

Mãximo A Roa Garzã³n

List of Publications by Year in descending order

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Version: 2024-02-01

104
papers

2,525
citations

430874

18
h-index

361022

35
g-index

108
all docs

108
docs citations

108
times ranked

1686
citing authors

#	ARTICLE	IF	CITATIONS
1	Grasp quality measures: review and performance. <i>Autonomous Robots</i> , 2015, 38, 65-88.	4.8	292
2	Overview of the torque-controlled humanoid robot TORO. , 2014, , .		199
3	Posture and balance control for biped robots based on contact force optimization. , 2011, , .		184
4	Passivity-based whole-body balancing for torque-controlled humanoid robots in multi-contact scenarios. <i>International Journal of Robotics Research</i> , 2016, 35, 1522-1543.	8.5	143
5	Bipedal walking control based on Capture Point dynamics. , 2011, , .		133
6	Computation of Independent Contact Regions for Grasping 3-D Objects. <i>IEEE Transactions on Robotics</i> , 2009, 25, 839-850.	10.3	113
7	Bipedal walking control based on Capture Point dynamics. , 2011, , .		110
8	Stable myoelectric control of a hand prosthesis using non-linear incremental learning. <i>Frontiers in Neurobotics</i> , 2014, 8, 8.	2.8	104
9	SMErobotics: Smart Robots for Flexible Manufacturing. <i>IEEE Robotics and Automation Magazine</i> , 2019, 26, 78-90.	2.0	64
10	Finding locally optimum force-closure grasps. <i>Robotics and Computer-Integrated Manufacturing</i> , 2009, 25, 536-544.	9.9	57
11	Humanoid Robots in Aircraft Manufacturing: The Airbus Use Cases. <i>IEEE Robotics and Automation Magazine</i> , 2019, 26, 30-45.	2.0	57
12	Posture and balance control for humanoid robots in multi-contact scenarios based on Model Predictive Control. , 2014, , .		47
13	Reachability and Capability Analysis for Manipulation Tasks. <i>Advances in Intelligent Systems and Computing</i> , 2014, , 703-718.	0.6	46
14	Good Posture, Good Balance: Comparison of Bioinspired and Model-Based Approaches for Posture Control of Humanoid Robots. <i>IEEE Robotics and Automation Magazine</i> , 2016, 23, 22-33.	2.0	45
15	Power grasp planning for anthropomorphic robot hands. , 2012, , .		37
16	Transferring functional grasps through contact warping and local replanning. , 2012, , .		35
17	Planning in-hand object manipulation with multifingered hands considering task constraints. , 2013, , .		33
18	Flexible assembly through integrated assembly sequence planning and grasp planning. , 2015, , .		29

#	ARTICLE	IF	CITATIONS
19	A Bin-Picking Benchmark for Systematic Evaluation of Robotic Pick-and-Place Systems. IEEE Robotics and Automation Letters, 2020, 5, 1389-1396.	5.1	28
20	Multi-contact balancing of humanoid robots in confined spaces: Utilizing knee contacts. , 2017, , .		27
21	CLASH: Compliant Low Cost Antagonistic Servo Hands. , 2018, , .		25
22	Humanoid Teleoperation Using Task-Relevant Haptic Feedback. , 2018, , .		24
23	Research Challenges and Progress in Robotic Grasping and Manipulation Competitions. IEEE Robotics and Automation Letters, 2022, 7, 874-881.	5.1	24
24	Mobile Manipulation: Toward Smart Manufacturing [TC Spotlight]. IEEE Robotics and Automation Magazine, 2015, 22, 14-15.	2.0	23
25	Reachable Independent Contact Regions for precision grasps. , 2011, , .		22
26	Toward a task space framework for gesture commanded telemanipulation. , 2012, , .		22
27	Evaluation of Human Prehension Using Grasp Quality Measures. International Journal of Advanced Robotic Systems, 2012, 9, 112.	2.1	22
28	Robotic manipulation and the role of the task in the metric of success. Nature Machine Intelligence, 2019, 1, 340-346.	16.0	22
29	Benchmarking Protocol for Grasp Planning Algorithms. IEEE Robotics and Automation Letters, 2020, 5, 315-322.	5.1	22
30	Geometrical approach for grasp synthesis on discretized 3d objects. , 2007, , .		21
31	Integrated grasp and motion planning using independent contact regions. , 2014, , .		21
32	Torque-Based Balancing for a Humanoid Robot Performing High-Force Interaction Tasks. IEEE Robotics and Automation Letters, 2019, 4, 2023-2030.	5.1	21
33	OCRTOC: A Cloud-Based Competition and Benchmark for Robotic Grasping and Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 486-493.	5.1	21
34	Control applications of TORO — A Torque controlled humanoid robot. , 2014, , .		20
35	Multi-contact planning and control for a torque-controlled humanoid robot. , 2016, , .		19
36	Guest Editorial Open Discussion of Robot Grasping Benchmarks, Protocols, and Metrics. IEEE Transactions on Automation Science and Engineering, 2018, 15, 1440-1442.	5.2	19

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37	Grasp space generation using sampling and computation of independent regions. , 2008, , .		16
38	An adaptive compliant multi-finger approach-to-grasp strategy for objects with position uncertainties. , 2015, , .		15
39	Grasp quality evaluation done right: How assumed contact force bounds affect Wrench-based quality metrics. , 2017, , .		15
40	Regrasp planning in the grasp space using independent regions. , 2009, , .		14
41	Hardware and Control Concept for an Experimental Bipedal Robot with Joint Torque Sensors. Journal of the Robotics Society of Japan, 2012, 30, 378-382.	0.1	14
42	Passivity Analysis and Control of Humanoid Robots on Movable Ground. IEEE Robotics and Automation Letters, 2018, 3, 3457-3464.	5.1	14
43	Functional power grasps transferred through warping and replanning. , 2015, , .		13
44	A General Deterministic Sequence for Sampling d-Dimensional Configuration Spaces. Journal of Intelligent and Robotic Systems: Theory and Applications, 2007, 50, 361-373.	3.4	12
45	Identification of contact formations: Resolving ambiguous force torque information. , 2012, , .		12
46	Sequential trajectory re-planning with tactile information gain for dexterous grasping under object-pose uncertainty. , 2013, , .		12
47	Grasp quality evaluation in underactuated robotic hands. , 2016, , .		11
48	Benchmarking Hand and Grasp Resilience to Dynamic Loads. IEEE Robotics and Automation Letters, 2020, 5, 1780-1787.	5.1	11
49	Independent contact regions for frictional grasps on 3D objects. , 2008, , .		10
50	Influence of contact types and uncertainties in the computation of Independent Contact Regions. , 2011, , .		10
51	Hierarchical Path Planner Using Workspace Decomposition and Parallel Task-Space RRTs. , 2018, , .		10
52	Experimental evaluation of human grasps using a sensorized object. , 2012, , .		9
53	Virtual reality support for teleoperation using online grasp planning. , 2013, , .		9
54	Flexible, semi-autonomous grasping for assistive robotics. , 2016, , .		9

#	ARTICLE	IF	CITATIONS
55	A Benchmarking Framework for Systematic Evaluation of Compliant Under-Actuated Soft End Effectors in an Industrial Context. , 2018, , .		9
56	Mechanisms and Design of DLR Humanoid Robots. , 2017, , 1-26.		9
57	Determination of Independent Contact Regions on Discretized 3D Objects. , 2007, , .		8
58	Tactile-Based In-Hand Object Pose Estimation. Advances in Intelligent Systems and Computing, 2018, , 716-728.	0.6	8
59	Robotic Grasping and Manipulation Competition: Task Pool. Communications in Computer and Information Science, 2018, , 1-18.	0.5	8
60	Experiments with Human-inspired Behaviors in a Humanoid Robot: Quasi-static Balancing using Toe-off Motion and Stretched Knees. , 2019, , .		8
61	Graspability map: A tool for evaluating grasp capabilities. , 2011, , .		7
62	Assistance for telepresence using online grasp planning. , 2013, , .		7
63	CLASH“ A Compliant Sensorized Hand for Handling Delicate Objects. Frontiers in Robotics and AI, 2019, 6, 138.	3.2	7
64	Towards a functional evaluation of manipulation performance in dexterous robotic hand design. , 2014, , .		6
65	Mobile Manipulation Hackathon: Moving into Real World Applications. IEEE Robotics and Automation Magazine, 2021, 28, 112-124.	2.0	6
66	Planning realistic interactions for bimanual grasping and manipulation. , 2016, , .		5
67	A Benchmarking Framework for Systematic Evaluation of Robotic Pick-and-Place Systems in an Industrial Grocery Setting. , 2019, , .		5
68	Hybrid Planning System for In-Space Robotic Assembly of Telescopes using Segmented Mirror Tiles. , 2021, , .		5
69	Efficient and Goal-Directed Oscillations in Articulated Soft Robots: The Point-To-Point Case. IEEE Robotics and Automation Letters, 2021, 6, 2555-2562.	5.1	5
70	Robotic Grasping and Manipulation Competition: Competitor Feedback and Lessons Learned. Communications in Computer and Information Science, 2018, , 180-189.	0.5	5
71	Autonomous Bipedal Humanoid Grasping with Base Repositioning and Whole-Body Control. , 2018, , .		4
72	Interpreting Manipulation Actions: From Language to Execution. Advances in Intelligent Systems and Computing, 2016, , 175-187.	0.6	4

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73	Experimental Evaluation of Tactile Sensors for Compliant Robotic Hands. <i>Frontiers in Robotics and AI</i> , 2021, 8, 704416.	3.2	4
74	Environment-Aware Grasp Strategy Planning in Clutter for a Variable Stiffness Hand. , 2020, , .		4
75	Special issue on advanced manipulation. <i>Advanced Robotics</i> , 2017, 31, 1029-1029.	1.8	3
76	Vision-Based Solutions for Robotic Manipulation and Navigation Applied to Object Picking and Distribution. <i>KI - Kunstliche Intelligenz</i> , 2019, 33, 171-180.	3.2	3
77	Experimental study on model- vs. learning-based slip detection. , 2019, , .		3
78	Experimental Evaluation and Modeling of Passive Falls in Humanoid Robots. , 2019, , .		3
79	Emerging Paradigms for Robotic Manipulation: From the Lab to the Productive World [From the Guest Editors]. <i>IEEE Robotics and Automation Magazine</i> , 2021, 28, 10-12.	2.0	3
80	Automated Planning of Workcell Layouts Considering Task Sequences. , 2021, , .		3
81	Quadrupedal template model for parametric stability analysis of trotting gaits. , 2021, , .		3
82	Regrasp planning for discrete objects. , 2009, , .		2
83	Simultaneous and realistic contact and force planning in grasping. , 2015, , .		2
84	Determining independent contacts regions to immobilize 2D articulated objects. , 2015, , .		2
85	Evaluating the Quality of Non-Prehensile Balancing Grasps. , 2018, , .		2
86	Optimal Trajectory for Active Safe Falls in Humanoid Robots. , 2019, , .		2
87	Mechanism Design of DLR Humanoid Robots. , 2019, , 637-662.		2
88	DLR Multi-fingered Hands. , 2019, , 481-522.		2
89	Autonomous Robot Planning System for In-Space Assembly of Reconfigurable Structures. , 2021, , .		2
90	Learning to teleoperate an upper-limb assistive humanoid robot for bimanual daily-living tasks. <i>Biomedical Physics and Engineering Express</i> , 2022, 8, 015022.	1.2	2

#	ARTICLE	IF	CITATIONS
91	Embedding a Nonlinear Strict Oscillatory Mode into a Segmented Leg. , 2021, , .		2
92	Kinematic Transfer Learning of Sampling Distributions for Manipulator Motion Planning. , 2022, , .		2
93	Design Methodology for Biped Robots: Applications in Robotics and Prosthetics. , 2007, , .		1
94	Torque-based multi-task and balancing control for humanoid robots. , 2014, , .		1
95	Manipulation and Task Execution by Humanoids. , 2019, , 1633-1655.		1
96	Manipulation and Task Execution by Humanoids. , 2017, , 1-23.		1
97	DLR Multi-fingered Hands. , 2017, , 1-41.		1
98	Editorial: On the Planning, Control, and Perception of Soft Robotic End-Effectors. Frontiers in Robotics and AI, 2021, 8, 795863.	3.2	1
99	Automatic generation of realistic training data for learning parallel-jaw grasping from synthetic stereo images. , 2021, , .		1
100	Determining Fixturing Points for Complex Objects. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 12709-12714.	0.4	0
101	Extended independent contact regions for grasping applications. , 2013, , .		0
102	Contact Trajectories for Regrasp Planning on Discrete Objects. , 2010, , 69-83.		0
103	Observation and Execution. Springer Tracts in Advanced Robotics, 2012, , 59-122.	0.4	0
104	Planning Fail-Safe Trajectories for Space Robotic Arms. Frontiers in Robotics and AI, 2021, 8, 710021.	3.2	0