

Alejandro Donaire

List of Publications by Year in descending order

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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	On the addition of integral action to port-controlled Hamiltonian systems. <i>Automatica</i> , 2009, 45, 1910-1916.	3.0	132
2	Passivity-based control for multi-vehicle systems subject to string constraints. <i>Automatica</i> , 2014, 50, 3224-3230.	3.0	78
3	Robust energy shaping control of mechanical systems. <i>Systems and Control Letters</i> , 2013, 62, 770-780.	1.3	73
4	Dynamic positioning of marine craft using a port-Hamiltonian framework. <i>Automatica</i> , 2012, 48, 851-856.	3.0	66
5	Shaping the Energy of Mechanical Systems Without Solving Partial Differential Equations. <i>IEEE Transactions on Automatic Control</i> , 2016, 61, 1051-1056.	3.6	64
6	Robust IDA-PBC for underactuated mechanical systems subject to matched disturbances. <i>International Journal of Robust and Nonlinear Control</i> , 2017, 27, 1000-1016.	2.1	59
7	Trajectory tracking passivity-based control for marine vehicles subject to disturbances. <i>Journal of the Franklin Institute</i> , 2017, 354, 2167-2182.	1.9	45
8	Global stabilisation of underactuated mechanical systems via PID passivity-based control. <i>Automatica</i> , 2018, 96, 178-185.	3.0	44
9	Energy-based motion control of a slender hull unmanned underwater vehicle. <i>Ocean Engineering</i> , 2015, 104, 604-616.	1.9	41
10	Constrained Control Design for Dynamic Positioning of Marine Vehicles with Control Allocation. <i>Modeling, Identification and Control</i> , 2009, 30, 57-70.	0.6	40
11	Energy Shaping of Mechanical Systems via PID Control and Extension to Constant Speed Tracking. <i>IEEE Transactions on Automatic Control</i> , 2016, 61, 3551-3556.	3.6	36
12	Simultaneous interconnection and damping assignment passivity-based control of mechanical systems using dissipative forces. <i>Systems and Control Letters</i> , 2016, 94, 118-126.	1.3	31
13	Integral Control of Port-Hamiltonian Systems: Nonpassive Outputs Without Coordinate Transformation. <i>IEEE Transactions on Automatic Control</i> , 2017, 62, 5947-5953.	3.6	31
14	Energy-based guidance of an underactuated unmanned underwater vehicle on a helical trajectory. <i>Control Engineering Practice</i> , 2015, 44, 138-156.	3.2	27
15	Control of Nonprehensile Planar Rolling Manipulation: A Passivity-Based Approach. <i>IEEE Transactions on Robotics</i> , 2019, 35, 317-329.	7.3	27
16	Passivity-Based Control for a Rolling-Balancing System: The Nonprehensile Disk-on-Disk. <i>IEEE Transactions on Control Systems Technology</i> , 2017, 25, 2135-2142.	3.2	24
17	Nonprehensile Manipulation of Deformable Objects: Achievements and Perspectives from the Robotic Dynamic Manipulation Project. <i>IEEE Robotics and Automation Magazine</i> , 2018, 25, 83-92.	2.2	22
18	Global Stabilisation of Underactuated Mechanical Systems via PID Passivity-Based Control. <i>IFAC-PapersOnLine</i> , 2017, 50, 9577-9582.	0.5	20

#	ARTICLE	IF	CITATIONS
19	Derivation of Input-State-Output Port-Hamiltonian Systems from bond graphs. Simulation Modelling Practice and Theory, 2009, 17, 137-151.	2.2	19
20	Energy shaping control with integral action for soft continuum manipulators. Mechanism and Machine Theory, 2021, 158, 104250.	2.7	19
21	Scalability of bidirectional vehicle strings with static and dynamic measurement errors. Automatica, 2015, 62, 208-212.	3.0	17
22	String stable integral control design for vehicle platoons with disturbances. Automatica, 2021, 127, 109542.	3.0	16
23	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
24	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
25	Disturbance rejection via control by interconnection of port-Hamiltonian systems. , 2015, , .		15
26	Matched Disturbance Rejection for a Class of Nonlinear Systems. IEEE Transactions on Automatic Control, 2020, 65, 1710-1715.	3.6	15
27	Kinetic-Potential Energy Shaping for Mechanical Systems With Applications to Tracking. , 2019, 3, 960-965.		13
28	Passivity-Based Control of Mechanical Systems. Lecture Notes in Control and Information Sciences, 2017, , 167-199.	0.6	12
29	Shaping the energy of mechanical systems without solving partial differential equations. , 2015, , .		10
30	Robustifying energy shaping control of mechanical systems. , 2012, , .		8
31	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
32	Smooth stabilisation of nonholonomic robots subject to disturbances. , 2015, , .		8
33	Robust integral action of port-Hamiltonian systems. IFAC-PapersOnLine, 2018, 51, 181-186.	0.5	8
34	Regulation and integral control of an underactuated robotic system using IDA-PBC with dynamic extension. , 2013, , .		7
35	Energy-based Motion Control of Marine Vehicles using Interconnection and Damping Assignment Passivity-based Control "A Survey. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 316-327.	0.4	7
36	Passivity-based Trajectory-tracking for Marine Craft with Disturbance Rejection. IFAC-PapersOnLine, 2015, 48, 19-24.	0.5	7

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37	Robust Trajectory Tracking Control for Fully Actuated Marine Surface Vehicle. IEEE Access, 2020, 8, 223897-223904.	2.6	7
38	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
39	Passivity-Based Tracking Controllers for Mechanical Systems with Active Disturbance Rejection. IFAC-PapersOnLine, 2015, 48, 129-134.	0.5	6
40	Intrinsic dynamics and total energy-shaping control of the ballbot system. International Journal of Control, 2017, 90, 2734-2747.	1.2	6
41	Matched disturbance rejection for energy-shaping controlled underactuated mechanical systems. , 2017, , .		6
42	String Stability in Microgrids Using Frequency Controlled Inverter Chains. , 2022, 6, 1484-1489.		6
43	Parametric modelling of interacting hydrodynamic forces in 3 DOF for underwater vehicles operating in close proximity. Ocean Engineering, 2020, 203, 107231.	1.9	5
44	Bond Graph Modeling and Simulation of Electrical Machines. , 2011, , 269-321.		5
45	Control of an underactuated-slender-hull unmanned underwater vehicle using Port-Hamiltonian theory. , 2013, , .		4
46	Robust speed tracking control of synchronous motors using immersion and invariance. , 2012, , .		3
47	Energy-based control of bidirectional vehicle strings. , 2013, , .		3
48	Decentralized control for l 2 weak string stability of vehicle platoon. IFAC-PapersOnLine, 2017, 50, 15012-15017.	0.5	3
49	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
50	Passive momentum observer for mechanical systems. IFAC-PapersOnLine, 2021, 54, 131-136.	0.5	3
51	A Framework for Testing Robust Autonomy of UAS During Design and Certification. , 2011, , .		2
52	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
53	Scalability of Bidirectional Vehicle Strings with Measurement Errors. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 9171-9176.	0.4	2
54	Robust IDA-PBC for underactuated mechanical systems subject to matched disturbances. , 2016, , .		2

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55	Switched Passivity-Based Control of the Chaplygin Sleigh. IFAC-PapersOnLine, 2016, 49, 1012-1017.	0.5	2
56	Internal Model Control for Rudder Roll Stabilisation and Course Keeping of a Surface Marine Craft. IFAC-PapersOnLine, 2018, 51, 457-462.	0.5	2
57	Tracking Control of Marine Craft in the port-Hamiltonian Framework: A Virtual Differential Passivity Approach. , 2019, , .		2
58	Design, Implementation and Experiments of a Robust Passivity-based Controller for a Rolling-balancing System. , 2016, , .		2
59	Energy pumping-and-damping for gait robustification of underactuated planar biped robots within the hybrid zero dynamics framework. , 2021, , .		2
60	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
61	Speed control of series DC motor: a bond graph based backstepping design. , 0, , .		1
62	Discontinuous energy shaping control of the Chaplygin sleigh. IFAC-PapersOnLine, 2018, 51, 211-216.	0.5	1
63	Passivity-based control design for a continuum robotic manipulator with disturbances. , 2020, , .		1
64	A Bond-Graph Method For Flatness-Based Dynamic Feedback Linearization Controller Synthesis: Application To A Current-Fed Induction Motor. , 2006, , .		1
65	On The Stability Of A Class Of Switched Bond Graphs. , 2008, , .		1
66	Energy Shaping And Interconnection And Damping Assignment Control In The Bond Graph Domain. , 2006, , .		1
67	Joint Motion Control and Control Allocation Design for UAS Flight Control Systems. , 2011, , .		0
68	Simultaneous interconnection and damping assignment passivity-based control of mechanical systems using dissipative forces. , 2016, , .		0
69	On the tuning of nested-structure dynamic-positioning control of a marine craft. , 2017, , .		0
70	Passivity-Based Control Design and Experiments for a Rolling-Balancing System. Lecture Notes in Electrical Engineering, 2018, , 230-255.	0.3	0
71	Suppression of Wave Disturbances and Tracking Control for Marine Systems. , 2019, , .		0
72	Control of underactuated marine crafts with matched disturbances. International Journal of Control, 0, , 1-11.	1.2	0

#	ARTICLE	IF	CITATIONS
73	On the tuning of a nonlinear energyâ€based regulator for the positioning of a fully actuated surface marine craft. IET Control Theory and Applications, 2021, 15, 850-860.	1.2	0
74	String Stable Integral Control of Vehicle Platoons with Actuator Dynamics and Disturbances. , 2020, , .		0
75	Dealing with constant power loads in DC-DC power electronic converters using flatness based coordinate transformations. , 2020, , .		0
76	Impedance Control for a Flexible Robot Enhanced with Energy Tanks in the port-Hamiltonian Framework. , 2021, , .		0