Antonio Barrientos Cruz

List of Publications by Year
in descending order

133 papers	2,654 citations	257450 24 h-index	233421 45 g-index
144 all docs	144 docs citations	144 times ranked	2575 citing authors

#	Article	IF	Citations
1	SwarmCity project: monitoring traffic, pedestrians, climate, and pollution with an aerial robotic swarm. Personal and Ubiquitous Computing, 2022, 26, 1151-1167.	2.8	4
2	Reduction of GNSS-Denied inertial navigation errors for fixed wing autonomous unmanned air vehicles. Aerospace Science and Technology, 2022, 120, 107237.	4.8	5
3	Robotic Fertilization in Strip Cropping using a CNN Vegetables Detection-Characterization Method. Computers and Electronics in Agriculture, 2022, 193, 106684.	7.7	17
4	Trend Technologies for Robotic Fertilization Process in Row Crops. Frontiers in Robotics and AI, 2022, 9, 808484.	3.2	3
5	Single Plant Fertilization Using a Robotic Platform in an Organic Cropping Environment. Agronomy, 2022, 12, 1339.	3.0	1
6	Unmanned Aerial Vehicles in Agriculture: A Survey. Agronomy, 2021, 11, 203.	3.0	84
7	A Survey on Robotic Technologies for Forest Firefighting: Applying Drone Swarms to Improve Firefightersâ€™ Efficiency and Safety. Applied Sciences (Switzerland), 2021, 11, 363.	2.5	65
8	C-Legged Hexapod Robot Design Guidelines Based on Energy Analysis. Applied Sciences (Switzerland), 2021, 11, 2513.	2.5	3
9	Emerging behaviours from cyclical, incremental and uniform movements of hyper-redundant and growing robots. Mechanism and Machine Theory, 2021, 158, 104198.	4.5	1
10	Comparison of Different Technologies for Soft Robotics Grippers. Sensors, 2021, 21, 3253.	3.8	29
11	Aplicaciones practicas de los sistemas multi-UAV y enjambres aÃ©reos. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2021, 18, 230.	1.0	2
12	A Soft Haptic Glove Actuated with Shape Memory Alloy and Flexible Stretch Sensors. Sensors, 2021, 21, 5278.	3.8	11
13	Robotic Fertilisation Using Localisation Systems Based on Point Clouds in Strip-Cropping Fields. Agronomy, 2021, 11, 11.	3.0	11
14	ClegS: A Meta-Package to Develop C-Legged Robots. Studies in Computational Intelligence, 2021, , 295-347.	0.9	0
15	Autonomous Thermal Vision Robotic System for Victims Recognition in Search and Rescue Missions. Sensors, 2021, 21, 7346.	3.8	23
16	Special Issue on Multi-Robot Systems: Challenges, Trends, and Applications. Applied Sciences (Switzerland), 2021, 11, 11861.	2.5	1
17	Application of immersive technologies and natural language to hyper-redundant robot teleoperation. Virtual Reality, 2020, 24, 541-555.	6.1	11
18	Soft Underwater Robot Actuated by Shape-Memory Alloys â€œJellyRobcibâ€•for Path Tracking through Fuzzy Visual Control. Applied Sciences (Switzerland), 2020, 10, 7160.	2.5	24

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19	Correction to â€œBringing Adaptive and Immersive Interfaces to Real-World Multi-Robot Scenarios: Application to Surveillance and Intervention in Infrastructuresâ€• IEEE Access, 2020, 8, 212837-212837.	4.2	0
20	A Sensor Fusion Method for Pose Estimation of C-Legged Robots. Sensors, 2020, 20, 6741.	3.8	3
21	Monitoring Plant Status and Fertilization Strategy through Multispectral Images. Sensors, 2020, 20, 435.	3.8	22
22	Design of a Hyper-Redundant Robot and Teleoperation Using Mixed Reality for Inspection Tasks. Sensors, 2020, 20, 2181.	3.8	19
23	Modelling the Soft Robot Kyma Based on Realâ€Time Finite Element Method. Computer Graphics Forum, 2020, 39, 289-302.	3.0	8
24	Una revisiÃ³n de los sistemas multi-robot: desafÃos actuales para los operadores y nuevos desarrollos de interfaces. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2020, 17, 294.	1.0	4
25	Multi-robot Systems, Virtual Reality and ROS: Developing a New Generation of Operator Interfaces. Studies in Computational Intelligence, 2019, , 29-64.	0.9	31
26	Bringing Adaptive and Immersive Interfaces to Real-World Multi-Robot Scenarios: Application to Surveillance and Intervention in Infrastructures. IEEE Access, 2019, 7, 86319-86335.	4.2	29
27	Press Start to Play: Classifying Multi-Robot Operators and Predicting Their Strategies through a Videogame. Robotics, 2019, 8, 53.	3.5	2
28	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.	2.5	28
29	SwarmCity Project: Can an Aerial Swarm Monitor Traffic in a Smart City?. , 2019, , .		11
30	Robotics in medicine. Medicina ClÃnica (English Edition), 2019, 152, 493-494.	0.2	2
31	A training system for Industry 4.0 operators in complex assemblies based on virtual reality and process mining. Robotics and Computer-Integrated Manufacturing, 2019, 59, 305-316.	9.9	123
32	Towards Airborne Thermography via Low-Cost Thermopile Infrared Sensors. Drones, 2019, 3, 30.	4.9	12
33	Behavior-Based Control for an Aerial Robotic Swarm in Surveillance Missions. Sensors, 2019, 19, 4584.	3.8	9
34	Monitoring traffic in future cities with aerial swarms: Developing and optimizing a behavior-based surveillance algorithm. Cognitive Systems Research, 2019, 54, 273-286.	2.7	37
35	La robÃ³tica en medicina. Medicina ClÃnica, 2019, 152, 493-494.	0.6	1
36	The Natural-CCD Algorithm, a Novel Method to Solve the Inverse Kinematics of Hyper-redundant and Soft Robots. Soft Robotics, 2018, 5, 242-257.	8.0	44

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37	Analyzing and improving multi-robot missions by using process mining. Autonomous Robots, 2018, 42, 1187-1205.	4.8	16
38	A Game of Drones: Game Theoretic Approaches for Multi-robot Task Allocation in Security Missions. Advances in Intelligent Systems and Computing, 2018, , 855-866.	0.6	7
39	Should We Compete or Should We Cooperate? Applying Game Theory to Task Allocation in Drone Swarms. , 2018, , .		6
40	Hybrid Bio-Inspired Architecture for Walking Robots Through Central Pattern Generators Using Open Source FPGAs. , 2018, , .		2
41	Control optimization of an aerial robotic swarm in a search task and its adaptation to different scenarios. Journal of Computational Science, 2018, 29, 107-118.	2.9	10
42	The Role of Massive Morphing Wings for Maneuvering a Bio-Inspired Bat-Like Robot. , 2018, , .		6
43	Comparison of Heuristic Algorithms in Discrete Search and Surveillance Tasks Using Aerial Swarms. Applied Sciences (Switzerland), 2018, 8, 711.	2.5	17
44	Integrating 3D Reconstruction and Virtual Reality: A New Approach for Immersive Teleoperation. Advances in Intelligent Systems and Computing, 2018, , 606-616.	0.6	7
45	Robots Hiper-Redundantes: ClasificaciÃ³n, Estado del Arte y ProblemÃ¡tica. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2018, 15, 351.	1.0	11
46	Enhancing RRT Planning for Interception withÂDistance and Probability Maps Based onÂFMM. Advances in Intelligent Systems and Computing, 2018, , 867-878.	0.6	0
47	Study of Gait Patterns for an Hexapod Robot inÂSearch and Rescue Tasks. Advances in Intelligent Systems and Computing, 2018, , 731-742.	0.6	1
48	Using Process Mining to Model Multi-UAV Missions through the Experience. IEEE Intelligent Systems, 2017, 32, 40-47.	4.0	5
49	Multi-Robot Interfaces and Operator Situational Awareness: Study of the Impact of Immersion and Prediction. Sensors, 2017, 17, 1720.	3.8	39
50	Using ROS in Multi-robot Systems: Experiences and Lessons Learned from Real-World Field Tests. Studies in Computational Intelligence, 2017, , 449-483.	0.9	8
51	Unmanned Helicopter Faults Diagnosis based on Petri Nets. I+D Revista De Investigaciones, 2017, 8, 91-103.	0.1	1
52	A Multi-Robot Sense-Act Approach to Lead to a Proper Acting in Environmental Incidents. Sensors, 2016, 16, 1269.	3.8	21
53	Heterogeneous Multi-Robot System for Mapping Environmental Variables of Greenhouses. Sensors, 2016, 16, 1018.	3.8	83
54	A Multirobot System for Distributed Area Coverage and Signal Searching in Large Outdoor Scenarios*. Journal of Field Robotics, 2016, 33, 1087-1106.	6.0	18

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55	Determining mission evolution through UAV telemetry by using decision trees. , 2016, , .		1
56	From Video Games Multiple Cameras to Multi-robot Teleoperation in Disaster Scenarios. , 2016, , .		2
57	A Proposal of Multi-UAV Mission Coordination and Control Architecture. Advances in Intelligent Systems and Computing, 2016, , 597-608.	0.6	9
58	Integrating Autonomous Aerial Scouting with Autonomous Ground Actuation to Reduce Chemical Pollution on Crop Soil. Advances in Intelligent Systems and Computing, 2016, , 41-53.	0.6	3
59	QuadLab. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 81, 97-116.	3.4	7
60	A UGV Approach to Measure the Ground Properties of Greenhouses. Advances in Intelligent Systems and Computing, 2016, , 3-13.	0.6	10
61	Pedestrian Trajectory Prediction in Large Infrastructures - A Long-term Approach based on Path Planning. , 2016, , .		1
62	Simultaneous Task Subdivision and Allocation Using Negotiations in Multi-Robot Systems. International Journal of Advanced Robotic Systems, 2015, 12, 16.	2.1	6
63	Corrigendum to Tactile-Sight: A Sensory Substitution Device Based on Distance-Related Vibrotactile Flow. International Journal of Advanced Robotic Systems, 2015, 12, 69.	2.1	0
64	Systematic Process for Building a Fault Diagnoser Based on Petri Nets Applied to a Helicopter. Mathematical Problems in Engineering, 2015, 2015, 1-13.	1.1	1
65	Towards efficient flight: insights on proper morphing-wing modulation in a bat-like robot. Advanced Robotics, 2015, 29, 1599-1610.	1.8	12
66	Tracking and following pedestrian trajectories, an approach for autonomous surveillance of critical infrastructures. Industrial Robot, 2015, 42, 429-440.	2.1	7
67	A proposal of methodology for multi-UAV mission modeling. , 2015, , .		19
68	Mini-UAV Based Sensory System for Measuring Environmental Variables in Greenhouses. Sensors, 2015, 15, 3334-3350.	3.8	135
69	Safe operation of mini UAVs: a review of regulation and best practices. Advanced Robotics, 2015, 29, 1221-1233.	1.8	10
70	Stepping on Obstacles with a Sensory Substitution Device on the Lower Leg: Practice without Vision Is More Beneficial than Practice with Vision. PLoS ONE, 2014, 9, e98801.	2.5	13
71	Detection and Tracking of Dynamic Objects by Using a Multirobot System: Application to Critical Infrastructures Surveillance. Sensors, 2014, 14, 2911-2943.	3.8	13
72	DIMETER: A Haptic Master Device for Tremor Diagnosis in Neurodegenerative Diseases. Sensors, 2014, 14, 4536-4559.	3.8	5

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73	Shape Memory Alloy-based High Phase Order Motor. , 2014, , .		1
74	Multi-robot data mapping simulation by using microsoft robotics developer studio. Simulation Modelling Practice and Theory, 2014, 49, 305-319.	3.8	10
75	RiskRRT-Based Planning For Interception of Moving Objects in Complex Environments. Advances in Intelligent Systems and Computing, 2014, , 489-503.	0.6	2
76	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.	7.6	28
77	The Influence of Bat Wings For Producing Efficient Net Body Forces in Bio-inspired Flapping Robots. , 2014, , .		1
78	Lift Failure Detection and Management System for Quadrotors. Advances in Intelligent Systems and Computing, 2014, , 103-114.	0.6	0
79	Wireless sensor networks for planetary exploration: Experimental assessment of communication and deployment. Advances in Space Research, 2013, 52, 1029-1046.	2.6	10
80	An Aerial-Ground Robotic System for Navigation and Obstacle Mapping in Large Outdoor Areas. Sensors, 2013, 13, 1247-1267.	3.8	60
81	Near-optimal coverage trajectories for image mosaicing using a mini quad-rotor over irregular-shaped fields. Precision Agriculture, 2013, 14, 115-132.	6.0	65
82	Aerial coverage optimization in precision agriculture management: A musical harmony inspired approach. Computers and Electronics in Agriculture, 2013, 99, 153-159.	7.7	82
83	Moisture measurement in crops using spherical robots. Industrial Robot, 2013, 40, 59-66.	2.1	34
84	Human Detection from a Mobile Robot Using Fusion of Laser and Vision Information. Sensors, 2013, 13, 11603-11635.	3.8	33
85	Sensorized robotic sphere for large exterior critical infrastructures supervision. Journal of Applied Remote Sensing, 2013, 7, 073522.	1.3	6
86	Inertial attitude control of a bat-like morphing-wing air vehicle. Bioinspiration and Biomimetics, 2013, 8, 016001.	2.9	15
87	Game Theory Models for Multi-Robot Patrolling of Infrastructures. International Journal of Advanced Robotic Systems, 2013, 10, 181.	2.1	12
88	Tactile-Sight: A Sensory Substitution Device Based on Distance-Related Vibrotactile Flow. International Journal of Advanced Robotic Systems, 2013, 10, 272.	2.1	25
89	Improving Planetary Rover Attitude Estimation via MEMS Sensor Characterization. Sensors, 2012, 12, 2219-2235.	3.8	17
90	Biomechanics of smart wings in a bat robot: morphing wings using SMA actuators. Bioinspiration and Biomimetics, 2012, 7, 036006.	2.9	83

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91	Action-contingent vibrotactile flow facilitates the detection of ground level obstacles with a partly virtual sensory substitution device. Human Movement Science, 2012, 31, 1571-1584.	1.4	18
92	A Real-Time Method to Detect and Track Moving Objects (DATMO) from Unmanned Aerial Vehicles (UAVs) Using a Single Camera. Remote Sensing, 2012, 4, 1090-1111.	4.0	110
93	COOPERATIVE MULTI-ROBOT SYSTEM FOR INFRASTRUCTURE SECURITY TASKS. , 2012, , .		0
94	A motor-less and gear-less bio-mimetic robotic fish design. , 2011, , .		17
95	An Air-Ground Wireless Sensor Network for Crop Monitoring. Sensors, 2011, 11, 6088-6108.	3.8	142
96	Aerial remote sensing in agriculture: A practical approach to area coverage and path planning for fleets of mini aerial robots. Journal of Field Robotics, 2011, 28, 667-689.	6.0	209
97	Bending continuous structures with SMAs: a novel robotic fish design. Bioinspiration and Biomimetics, 2011, 6, 045005.	2.9	95
98	Adaptive RBF-HMM Bi-Stage Classifier Applied to Brain Computer Interface. Communications in Computer and Information Science, 2011, , 152-165.	0.5	1
99	Rotary-wing MAV modeling & control for indoor scenarios. , 2010, , .		2
100	Follow-the-leader formation marching through a scalable O(log<inf>2</inf>n) Parallel Architecture.. , 2010, , .		1
101	Mini-quadrotor attitude control based on Hybrid Backstepping & Frenet-Serret theory. , 2010, , .		43
102	Polymeric piezoelectric sensors and remote communication for detection of bruxism. , 2010, , .		4
103	Negotiation of target points for teams of heterogeneous robots: an application to exploration. , 2009, , .		2
104	Simultaneous task subdivision and allocation for teams of heterogeneous robots. , 2009, , .		11
105	Two adaptive mutation operators for optima tracking in dynamic optimization problems with evolution strategies. , 2007, , .		7
106	Pose Estimation with Multiple Sources Using Evolutionary Algorithms. , 2007, , .		0
107	Linear Discriminant Analysis on Brain Computer Interface. , 2007, , .		10
108	An experimental study about the effect of interactions among functional factors in performance of telemanipulation systems. Control Engineering Practice, 2007, 15, 29-41.	5.5	6

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109	Re-configurable Control Scheme for Guiding Telerobotics. , 2007, , 289-301.		0
110	Embedded Control System Architecture applied to an Unmanned Aerial Vehicle. , 2006, , .		1
111	Identification of a small unmanned helicopter model using genetic algorithms. , 2005, , .		4
112	An Stereoscopic Vision System Guiding an Autonomous Helicopter for Overhead Power Cable Inspection. Lecture Notes in Computer Science, 2001, , 115-124.	1.3	20
113	Robotized spraying of prefabricated panels. IEEE Robotics and Automation Magazine, 1998, 5, 18-29.	2.0	43
114	<title>Telemanipulation and supervisory control of a backhoe excavator</title>. , 1998, , .		3
115	<title>Multimedia interface for robot teleoperation</title>. , 1996, , .		3
116	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.	3.4	1
117	<title>Teleoperated system for live power lines maintenance</title>. , 1995, 2590, 40.		4
118	Planning collision-free paths in a three-dimensional partially known environment. Advanced Robotics, 1994, 9, 15-27.	1.8	4
119	Forceâ€"torque sensor-based strategy for precise assembly using a SCARA robot. Robotics and Autonomous Systems, 1991, 8, 203-212.	5.1	9
120	ROBTET: a new teleoperated system for live-line maintenance. , 0, , .		23
121	Robot assembly system for the construction process automation. , 0, , .		24
122	Collision control in teleoperation by virtual force reflection. An application to the ROBTET system. , 0, , .		6
123	Behavior control architecture for a life-like creature: "The Robotaurus". , 0, , .		3
124	CAWAS: collision avoidance and warning system for automotives based on satellite. , 0, , .		8
125	Emotion recognition in non-structured utterances for human-robot interaction. , 0, , .		5
126	Unmanned aerial vehicle (UAV) modelling based on supervised neural networks. , 0, , .		16

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127	SMA-Based Muscle-Like Actuation in Biologically Inspired Robots: A State of the Art Review. , 0, , .		18
128	Robots in Agriculture: State of Art and Practical Experiences. , 0, , .		61
129	Interfaz de control para un robot manipulador mediante realidad virtual. , 0, , .		1
130	PlanificaciÃ³n para interceptaciÃ³n de objetivos: IntegraciÃ³n del MÃ©todo Fast Marching y Risk-RRT. , 0, , .		0
131	CoordinaciÃ³n UAV-UGV para tareas de BÃºsqueda y Rescate. , 0, , .		0
132	ProtecciÃ³n multi-robot de infraestructuras: un enfoque cooperativo para entornos con informaciÃ³n limitada. , 0, , .		0
133	Modelo cinemÃ¡tico de un robot hexÃ¡podo con "C-legs". , 0, , .		0