

Alexander Lanzon

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

140
papers

2,312
citations

27
h-index

43
g-index

158
ext. papers

3,005
ext. citations

3.6
avg, IF

5.68
L-index

#	Paper	IF	Citations
140	Stability Robustness of a Feedback Interconnection of Systems With Negative Imaginary Frequency Response. <i>IEEE Transactions on Automatic Control</i> , 2008 , 53, 1042-1046	5.9	194
139	Feedback Control of Negative-Imaginary Systems. <i>IEEE Control Systems</i> , 2010 , 30, 54-72	2.9	184
138	A Negative Imaginary Lemma and the Stability of Interconnections of Linear Negative Imaginary Systems. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 2342-2347	5.9	108
137	Generalizing Negative Imaginary Systems Theory to Include Free Body Dynamics: Control of Highly Resonant Structures With Free Body Motion. <i>IEEE Transactions on Automatic Control</i> , 2014 , 59, 2692-2707	5.9	76
136	Flight Control of a Quadrotor Vehicle Subsequent to a Rotor Failure. <i>Journal of Guidance, Control, and Dynamics</i> , 2014 , 37, 580-591	2.1	75
135	Stability Analysis of Interconnected Systems With Mixed Negative-Imaginary and Small-Gain Properties. <i>IEEE Transactions on Automatic Control</i> , 2011 , 56, 1395-1400	5.9	59
134	A Feedback Linearization Approach to Fault Tolerance in Quadrotor Vehicles. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 5413-5418		57
133	A negative-imaginary lemma without minimality assumptions and robust state-feedback synthesis for uncertain negative-imaginary systems. <i>Systems and Control Letters</i> , 2012 , 61, 1269-1276	2.4	52
132	Kinematic Analysis and Control Design for a Nonplanar Multirotor Vehicle. <i>Journal of Guidance, Control, and Dynamics</i> , 2011 , 34, 1157-1171	2.1	48
131	Foundations of Not Necessarily Rational Negative Imaginary Systems Theory: Relations Between Classes of Negative Imaginary and Positive Real Systems. <i>IEEE Transactions on Automatic Control</i> , 2016 , 61, 3052-3057	5.9	47
130	. <i>IEEE Transactions on Control of Network Systems</i> , 2020 , 7, 140-150	4	46
129	Robust Output Feedback Consensus for Networked Negative-Imaginary Systems. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 2547-2552	5.9	45
128	Computing the Positive Stabilizing Solution to Algebraic Riccati Equations With an Indefinite Quadratic Term via a Recursive Method. <i>IEEE Transactions on Automatic Control</i> , 2008 , 53, 2280-2291	5.9	45
127	Spectral Conditions for Negative Imaginary Systems With Applications to Nanopositioning. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014 , 19, 895-903	5.5	44
126	Weight optimisation in H _∞ shaping. <i>Automatica</i> , 2005 , 41, 1201-1208	5.7	42
125	Robust cooperative control of multiple heterogeneous Negative-Imaginary systems. <i>Automatica</i> , 2015 , 61, 64-72	5.7	40
124	Cooperative Control of Heterogeneous Connected Vehicle Platoons: An Adaptive Leader-Following Approach. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 977-984	4.2	40

123	Feedback Stability of Negative Imaginary Systems. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 5620-5633	5.9	39
122	A mixed-small gain and passivity theorem in the frequency domain. <i>Systems and Control Letters</i> , 2007 , 56, 596-602	2.4	39
121	Discrete-time negative imaginary systems. <i>Automatica</i> , 2017 , 79, 1-10	5.7	37
120	Towards Controller Synthesis for Systems with Negative Imaginary Frequency Response. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 1506-1511	5.9	36
119	On lossless negative imaginary systems. <i>Automatica</i> , 2012 , 48, 1213-1217	5.7	32
118	An innovative tri-rotor drone and associated distributed aerial drone swarm control. <i>Robotics and Autonomous Systems</i> , 2018 , 103, 162-174	3.5	31
117	A generalized negative imaginary lemma and Riccati-based static state-feedback negative imaginary synthesis. <i>Systems and Control Letters</i> , 2015 , 77, 63-68	2.4	31
116	Equivalence between classes of multipliers for slope-restricted nonlinearities. <i>Automatica</i> , 2013 , 49, 1732-1740	5.7	30
115	A strongly strict negative-imaginary lemma for non-minimal linear systems. <i>Communications in Information and Systems</i> , 2011 , 11, 139-142	0.8	30
114	Robust performance analysis for uncertain negative-imaginary systems. <i>International Journal of Robust and Nonlinear Control</i> , 2012 , 22, 262-281	3.6	29
113	Interconnections of nonlinear systems with mixed-small gain and passivity properties and associated input-output stability results. <i>Systems and Control Letters</i> , 2009 , 58, 289-295	2.4	26
112	A combined application of H_{∞} loop shaping and μ -synthesis to control high-speed flywheels. <i>IEEE Transactions on Control Systems Technology</i> , 2005 , 13, 766-777	4.8	26
111	Validating Controllers for Internal Stability Utilizing Closed-Loop Data. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 2719-2725	5.9	25
110	Comments on "On the Existence of Stable, Causal Multipliers for Systems With Slope-Restricted Nonlinearities" <i>IEEE Transactions on Automatic Control</i> , 2012 , 57, 2422-2428	5.9	24
109	H_{∞} design to generalize internal model control. <i>Automatica</i> , 2006 , 42, 1959-1968	5.7	24
108	Distributed Finite-Time Consensus Control for Heterogeneous Battery Energy Storage Systems in Droop-Controlled Microgrids. <i>IEEE Transactions on Smart Grid</i> , 2019 , 10, 4751-4761	10.7	24
107	LMI searches for anticausal and noncausal rational Zames-Balb multipliers. <i>Systems and Control Letters</i> , 2014 , 70, 17-22	2.4	23
106	Distance Measures for Uncertain Linear Systems: A General Theory. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 1532-1547	5.9	23

105	Unfalsified adaptive control: A new controller implementation and some remarks 2007 ,		23
104	Enhanced Tracking for Nanopositioning Systems Using Feedforward/Feedback Multivariable Control Design. <i>IEEE Transactions on Control Systems Technology</i> , 2015 , 23, 1003-1013	4.8	21
103	Design and control of novel tri-rotor UAV 2012 ,		21
102	Stability analysis of negative imaginary systems with real parametric uncertainty [the single-input single-output case]. <i>IET Control Theory and Applications</i> , 2010 , 4, 2631-2638	2.5	21
101	Finite Frequency Negative Imaginary Systems. <i>IEEE Transactions on Automatic Control</i> , 2012 , 57, 2917-2922	3.9	18
100	Checking if controllers are stabilizing using closed-loop data 2006 ,		18
99	A model reference approach to safe controller changes in iterative identification and control. <i>Automatica</i> , 2006 , 42, 193-203	5.7	17
98	An H _∞ Algorithm for the windsurfer approach to adaptive robust control. <i>International Journal of Adaptive Control and Signal Processing</i> , 2004 , 18, 607-628	2.8	17
97	Factorization of multipliers in passivity and IQC analysis. <i>Automatica</i> , 2012 , 48, 909-916	5.7	15
96	Model approximation using magnitude and phase criteria: implications for model reduction and system identification. <i>International Journal of Robust and Nonlinear Control</i> , 2007 , 17, 435-461	3.6	15
95	A Decentralized Cluster Formation Containment Framework for Multirobot Systems. <i>IEEE Transactions on Robotics</i> , 2021 , 1-20	6.5	15
94	Design of Robust Drag-Free Controllers with Given Structure. <i>Journal of Guidance, Control, and Dynamics</i> , 2009 , 32, 1609-1621	2.1	14
93	On the formulation and solution of robust performance problems. <i>Automatica</i> , 2003 , 39, 1707-1720	5.7	14
92	Two-layer distributed formation-containment control strategy for linear swarm systems: Algorithm and experiments. <i>International Journal of Robust and Nonlinear Control</i> , 2020 , 30, 6433-6453	3.6	13
91	Group Coordinated Control of Networked Mobile Robots With Applications to Object Transportation. <i>IEEE Transactions on Vehicular Technology</i> , 2021 , 70, 8269-8274	6.8	13
90	On multipliers for bounded and monotone nonlinearities. <i>Systems and Control Letters</i> , 2014 , 66, 65-71	2.4	12
89	A two-degree-of-freedom H _∞ control design method for robust model matching. <i>International Journal of Robust and Nonlinear Control</i> , 2006 , 16, 467-483	3.6	12
88	A new stability result for the feedback interconnection of negative imaginary systems with a pole at the origin 2011 ,		11

87	A combined iterative scheme for identification and control redesigns. <i>International Journal of Adaptive Control and Signal Processing</i> , 2004 , 18, 629-644	2.8	11
86	Output strictly negative imaginary systems and its connections to dissipativity theory 2019 ,		11
85	An approach for computing the exact stability domain for a class of LTI parameter dependent systems. <i>International Journal of Control</i> , 2006 , 79, 1046-1061	1.5	10
84	Enforcing negative imaginary dynamics on mathematical system models. <i>International Journal of Control</i> , 2013 , 86, 1292-1303	1.5	9
83	A Robust Kalman Conjecture For First-Order Plants. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012 , 45, 27-32		9
82	A modified positive-real type stability condition 2007 ,		9
81	Pointwise in frequency performance weight optimization in μ -synthesis. <i>International Journal of Robust and Nonlinear Control</i> , 2005 , 15, 171-199	3.6	9
80	Closed-loop stability analysis of discrete-time negative imaginary systems. <i>Systems and Control Letters</i> , 2018 , 114, 52-58	2.4	8
79	LMI search for rational anticausal Zames-Falb multipliers 2012 ,		8
78	Robust stability and performance analysis for uncertain linear systemsThe distance measure approach. <i>International Journal of Robust and Nonlinear Control</i> , 2012 , 22, 1270-1292	3.6	8
77	Smooth weight optimization in loop-shaping design. <i>Systems and Control Letters</i> , 2010 , 59, 663-670	2.4	8
76	Negative imaginary synthesis via dynamic output feedback and static state feedback: A Riccati approach. <i>Automatica</i> , 2019 , 104, 220-227	5.7	7
75	Stability analysis of positive feedback interconnections of linear negative imaginary systems 2009 ,		7
74	An iterative algorithm to solve Algebraic Riccati Equations with an indefinite quadratic term 2007 ,		7
73	Applying negative imaginary systems theory to non-square systems with polytopic uncertainty. <i>Automatica</i> , 2021 , 128, 109570	5.7	7
72	State-space solution to weight optimization problem in H_2 loop-shaping control. <i>Automatica</i> , 2012 , 48, 505-513	5.7	6
71	2007 ,		6
70	Selection of a single uniquely specifiable H_2 controller in the chain-scattering framework. <i>Automatica</i> , 2004 , 40, 985-994	5.7	6

69	Effect of unmodelled actuator dynamics on feedback linearised systems and a two stage feedback linearisation method 2013 ,		5
68	Simultaneous synthesis of weights and controllers in H_{∞} loop-shaping		5
67	Cooperative Adaptive Time-Varying Formation Tracking for Multi-Agent Systems with LQR Performance Index and Switching Directed Topologies 2018 ,		5
66	Negative Imaginary Lemmas for Descriptor Systems. <i>IEEE Transactions on Automatic Control</i> , 2015 , 1-1	5.9	4
65	Distributed robust stabilization of networked multiagent systems with strict negative imaginary uncertainties. <i>International Journal of Robust and Nonlinear Control</i> , 2019 , 29, 4845-4858	3.6	4
64	Foundations of a Bicoprime Factorization Theory. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 4598-4603	5.4	4
63	A closed-loop data based test for robust performance improvement in iterative identification and control redesigns. <i>Automatica</i> , 2012 , 48, 2710-2716	5.7	4
62	Stabilization of uncertain negative-imaginary systems using a Riccati equation approach 2012 ,		4
61	Spectral Conditions for the Negative Imaginary Property of Transfer Function Matrices. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 1302-1306		4
60	Verifying stabilizing controllers via closed-loop noisy data: MIMO case 2007 ,		4
59	Time-domain output negative imaginary systems and its connection to dynamic dissipativity 2020 ,		4
58	Negative Imaginary Theory for a Class of Linear Time-Varying Systems 2021 , 5, 1001-1006		4
57	Dynamic Output Feedback Controller Synthesis using an LMI-based Strictly Negative Imaginary Framework 2019 ,		3
56	Robust output consensus of homogeneous multi-agent systems with negative imaginary dynamics. <i>Automatica</i> , 2020 , 113, 108799	5.7	3
55	Conditions for preserving negative imaginary properties in feedback interconnections and an application to multi-agent systems 2017 ,		3
54	Robustness analysis and controller synthesis with non-normalized coprime factor uncertainty characterisation 2011 ,		3
53	Reformulating negative imaginary frequency response systems to bounded-real systems 2008 ,		3
52	2007 ,		3

51	A state-space algorithm for the simultaneous optimisation of performance weights and controllers in μ -synthesis		3
50	Compliant motion control for non-redundant rigid robotic manipulators. <i>International Journal of Control</i> , 2000 , 73, 225-241	1.5	3
49	A Direct Proof of the Equivalence of Side Conditions for Strictly Positive Real Matrix Transfer Functions. <i>IEEE Transactions on Automatic Control</i> , 2020 , 65, 450-452	5.9	3
48	Controller Synthesis to Render a Closed Loop Transfer Function Strongly Strictly Negative Imaginary 2018 ,		3
47	On negative imaginary synthesis via solutions to Riccati equations 2018 ,		3
46	Robust Output Consensus for Networks of Homogeneous Negative Imaginary Systems 2018 ,		3
45	Normalized Bicoprime Factorizations 2018 ,		3
44	Cooperative Control of Integrator Negative Imaginary Systems with Application to Rendezvous Multiple Mobile Robots 2019 ,		2
43	Strictly negative imaginary state feedback control with a prescribed degree of stability. <i>Automatica</i> , 2020 , 119, 109079	5.7	2
42	A Robust Output Feedback Consensus Protocol for Networked Negative-Imaginary Systems. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014 , 47, 2878-2883		2
41	Designing simple indoor navigation system for UAVs 2011 ,		2
40	Quantitative effects of weight adjustments in H_2 control. <i>Optimal Control Applications and Methods</i> , 2009 , 30, 267-286	1.7	2
39	Distance Measures, Robust Stability Conditions and Robust Performance Guarantees for Uncertain Feedback Systems 317-344		2
38	Relationship between poles and zeros of input/output and chain-scattering systems. <i>Systems and Control Letters</i> , 2006 , 55, 314-320	2.4	2
37	Safe adaptive controller changes based on reference model adjustments		2
36	A frequency domain optimisation algorithm for simultaneous design of performance weights and controllers in μ -synthesis		2
35	On weight adjustments in H_2 control design 2003 ,		2
34	Analysis for interconnections of systems with negative imaginary frequency response 2009 ,		2

33	Cooperative Control of Innovative Tri-Rotor Drones Using Robust Feedback Linearization 2018 ,		2
32	On Discrete-Time Output Negative Imaginary Systems 2022 , 6, 1124-1129		2
31	Characterising discrete-time linear systems with the mixed positive real and bounded real property. <i>European Journal of Control</i> , 2014 , 20, 259-268	2.5	1
30	An iterative algorithm for maximizing robust performance in loop-shaping design. <i>International Journal of Robust and Nonlinear Control</i> , 2013 , 23, 919-931	3.6	1
29	Bicoprime Factor Stability Criteria and Uncertainty Characterisation. <i>IFAC-PapersOnLine</i> , 2015 , 48, 229-234		1
28	Robust output feedback consensus for multiple heterogeneous negative-imaginary systems 2015 ,		1
27	Design, control, and performance of the Weed wheel robot in the UK MOD grand challenge. <i>Advanced Robotics</i> , 2014 , 28, 203-218	1.7	1
26	Discussion on: n -DOF Controller Design for Precise Positioning a Spindle Levitated with Active Magnetic Bearings <i>European Journal of Control</i> , 2012 , 18, 207-209	2.5	1
25	2012 ,		1
24	On multipliers for bounded and monotone nonlinearities 2013 ,		1
23	Designing Electric Propulsion Systems for UAVs. <i>Lecture Notes in Computer Science</i> , 2011 , 388-389	0.9	1
22	Weight optimization for maximizing robust performance in H ∞ loop-shaping design. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 10135-10140		1
21	Analysis of robust performance for uncertain negative-imaginary systems using structured singular value 2010 ,		1
20	A test for stability robustness of linear time-varying systems utilizing the linear time-invariant gap metric. <i>International Journal of Robust and Nonlinear Control</i> , 2009 , 19, 986-1015	3.6	1
19	Enforcing a system model to be negative imaginary via perturbation of Hamiltonian matrices 2011 ,		1
18	Revisiting robust stabilization of coprime factors: The general case 2012 ,		1
17	Design of robust decentralized controllers for drag-free satellite 2008 ,		1
16	Systematic Design of Optimal Performance Weight and Controller in Mixed- μ Synthesis. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2008 , 41, 7814-7819		1

15	Synthesis of parameter-dependent controllers yielding affine-in-parameters characteristic polynomials 2006 ,		1
14	On the modelling of a bistable genetic switch 2006 ,		1
13	Safe controller changes with additional guaranteed model reference performance improvement for the unknown plant 2004 ,		1
12	ON POLES AND ZEROS OF INPUT-OUTPUT AND CHAIN-SCATTERING SYSTEMS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2005 , 38, 348-353		1
11	An algorithm for joint identification and control 2002 ,		1
10	. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 413-424	4.8	1
9	Robust Cooperative Control of Networked Train Platoons: a Negative-Imaginary Systems' Perspective. <i>IEEE Transactions on Control of Network Systems</i> , 2021 , 1-1	4	1
8	2018 ,		1
7	A parameterization of parahermitian matrix functions and its application to a state-space solution for -analysis. <i>Systems and Control Letters</i> , 2011 , 60, 798-806	2.4	0
6	Simultaneous optimization of performance weights and a controller in mixed-. <i>Automatica</i> , 2012 , 48, 115-120	5.7	
5	Robust Performance Improvement Test for Stabilizing Controllers Using Closed-Loop Data. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 3623-3628		
4	Development and stabilization of a low-cost single-tilt tricopter. <i>IFAC-PapersOnLine</i> , 2020 , 53, 8897-8902.	0.7	
3	Sensor blending and Control allocation for non-square linear systems to achieve negative imaginary dynamics. <i>IFAC-PapersOnLine</i> , 2020 , 53, 4629-4634	0.7	
2	Controller synthesis to achieve robust stability against bicoprime factor uncertainty: an LMI approach. <i>IFAC-PapersOnLine</i> , 2020 , 53, 7400-7405	0.7	
1	On Local Input-Output Stability of Nonlinear Feedback Systems via Local Graph Separation 2022 , 1-1		