Alejandro Donaire

List of Publications by Year
in descending order

76 papers	1,171 citations	393982 19 h-index	414034 32 g-index
82 all docs	82 docs citations	82 times ranked	702 citing authors

#	Article	IF	Citations
1	String Stability in Microgrids Using Frequency Controlled Inverter Chains. , 2022, 6, 1484-1489.		6
2	On the tuning of a nonlinear energy‑based regulator for the positioning of a fully actuated surface marine craft. IET Control Theory and Applications, 2021, 15, 850-860.	1.2	0
3	Energy shaping control with integral action for soft continuum manipulators. Mechanism and Machine Theory, 2021, 158, 104250.	2.7	19
4	String stable integral control design for vehicle platoons with disturbances. Automatica, 2021, 127, 109542.	3.0	16
5	Energy pumping-and-damping for gait robustification of underactuated planar biped robots within the hybrid zero dynamics framework. , 2021, , .		2
6	Passive momentum observer for mechanical systems. IFAC-PapersOnLine, 2021, 54, 131-136.	0.5	3
7	Impedance Control for a Flexible Robot Enhanced with Energy Tanks in the port-Hamiltonian Framework. , 2021, , .		0
8	Matched Disturbance Rejection for a Class of Nonlinear Systems. IEEE Transactions on Automatic Control, 2020, 65, 1710-1715.	3.6	15
9	Correction to the Paper "A Robust IDA-PBC Approach for Handling Uncertainties in Underactuated Mechanical Systems"[Oct 18 3495-3502]. IEEE Transactions on Automatic Control, 2020, 65, 3223-3226.	3.6	3
10	Robust Trajectory Tracking Control for Fully Actuated Marine Surface Vehicle. IEEE Access, 2020, 8, 223897-223904.	2.6	7
11	Passivity-based control design for a continuum robotic manipulator with disturbances. , 2020, , .		1
12	Parametric modelling of interacting hydrodynamic forces in 3 DOF for underwater vehicles operating in close proximity. Ocean Engineering, 2020, 203, 107231.	1.9	5
13	Nonprehensile Manipulation Control and Task Planning for Deformable Object Manipulation: Results from the RoDyMan Project. Lecture Notes in Electrical Engineering, 2020, , 76-100.	0.3	2
14	String Stable Integral Control of Vehicle Platoons with Actuator Dynamics and Disturbances. , 2020, , .		0
15	Dealing with constant power loads in DC-DC power electronic converters using flatness based coordinate transformations. , 2020, , .		0
16	Kinetic-Potential Energy Shaping for Mechanical Systems With Applications to Tracking. , 2019, 3, 960-965.		13
17	Tracking Control of Marine Craft in the port-Hamiltonian Framework: A Virtual Differential Passivity Approach. , 2019, , .		2
18	Suppression of Wave Disturbances and Tracking Control for Marine Systems. , 2019, , .		0

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19	Control of Nonprehensile Planar Rolling Manipulation: A Passivity-Based Approach. IEEE Transactions on Robotics, 2019, 35, 317-329.	7.3	27
20	Passivity-Based Control Design and Experiments for a Rolling-Balancing System. Lecture Notes in Electrical Engineering, 2018, , 230-255.	0.3	0
21	Robust integral action of port-Hamiltonian systems. IFAC-PapersOnLine, 2018, 51, 181-186.	0.5	8
22	Internal Model Control for Rudder Roll Stabilisation and Course Keeping of a Surface Marine Craft. IFAC-PapersOnLine, 2018, 51, 457-462.	0.5	2
23	Discontinuous energy shaping control of the Chaplygin sleigh. IFAC-PapersOnLine, 2018, 51, 211-216.	0.5	1
24	Global stabilisation of underactuated mechanical systems via PID passivity-based control. Automatica, 2018, 96, 178-185.	3.0	44
25	Nonprehensile Manipulation of Deformable Objects: Achievements and Perspectives from the Robotic Dynamic Manipulation Project. IEEE Robotics and Automation Magazine, 2018, 25, 83-92.	2.2	22
26	Trajectory tracking passivity-based control for marine vehicles subject to disturbances. Journal of the Franklin Institute, 2017, 354, 2167-2182.	1.9	45
27	Passivity-Based Control for a Rolling-Balancing System: The Nonprehensile Disk-on-Disk. IEEE Transactions on Control Systems Technology, 2017, 25, 2135-2142.	3.2	24
28	Integral Control of Port-Hamiltonian Systems: Nonpassive Outputs Without Coordinate Transformation. IEEE Transactions on Automatic Control, 2017, 62, 5947-5953.	3.6	31
29	Passivity-Based Control of Mechanical Systems. Lecture Notes in Control and Information Sciences, 2017, , 167-199.	0.6	12
30	Robust IDA-PBC for underactuated mechanical systems subject to matched disturbances. International Journal of Robust and Nonlinear Control, 2017, 27, 1000-1016.	2.1	59
31	Intrinsic dynamics and total energy-shaping control of the ballbot system. International Journal of Control, 2017, 90, 2734-2747.	1.2	6
32	Global Stabilisation of Underactuated Mechanical Systems via PID Passivity-Based Control. IFAC-PapersOnLine, 2017, 50, 9577-9582.	0.5	20
33	Decentralized control for l 2 weak string stability of vehicle platoon. IFAC-PapersOnLine, 2017, 50, 15012-15017.	0.5	3
34	Matched disturbance rejection for energy-shaping controlled underactuated mechanical systems. , 2017, , .		6
35	On the tuning of nested-structure dynamic-positioning control of a marine craft. , 2017, , .		0
36	Simultaneous interconnection and damping assignment passivity-based control of mechanical systems using dissipative forces. , 2016, , .		0

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37	Robust IDA-PBC for underactuated mechanical systems subject to matched disturbances. , 2016, , .		2
38	Switched Passivity—Based Control of the Chaplygin Sleigh. IFAC-PapersOnLine, 2016, 49, 1012-1017.	0.5	2
39	Simultaneous interconnection and damping assignment passivity-based control of mechanical systems using dissipative forces. Systems and Control Letters, 2016, 94, 118-126.	1.3	31
40	Energy Shaping of Mechanical Systems via PID Control and Extension to Constant Speed Tracking. IEEE Transactions on Automatic Control, 2016, 61, 3551-3556.	3.6	36
41	Shaping the Energy of Mechanical Systems Without Solving Partial Differential Equations. IEEE Transactions on Automatic Control, 2016, 61, 1051-1056.	3.6	64
42	Design, Implementation and Experiments of a Robust Passivity-based Controller for a Rolling-balancing System. , 2016, , .		2
43	Disturbance rejection via control by interconnection of port-Hamiltonian systems. , 2015, , .		15
44	Passivity-Based Tracking Controllers for Mechanical Systems with Active Disturbance Rejection. IFAC-PapersOnLine, 2015, 48, 129-134.	0.5	6
45	Passivity-based Trajectory-tracking for Marine Craft with Disturbance Rejection. IFAC-PapersOnLine, 2015, 48, 19-24.	0.5	7
46	Energy-based motion control of a slender hull unmanned underwater vehicle. Ocean Engineering, 2015, 104, 604-616.	1.9	41
47	Smooth stabilisation of nonholonomic robots subject to disturbances. , 2015, , .		8
48	Energy-based guidance of an underactuated unmanned underwater vehicle on a helical trajectory. Control Engineering Practice, 2015, 44, 138-156.	3.2	27
49	Shaping the energy of mechanical systems without solving partial differential equations. , 2015, , .		10
50	Scalability of bidirectional vehicle strings with static and dynamic measurement errors. Automatica, 2015, 62, 208-212.	3.0	17
51	Passivity-based control for multi-vehicle systems subject to string constraints. Automatica, 2014, 50, 3224-3230.	3.0	78
52	Scalability of Bidirectional Vehicle Strings with Measurement Errors. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 9171-9176.	0.4	2
53	Robust energy shaping control of mechanical systems. Systems and Control Letters, 2013, 62, 770-780.	1.3	73
54	Control of an underactuated-slender-hull unmanned underwater vehicle using Port-Hamiltonian theory. , 2013, , .		4

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55	Energy-based control of bidirectional vehicle strings. , 2013, , .		3
56	Regulation and integral control of an underactuated robotic system using IDA-PBC with dynamic extension. , 2013, , .		7
57	Energy-based Nonlinear Control of Ship Roll Gyro-stabiliser with Precession Angle Constraints. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 328-333.	0.4	8
58	Energy-based Motion Control of Marine Vehicles using Interconnection and Damping Assignment Passivity-based Control â€" A Survey. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 316-327.	0.4	7
59	Simplifying Robust Energy Shaping Controllers for Mechanical Systems via Coordinate Changes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 60-65.	0.4	2
60	Robustifying energy shaping control of mechanical systems. , 2012, , .		8
61	Robust speed tracking control of synchronous motors using immersion and invariance. , 2012, , .		3
62	Dynamic positioning of marine craft using a port-Hamiltonian framework. Automatica, 2012, 48, 851-856.	3.0	66
63	A Framework for Testing Robust Autonomy of UAS During Design and Certification. , 2011, , .		2
64	Joint Motion Control and Control Allocation Design for UAS Flight Control Systems. , 2011, , .		0
65	Bond Graph Modeling and Simulation of Electrical Machines. , 2011, , 269-321.		5
66	Port-Hamiltonian Theory of Motion Control for Marine Craft. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 201-206.	0.4	15
67	Derivation of Input-State-Output Port-Hamiltonian Systems from bond graphs. Simulation Modelling Practice and Theory, 2009, 17, 137-151.	2.2	19
68	Energy shaping, interconnection and damping assignment, and integral control in the bond graph domain. Simulation Modelling Practice and Theory, 2009, 17, 152-174.	2.2	15
69	On the addition of integral action to port-controlled Hamiltonian systems. Automatica, 2009, 45, 1910-1916.	3.0	132
70	Constrained Control Design for Dynamic Positioning of Marine Vehicles with Control Allocation. Modeling, Identification and Control, 2009, 30, 57-70.	0.6	40
71	On The Stability Of A Class Of Switched Bond Graphs. , 2008, , .		1
72	A Bond-Graph Method For Flatness-Based Dynamic Feedback Linearization Controller Synthesis: Application To A Current-Fed Induction Motor. , 2006, , .		1

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73	Energy Shaping And Interconnection And Damping Assignment Control In The Bond Graph Domain. , 2006, , .		1
74	Non-linear control of a series direct current motor via flatness and decomposition in the bond graph domain. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2005, 219, 215-229.	0.7	6
75	Speed control of series DC motor: a bond graph based backstepping design. , 0, , .		1
76	Control of underactuated marine crafts with matched disturbances. International Journal of Control, 0, , 1-11.	1.2	0