2007, , .		2
111	A first approach to a proposal of a soft robotic link acting as a neck. , 0, , .		2
112	Neural Policy Style Transfer. Cognitive Systems Research, 2022, 72, 23-32.	1.9	2
113	Reduction of free-space-loss for good and rapid 3D path planning of 6DOF robots. Journal of Intelligent and Robotic Systems: Theory and Applications, 1995, 13, 263-278.	2.0	1
114	Humanoid robot RH-1 for collaborative tasks: a control architecture for human-robot cooperation. Applied Bionics and Biomechanics, 2009, 5, 225-234.	0.5	1
115	An information-theoretic approach to modeling and quantifying assistive robotics HRI. , 2011, , .		1
116	Generation and adaptation of robot skills models. , 2014, , .		1
117	Distributed sensing, learning and control in an assistive manipulator. , 2014, , .		1
118	Task Oriented Control of a Humanoid Robot Through the Implementation of a Cognitive Architecture. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 85, 3-25.	2.0	1
119	A Robust Control Method for the Elbow of the Humanoid Robot TEO Based on a Fractional Order Controller. , 2018, , .		1
120	A Modular Framework to Facilitate the Control of an Assistive Robotic Arm Using Visual Servoing and Proximity Sensing. , 2020, , .		1
121	Towards Objective Assessment of Upper Limb Spasticity by Means ofÂCollaborative Robots. Biosystems and Biorobotics, 2022, , 463-467.	0.2	1
122	Technical Note: Mobile accelerator guidance using an optical tracker during docking in <scp>IOERT</scp> procedures. Medical Physics, 2017, 44, 5061-5069.	1.6	1
123	Special issue on recent advances in field and service robotics: handling harsh environments and cooperation. Robotica, 2023, 41, 411-413.	1.3	1
124	The virtual COM joints approach for whole-body rh-1 motion. , 2009, , .		0
125	Humanoid feet trajectory generation for the reduction of the dynamical effects. , 2009, , .		0
126	A STUDY FOR THE APPLICATION OF AUTOMATED PLANNING TO MOBILE ASSISTIVE ROBOTS. Cybernetics and Systems, 2014, 45, 512-529.	1.6	0

#	Article	IF	Citations
127	Editorial: ISARC 2014. Automation in Construction, 2015, 59, 97-98.	4.8	0
128	Guest Editorial: "Humans and Humanoids Face to Face". International Journal of Humanoid Robotics, 2015, 12, 1502001.	0.6	0
129	2014 IEEE-RAS International Conference on Humanoid Robots [Society News]. IEEE Robotics and Automation Magazine, 2015, 22, 102-103.	2.2	0
130	Improving CGDA execution through Genetic Algorithms incorporating Spatial and Velocity constraints. , 2017, , .		0
131	Reducing the number of evaluations required for CGDA execution through Particle Swarm Optimization methods. , 2017, , .		0
132	A use case of an adaptive cognitive architecture for the operation of humanoid robots in real environments. International Journal of Advanced Robotic Systems, 2017, 14, 172988141667813.	1.3	0
133	Robot Imitation Through Vision, Kinesthetic and Force Features with Online Adaptation to Changing Environments. , 2018, , .		0
134	Characterization and Study of the Primitive Dynamic Movements Required to Bi-Manipulate a Box. Electronics (Switzerland), 2021, 10, 1354.	1.8	0
135	FOOT PLANNING MOTION OF HUMANOID ROBOT RH-1 USING LAG ALGORITHM. , 2007, , .		0
136	High Level Humanoid Postural Control Architecture with Human Inspiration. Advances in Intelligent Systems and Computing, 2014, , 603-618.	0.5	0
137	Under-Actuation Modelling in Robotic Hands via Neural Networks for Sign Language Representation with End-User Validation. Lecture Notes in Computer Science, 2020, , 239-251.	1.0	0