

Antonio Barrientos Cruz

List of Publications by Year in descending order

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Version: 2024-02-01

133
papers

2,654
citations

257101

24
h-index

233125

45
g-index

144
all docs

144
docs citations

144
times ranked

2575
citing authors

#	ARTICLE	IF	CITATIONS
1	Aerial remote sensing in agriculture: A practical approach to area coverage and path planning for fleets of mini aerial robots. <i>Journal of Field Robotics</i> , 2011, 28, 667-689.	3.2	209
2	An Air-Ground Wireless Sensor Network for Crop Monitoring. <i>Sensors</i> , 2011, 11, 6088-6108.	2.1	142
3	Mini-UAV Based Sensory System for Measuring Environmental Variables in Greenhouses. <i>Sensors</i> , 2015, 15, 3334-3350.	2.1	135
4	A training system for Industry 4.0 operators in complex assemblies based on virtual reality and process mining. <i>Robotics and Computer-Integrated Manufacturing</i> , 2019, 59, 305-316.	6.1	123
5	A Real-Time Method to Detect and Track Moving Objects (DATMO) from Unmanned Aerial Vehicles (UAVs) Using a Single Camera. <i>Remote Sensing</i> , 2012, 4, 1090-1111.	1.8	110
6	Bending continuous structures with SMAs: a novel robotic fish design. <i>Bioinspiration and Biomimetics</i> , 2011, 6, 045005.	1.5	95
7	Unmanned Aerial Vehicles in Agriculture: A Survey. <i>Agronomy</i> , 2021, 11, 203.	1.3	84
8	Biomechanics of smart wings in a bat robot: morphing wings using SMA actuators. <i>Bioinspiration and Biomimetics</i> , 2012, 7, 036006.	1.5	83
9	Heterogeneous Multi-Robot System for Mapping Environmental Variables of Greenhouses. <i>Sensors</i> , 2016, 16, 1018.	2.1	83
10	Aerial coverage optimization in precision agriculture management: A musical harmony inspired approach. <i>Computers and Electronics in Agriculture</i> , 2013, 99, 153-159.	3.7	82
11	Near-optimal coverage trajectories for image mosaicing using a mini quad-rotor over irregular-shaped fields. <i>Precision Agriculture</i> , 2013, 14, 115-132.	3.1	65
12	A Survey on Robotic Technologies for Forest Firefighting: Applying Drone Swarms to Improve Firefighters' Efficiency and Safety. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 363.	1.3	65
13	Robots in Agriculture: State of Art and Practical Experiences. , 0, , .		61
14	An Aerial-Ground Robotic System for Navigation and Obstacle Mapping in Large Outdoor Areas. <i>Sensors</i> , 2013, 13, 1247-1267.	2.1	60
15	The Natural-CCD Algorithm, a Novel Method to Solve the Inverse Kinematics of Hyper-redundant and Soft Robots. <i>Soft Robotics</i> , 2018, 5, 242-257.	4.6	44
16	Robotized spraying of prefabricated panels. <i>IEEE Robotics and Automation Magazine</i> , 1998, 5, 18-29.	2.2	43
17	Mini-quadrotor attitude control based on Hybrid Backstepping & Frenet-Serret theory. , 2010, , .		43
18	Multi-Robot Interfaces and Operator Situational Awareness: Study of the Impact of Immersion and Prediction. <i>Sensors</i> , 2017, 17, 1720.	2.1	39

#	ARTICLE	IF	CITATIONS
19	Monitoring traffic in future cities with aerial swarms: Developing and optimizing a behavior-based surveillance algorithm. Cognitive Systems Research, 2019, 54, 273-286.	1.9	37
20	Moisture measurement in crops using spherical robots. Industrial Robot, 2013, 40, 59-66.	1.2	34
21	Human Detection from a Mobile Robot Using Fusion of Laser and Vision Information. Sensors, 2013, 13, 11603-11635.	2.1	33
22	Multi-robot Systems, Virtual Reality and ROS: Developing a New Generation of Operator Interfaces. Studies in Computational Intelligence, 2019, , 29-64.	0.7	31
23	Bringing Adaptive and Immersive Interfaces to Real-World Multi-Robot Scenarios: Application to Surveillance and Intervention in Infrastructures. IEEE Access, 2019, 7, 86319-86335.	2.6	29
24	Comparison of Different Technologies for Soft Robotics Grippers. Sensors, 2021, 21, 3253.	2.1	29
25	Selective Smooth Fictitious Play: An approach based on game theory for patrolling infrastructures with a multi-robot system. Expert Systems With Applications, 2014, 41, 2897-2913.	4.4	28
26	Robust Visual-Aided Autonomous Takeoff, Tracking, and Landing of a Small UAV on a Moving Landing Platform for Life-Long Operation. Applied Sciences (Switzerland), 2019, 9, 2661.	1.3	28
27	Tactile-Sight: A Sensory Substitution Device Based on Distance-Related Vibrotactile Flow. International Journal of Advanced Robotic Systems, 2013, 10, 272.	1.3	25
28	Robot assembly system for the construction process automation. , 0, , .		24
29	Soft Underwater Robot Actuated by Shape-Memory Alloys "JellyRob" for Path Tracking through Fuzzy Visual Control. Applied Sciences (Switzerland), 2020, 10, 7160.	1.3	24
30	ROBTET: a new teleoperated system for live-line maintenance. , 0, , .		23
31	Autonomous Thermal Vision Robotic System for Victims Recognition in Search and Rescue Missions. Sensors, 2021, 21, 7346.	2.1	23
32	Monitoring Plant Status and Fertilization Strategy through Multispectral Images. Sensors, 2020, 20, 435.	2.1	22
33	A Multi-Robot Sense-Act Approach to Lead to a Proper Acting in Environmental Incidents. Sensors, 2016, 16, 1269.	2.1	21
34	An Stereoscopic Vision System Guiding an Autonomous Helicopter for Overhead Power Cable Inspection. Lecture Notes in Computer Science, 2001, , 115-124.	1.0	20
35	A proposal of methodology for multi-UAV mission modeling. , 2015, , .		19
36	Design of a Hyper-Redundant Robot and Teleoperation Using Mixed Reality for Inspection Tasks. Sensors, 2020, 20, 2181.	2.1	19

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37	Action-contingent vibrotactile flow facilitates the detection of ground level obstacles with a partly virtual sensory substitution device. <i>Human Movement Science</i> , 2012, 31, 1571-1584.	0.6	18
38	SMA-Based Muscle-Like Actuation in Biologically Inspired Robots: A State of the Art Review. , 0, , .		18
39	A Multirobot System for Distributed Area Coverage and Signal Searching in Large Outdoor Scenarios*. <i>Journal of Field Robotics</i> , 2016, 33, 1087-1106.	3.2	18
40	A motor-less and gear-less bio-mimetic robotic fish design. , 2011, , .		17
41	Improving Planetary Rover Attitude Estimation via MEMS Sensor Characterization. <i>Sensors</i> , 2012, 12, 2219-2235.	2.1	17
42	Comparison of Heuristic Algorithms in Discrete Search and Surveillance Tasks Using Aerial Swarms. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 711.	1.3	17
43	Robotic Fertilization in Strip Cropping using a CNN Vegetables Detection-Characterization Method. <i>Computers and Electronics in Agriculture</i> , 2022, 193, 106684.	3.7	17
44	Unmanned aerial vehicle (UAV) modelling based on supervised neural networks. , 0, , .		16
45	Analyzing and improving multi-robot missions by using process mining. <i>Autonomous Robots</i> , 2018, 42, 1187-1205.	3.2	16
46	Inertial attitude control of a bat-like morphing-wing air vehicle. <i>Bioinspiration and Biomimetics</i> , 2013, 8, 016001.	1.5	15
47	Stepping on Obstacles with a Sensory Substitution Device on the Lower Leg: Practice without Vision Is More Beneficial than Practice with Vision. <i>PLoS ONE</i> , 2014, 9, e98801.	1.1	13
48	Detection and Tracking of Dynamic Objects by Using a Multirobot System: Application to Critical Infrastructures Surveillance. <i>Sensors</i> , 2014, 14, 2911-2943.	2.1	13
49	Game Theory Models for Multi-Robot Patrolling of Infrastructures. <i>International Journal of Advanced Robotic Systems</i> , 2013, 10, 181.	1.3	12
50	Towards efficient flight: insights on proper morphing-wing modulation in a bat-like robot. <i>Advanced Robotics</i> , 2015, 29, 1599-1610.	1.1	12
51	Towards Airborne Thermography via Low-Cost Thermopile Infrared Sensors. <i>Drones</i> , 2019, 3, 30.	2.7	12
52	Simultaneous task subdivision and allocation for teams of heterogeneous robots. , 2009, , .		11
53	SwarmCity Project: Can an Aerial Swarm Monitor Traffic in a Smart City?. , 2019, , .		11
54	Application of immersive technologies and natural language to hyper-redundant robot teleoperation. <i>Virtual Reality</i> , 2020, 24, 541-555.	4.1	11

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55	A Soft Haptic Glove Actuated with Shape Memory Alloy and Flexible Stretch Sensors. <i>Sensors</i> , 2021, 21, 5278.	2.1	11
56	Robotic Fertilisation Using Localisation Systems Based on Point Clouds in Strip-Cropping Fields. <i>Agronomy</i> , 2021, 11, 11.	1.3	11
57	Robots Hiper-Redundantes: Clasificaci3n, Estado del Arte y Problem4tica. <i>RIAI - Revista Iberoamericana De Automatica E Informatica Industrial</i> , 2018, 15, 351.	0.6	11
58	Linear Discriminant Analysis on Brain Computer Interface. , 2007, , .		10
59	Wireless sensor networks for planetary exploration: Experimental assessment of communication and deployment. <i>Advances in Space Research</i> , 2013, 52, 1029-1046.	1.2	10
60	Multi-robot data mapping simulation by using microsoft robotics developer studio. <i>Simulation Modelling Practice and Theory</i> , 2014, 49, 305-319.	2.2	10
61	Safe operation of mini UAVs: a review of regulation and best practices. <i>Advanced Robotics</i> , 2015, 29, 1221-1233.	1.1	10
62	Control optimization of an aerial robotic swarm in a search task and its adaptation to different scenarios. <i>Journal of Computational Science</i> , 2018, 29, 107-118.	1.5	10
63	A UGV Approach to Measure the Ground Properties of Greenhouses. <i>Advances in Intelligent Systems and Computing</i> , 2016, , 3-13.	0.5	10
64	Force-torque sensor-based strategy for precise assembly using a SCARA robot. <i>Robotics and Autonomous Systems</i> , 1991, 8, 203-212.	3.0	9
65	A Proposal of Multi-UAV Mission Coordination and Control Architecture. <i>Advances in Intelligent Systems and Computing</i> , 2016, , 597-608.	0.5	9
66	Behavior-Based Control for an Aerial Robotic Swarm in Surveillance Missions. <i>Sensors</i> , 2019, 19, 4584.	2.1	9
67	CAWAS: collision avoidance and warning system for automotives based on satellite. , 0, , .		8
68	Using ROS in Multi-robot Systems: Experiences and Lessons Learned from Real-World Field Tests. <i>Studies in Computational Intelligence</i> , 2017, , 449-483.	0.7	8
69	Modelling the Soft Robot <i>Kyma</i> Based on Real-time Finite Element Method. <i>Computer Graphics Forum</i> , 2020, 39, 289-302.	1.8	8
70	Two adaptive mutation operators for optima tracking in dynamic optimization problems with evolution strategies. , 2007, , .		7
71	Tracking and following pedestrian trajectories, an approach for autonomous surveillance of critical infrastructures. <i>Industrial Robot</i> , 2015, 42, 429-440.	1.2	7
72	QuadLab. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2016, 81, 97-116.	2.0	7

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73	A Game of Drones: Game Theoretic Approaches for Multi-robot Task Allocation in Security Missions. <i>Advances in Intelligent Systems and Computing</i> , 2018, , 855-866.	0.5	7
74	Integrating 3D Reconstruction and Virtual Reality: A New Approach for Immersive Teleoperation. <i>Advances in Intelligent Systems and Computing</i> , 2018, , 606-616.	0.5	7
75	Collision control in teleoperation by virtual force reflection. An application to the ROBTET system. , 0, , .		6
76	An experimental study about the effect of interactions among functional factors in performance of telemanipulation systems. <i>Control Engineering Practice</i> , 2007, 15, 29-41.	3.2	6
77	Sensorized robotic sphere for large exterior critical infrastructures supervision. <i>Journal of Applied Remote Sensing</i> , 2013, 7, 073522.	0.6	6
78	Simultaneous Task Subdivision and Allocation Using Negotiations in Multi-Robot Systems. <i>International Journal of Advanced Robotic Systems</i> , 2015, 12, 16.	1.3	6
79	Should We Compete or Should We Cooperate? Applying Game Theory to Task Allocation in Drone Swarms. , 2018, , .		6
80	The Role of Massive Morphing Wings for Maneuvering a Bio-Inspired Bat-Like Robot. , 2018, , .		6
81	Emotion recognition in non-structured utterances for human-robot interaction. , 0, , .		5
82	DIMETER: A Haptic Master Device for Tremor Diagnosis in Neurodegenerative Diseases. <i>Sensors</i> , 2014, 14, 4536-4559.	2.1	5
83	Using Process Mining to Model Multi-UAV Missions through the Experience. <i>IEEE Intelligent Systems</i> , 2017, 32, 40-47.	4.0	5
84	Reduction of GNSS-Denied inertial navigation errors for fixed wing autonomous unmanned air vehicles. <i>Aerospace Science and Technology</i> , 2022, 120, 107237.	2.5	5
85	Planning collision-free paths in a three-dimensional partially known environment. <i>Advanced Robotics</i> , 1994, 9, 15-27.	1.1	4
86	<title>Teleoperated system for live power lines maintenance</title>. , 1995, 2590, 40.		4
87	Identification of a small unmanned helicopter model using genetic algorithms. , 2005, , .		4
88	Polymeric piezoelectric sensors and remote communication for detection of bruxism. , 2010, , .		4
89	SwarmCity project: monitoring traffic, pedestrians, climate, and pollution with an aerial robotic swarm. <i>Personal and Ubiquitous Computing</i> , 2022, 26, 1151-1167.	1.9	4
90	Una revisi3n de los sistemas multi-robot: desaf3os actuales para los operadores y nuevos desarrollos de interfaces. <i>RIAI - Revista Iberoamericana De Automatica E Informatica Industrial</i> , 2020, 17, 294.	0.6	4

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91	<title>Multimedia interface for robot teleoperation</title>. , 1996, , .		3
92	<title>Telemanipulation and supervisory control of a backhoe excavator</title>. , 1998, , .		3
93	Behavior control architecture for a life-like creature: "The Robotaurus". , 0, , .		3
94	Integrating Autonomous Aerial Scouting with Autonomous Ground Actuation to Reduce Chemical Pollution on Crop Soil. Advances in Intelligent Systems and Computing, 2016, , 41-53.	0.5	3
95	A Sensor Fusion Method for Pose Estimation of C-Legged Robots. Sensors, 2020, 20, 6741.	2.1	3
96	C-Legged Hexapod Robot Design Guidelines Based on Energy Analysis. Applied Sciences (Switzerland), 2021, 11, 2513.	1.3	3
97	Trend Technologies for Robotic Fertilization Process in Row Crops. Frontiers in Robotics and AI, 2022, 9, 808484.	2.0	3
98	Negotiation of target points for teams of heterogeneous robots: an application to exploration. , 2009, , .		2
99	Rotary-wing MAV modeling & control for indoor scenarios. , 2010, , .		2
100	RiskRRT-Based Planning For Interception of Moving Objects in Complex Environments. Advances in Intelligent Systems and Computing, 2014, , 489-503.	0.5	2
101	From Video Games Multiple Cameras to Multi-robot Teleoperation in Disaster Scenarios. , 2016, , .		2
102	Hybrid Bio-Inspired Architecture for Walking Robots Through Central Pattern Generators Using Open Source FPGAs. , 2018, , .		2
103	Press Start to Play: Classifying Multi-Robot Operators and Predicting Their Strategies through a Videogame. Robotics, 2019, 8, 53.	2.1	2
104	Robotics in medicine. Medicina Clínica (English Edition), 2019, 152, 493-494.	0.1	2
105	Aplicaciones practicas de los sistemas multi-UAV y enjambres aÃ©reos. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2021, 18, 230.	0.6	2
106	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
107	Embedded Control System Architecture applied to an Unmanned Aerial Vehicle. , 2006, , .		1
108	Follow-the-leader formation marching through a scalable $O(\log\<inf\>2\</inf\>n)$ Parallel Architecture.. , 2010, , .		1

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109	Shape Memory Alloy-based High Phase Order Motor. , 2014, , .		1
110	The Influence of Bat Wings For Producing Efficient Net Body Forces in Bio-inspired Flapping Robots. , 2014, , .		1
111	Systematic Process for Building a Fault Diagnoser Based on Petri Nets Applied to a Helicopter. Mathematical Problems in Engineering, 2015, 2015, 1-13.	0.6	1
112	Determining mission evolution through UAV telemetry by using decision trees. , 2016, , .		1
113	Emerging behaviours from cyclical, incremental and uniform movements of hyper-redundant and growing robots. Mechanism and Machine Theory, 2021, 158, 104198.	2.7	1
114	Unmanned Helicopter Faults Diagnosis based on Petri Nets. I+D Revista De Investigaciones, 2017, 8, 91-103.	0.1	1
115	Adaptive RBF-HMM Bi-Stage Classifier Applied to Brain Computer Interface. Communications in Computer and Information Science, 2011, , 152-165.	0.4	1
116	Pedestrian Trajectory Prediction in Large Infrastructures - A Long-term Approach based on Path Planning. , 2016, , .		1
117	Study of Gait Patterns for an Hexapod Robot in Search and Rescue Tasks. Advances in Intelligent Systems and Computing, 2018, , 731-742.	0.5	1
118	La rob�tica en medicina. Medicina Cl�nica, 2019, 152, 493-494.	0.3	1
119	Interfaz de control para un robot manipulador mediante realidad virtual. , 0, , .		1
120	Special Issue on Multi-Robot Systems: Challenges, Trends, and Applications. Applied Sciences (Switzerland), 2021, 11, 11861.	1.3	1
121	Single Plant Fertilization Using a Robotic Platform in an Organic Cropping Environment. Agronomy, 2022, 12, 1339.	1.3	1
122	Pose Estimation with Multiple Sources Using Evolutionary Algorithms. , 2007, , .		0
123	<i>Corrigendum to</i> Tactile-Sight: A Sensory Substitution Device Based on Distance-Related Vibrotactile Flow. International Journal of Advanced Robotic Systems, 2015, 12, 69.	1.3	0
124	Correction to ‘‘Bringing Adaptive and Immersive Interfaces to Real-World Multi-Robot Scenarios: Application to Surveillance and Intervention in Infrastructures’’. IEEE Access, 2020, 8, 212837-212837.	2.6	0
125	COOPERATIVE MULTI-ROBOT SYSTEM FOR INFRASTRUCTURE SECURITY TASKS. , 2012, , .		0
126	Lift Failure Detection and Management System for Quadrotors. Advances in Intelligent Systems and Computing, 2014, , 103-114.	0.5	0

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127	Enhancing RRT Planning for Interception with Distance and Probability Maps Based on FMM. Advances in Intelligent Systems and Computing, 2018, , 867-878.	0.5	0
128	Planificación para interceptación de objetivos: Integración del Método Fast Marching y Risk-RRT. , 0, , .		0
129	ClegS: A Meta-Package to Develop C-Legged Robots. Studies in Computational Intelligence, 2021, , 295-347.	0.7	0
130	Re-configurable Control Scheme for Guiding Telerobotics. , 2007, , 289-301.		0
131	Coordinación UAV-UGV para tareas de Búsqueda y Rescate. , 0, , .		0
132	Protección multi-robot de infraestructuras: un enfoque cooperativo para entornos con información limitada. , 0, , .		0
133	Modelo cinemático de un robot hexápodo con "C-legs". , 0, , .		0