

# Mãximo A Roa Garzã³n

## List of Publications by Year in descending order

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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	OCRTOC: A Cloud-Based Competition and Benchmark for Robotic Grasping and Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 486-493.	5.1	21
2	Learning to teleoperate an upper-limb assistive humanoid robot for bimanual daily-living tasks. Biomedical Physics and Engineering Express, 2022, 8, 015022.	1.2	2
3	Research Challenges and Progress in Robotic Grasping and Manipulation Competitions. IEEE Robotics and Automation Letters, 2022, 7, 874-881.	5.1	24
4	Kinematic Transfer Learning of Sampling Distributions for Manipulator Motion Planning. , 2022, , .		2
5	Autonomous Robot Planning System for In-Space Assembly of Reconfigurable Structures. , 2021, , .		2
6	Hybrid Planning System for In-Space Robotic Assembly of Telescopes using Segmented Mirror Tiles. , 2021, , .		5
7	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
8	Emerging Paradigms for Robotic Manipulation: From the Lab to the Productive World [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2021, 28, 10-12.	2.0	3
9	Mobile Manipulation Hackathon: Moving into Real World Applications. IEEE Robotics and Automation Magazine, 2021, 28, 112-124.	2.0	6
10	Automated Planning of Workcell Layouts Considering Task Sequences. , 2021, , .		3
11	Experimental Evaluation of Tactile Sensors for Compliant Robotic Hands. Frontiers in Robotics and AI, 2021, 8, 704416.	3.2	4
12	Planning Fail-Safe Trajectories for Space Robotic Arms. Frontiers in Robotics and AI, 2021, 8, 710021.	3.2	0
13	Editorial: On the Planning, Control, and Perception of Soft Robotic End-Effectors. Frontiers in Robotics and AI, 2021, 8, 795863.	3.2	1
14	Quadrupedal template model for parametric stability analysis of trotting gaits. , 2021, , .		3
15	Embedding a Nonlinear Strict Oscillatory Mode into a Segmented Leg. , 2021, , .		2
16	Automatic generation of realistic training data for learning parallel-jaw grasping from synthetic stereo images. , 2021, , .		1
17	Benchmarking Protocol for Grasp Planning Algorithms. IEEE Robotics and Automation Letters, 2020, 5, 315-322.	5.1	22
18	Benchmarking Hand and Grasp Resilience to Dynamic Loads. IEEE Robotics and Automation Letters, 2020, 5, 1780-1787.	5.1	11

#	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	Environment-Aware Grasp Strategy Planning in Clutter for a Variable Stiffness Hand. , 2020, , .		4
21	Experiments with Human-inspired Behaviors in a Humanoid Robot: Quasi-static Balancing using Toe-off Motion and Stretched Knees. , 2019, , .		8
22	A Benchmarking Framework for Systematic Evaluation of Robotic Pick-and-Place Systems in an Industrial Grocery Setting. , 2019, , .		5
23	Robotic manipulation and the role of the task in the metric of success. Nature Machine Intelligence, 2019, 1, 340-346.	16.0	22
24	Humanoid Robots in Aircraft Manufacturing: The Airbus Use Cases. IEEE Robotics and Automation Magazine, 2019, 26, 30-45.	2.0	57
25	Vision-Based Solutions for Robotic Manipulation and Navigation Applied to Object Picking and Distribution. KI - Kunstliche Intelligenz, 2019, 33, 171-180.	3.2	3
26	Torque-Based Balancing for a Humanoid Robot Performing High-Force Interaction Tasks. IEEE Robotics and Automation Letters, 2019, 4, 2023-2030.	5.1	21
27	Experimental study on model- vs. learning-based slip detection. , 2019, , .		3
28	Experimental Evaluation and Modeling of Passive Falls in Humanoid Robots. , 2019, , .		3
29	Optimal Trajectory for Active Safe Falls in Humanoid Robots. , 2019, , .		2
30	SMErobotics: Smart Robots for Flexible Manufacturing. IEEE Robotics and Automation Magazine, 2019, 26, 78-90.	2.0	64
31	Mechanism Design of DLR Humanoid Robots. , 2019, , 637-662.		2
32	Manipulation and Task Execution by Humanoids. , 2019, , 1633-1655.		1
33	DLR Multi-fingered Hands. , 2019, , 481-522.		2
34	CLASH—A Compliant Sensorized Hand for Handling Delicate Objects. Frontiers in Robotics and AI, 2019, 6, 138.	3.2	7
35	Tactile-Based In-Hand Object Pose Estimation. Advances in Intelligent Systems and Computing, 2018, , 716-728.	0.6	8
36	Hierarchical Path Planner Using Workspace Decomposition and Parallel Task-Space RRTs. , 2018, , .		10

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37	Humanoid Teleoperation Using Task-Relevant Haptic Feedback. , 2018, , .		24
38	A Benchmarking Framework for Systematic Evaluation of Compliant Under-Actuated Soft End Effectors in an Industrial Context. , 2018, , .		9
39	Autonomous Bipedal Humanoid Grasping with Base Repositioning and Whole-Body Control. , 2018, , .		4
40	CLASH: Compliant Low Cost Antagonistic Servo Hands. , 2018, , .		25
41	Evaluating the Quality of Non-Prehensile Balancing Grasps. , 2018, , .		2
42	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
43	Passivity Analysis and Control of Humanoid Robots on Movable Ground. IEEE Robotics and Automation Letters, 2018, 3, 3457-3464.	5.1	14
44	Robotic Grasping and Manipulation Competition: Task Pool. Communications in Computer and Information Science, 2018, , 1-18.	0.5	8
45	Robotic Grasping and Manipulation Competition: Competitor Feedback and Lessons Learned. Communications in Computer and Information Science, 2018, , 180-189.	0.5	5
46	Special issue on advanced manipulation. Advanced Robotics, 2017, 31, 1029-1029.	1.8	3
47	Grasp quality evaluation done right: How assumed contact force bounds affect Wrench-based quality metrics. , 2017, , .		15
48	Multi-contact balancing of humanoid robots in confined spaces: Utilizing knee contacts. , 2017, , .		27
49	Mechanisms and Design of DLR Humanoid Robots. , 2017, , 1-26.		9
50	Manipulation and Task Execution by Humanoids. , 2017, , 1-23.		1
51	DLR Multi-fingered Hands. , 2017, , 1-41.		1
52	Planning realistic interactions for bimanual grasping and manipulation. , 2016, , .		5
53	Grasp quality evaluation in underactuated robotic hands. , 2016, , .		11
54	Multi-contact planning and control for a torque-controlled humanoid robot. , 2016, , .		19

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55	Passivity-based whole-body balancing for torque-controlled humanoid robots in multi-contact scenarios. International Journal of Robotics Research, 2016, 35, 1522-1543.	8.5	143
56	Flexible, semi-autonomous grasping for assistive robotics. , 2016, , .		9
57	Good Posture, Good Balance: Comparison of Bioinspired and Model-Based Approaches for Posture Control of Humanoid Robots. IEEE Robotics and Automation Magazine, 2016, 23, 22-33.	2.0	45
58	Interpreting Manipulation Actions: From Language to Execution. Advances in Intelligent Systems and Computing, 2016, , 175-187.	0.6	4
59	Simultaneous and realistic contact and force planning in grasping. , 2015, , .		2
60	Flexible assembly through integrated assembly sequence planning and grasp planning. , 2015, , .		29
61	Determining independent contacts regions to immobilize 2D articulated objects. , 2015, , .		2
62	Mobile Manipulation: Toward Smart Manufacturing [TC Spotlight]. IEEE Robotics and Automation Magazine, 2015, 22, 14-15.	2.0	23
63	Functional power grasps transferred through warping and replanning. , 2015, , .		13
64	An adaptive compliant multi-finger approach-to-grasp strategy for objects with position uncertainties. , 2015, , .		15
65	Grasp quality measures: review and performance. Autonomous Robots, 2015, 38, 65-88.	4.8	292
66	Stable myoelectric control of a hand prosthesis using non-linear incremental learning. Frontiers in Neurobotics, 2014, 8, 8.	2.8	104
67	Towards a functional evaluation of manipulation performance in dexterous robotic hand design. , 2014, , .		6
68	Overview of the torque-controlled humanoid robot TORO. , 2014, , .		199
69	Integrated grasp and motion planning using independent contact regions. , 2014, , .		21
70	Torque-based multi-task and balancing control for humanoid robots. , 2014, , .		1
71	Posture and balance control for humanoid robots in multi-contact scenarios based on Model Predictive Control. , 2014, , .		47
72	Control applications of TORO &#x2014; A Torque controlled humanoid robot. , 2014, , .		20

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73	Reachability and Capability Analysis for Manipulation Tasks. Advances in Intelligent Systems and Computing, 2014, , 703-718.	0.6	46
74	Planning in-hand object manipulation with multifingered hands considering task constraints. , 2013, , .		33
75	Assistance for telepresence using online grasp planning. , 2013, , .		7
76	Sequential trajectory re-planning with tactile information gain for dexterous grasping under object-pose uncertainty. , 2013, , .		12
77	Virtual reality support for teleoperation using online grasp planning. , 2013, , .		9
78	Extended independent contact regions for grasping applications. , 2013, , .		0
79	Toward a task space framework for gesture commanded telemanipulation. , 2012, , .		22
80	Identification of contact formations: Resolving ambiguous force torque information. , 2012, , .		12
81	Transferring functional grasps through contact warping and local replanning. , 2012, , .		35
82	Evaluation of Human Prehension Using Grasp Quality Measures. International Journal of Advanced Robotic Systems, 2012, 9, 112.	2.1	22
83	Power grasp planning for anthropomorphic robot hands. , 2012, , .		37
84	Experimental evaluation of human grasps using a sensorized object. , 2012, , .		9
85	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
86	Observation and Execution. Springer Tracts in Advanced Robotics, 2012, , 59-122.	0.4	0
87	Bipedal walking control based on Capture Point dynamics. , 2011, , .		110
88	Reachable Independent Contact Regions for precision grasps. , 2011, , .		22
89	Posture and balance control for biped robots based on contact force optimization. , 2011, , .		184
90	Bipedal walking control based on Capture Point dynamics. , 2011, , .		133

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91	Graspability map: A tool for evaluating grasp capabilities. , 2011, , .		7
92	Influence of contact types and uncertainties in the computation of Independent Contact Regions. , 2011, , .		10
93	Contact Trajectories for Regrasp Planning on Discrete Objects. , 2010, , 69-83.		0
94	Regrasp planning in the grasp space using independent regions. , 2009, , .		14
95	Computation of Independent Contact Regions for Grasping 3-D Objects. IEEE Transactions on Robotics, 2009, 25, 839-850.	10.3	113
96	Regrasp planning for discrete objects. , 2009, , .		2
97	Finding locally optimum force-closure grasps. Robotics and Computer-Integrated Manufacturing, 2009, 25, 536-544.	9.9	57
98	Grasp space generation using sampling and computation of independent regions. , 2008, , .		16
99	Independent contact regions for frictional grasps on 3D objects. , 2008, , .		10
100	Determining Fixturing Points for Complex Objects. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 12709-12714.	0.4	0
101	Geometrical approach for grasp synthesis on discretized 3d objects. , 2007, , .		21
102	Determination of Independent Contact Regions on Discretized 3D Objects. , 2007, , .		8
103	Design Methodology for Biped Robots: Applications in Robotics and Prosthetics. , 2007, , .		1
104	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