

Maruthi R Akella

List of Publications by Year in descending order

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96
papers

2,602
citations

236925

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h-index

197818

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all docs

96
docs citations

96
times ranked

1085
citing authors

#	ARTICLE	IF	CITATIONS
1	Globally Stabilizing Saturated Attitude Control in the Presence of Bounded Unknown Disturbances. <i>Journal of Guidance, Control, and Dynamics</i> , 2005, 28, 957-963.	2.8	205
2	Coordinated Standoff Tracking of Moving Targets: Control Laws and Information Architectures. <i>Journal of Guidance, Control, and Dynamics</i> , 2009, 32, 56-69.	2.8	183
3	High-Performance Spacecraft Adaptive Attitude-Tracking Control Through Attracting-Manifold Design. <i>Journal of Guidance, Control, and Dynamics</i> , 2008, 31, 884-891.	2.8	147
4	Rigid body attitude tracking without angular velocity feedback. <i>Systems and Control Letters</i> , 2001, 42, 321-326.	2.3	130
5	Adaptive Control of Nonlinear Attitude Motions Realizing Linear Closed Loop Dynamics. <i>Journal of Guidance, Control, and Dynamics</i> , 2001, 24, 95-100.	2.8	127
6	Adaptive Attitude-Tracking Control of Spacecraft with Uncertain Time-Varying Inertia Parameters. <i>Journal of Guidance, Control, and Dynamics</i> , 2015, 38, 41-52.	2.8	120
7	Nonlinear Adaptive Control of Spacecraft Maneuvers. <i>Journal of Guidance, Control, and Dynamics</i> , 1997, 20, 1104-1110.	2.8	97
8	Probability of Collision Between Space Objects. <i>Journal of Guidance, Control, and Dynamics</i> , 2000, 23, 769-772.	2.8	95
9	Velocity-Free Attitude Controllers Subject to Actuator Magnitude and Rate Saturations. <i>Journal of Guidance, Control, and Dynamics</i> , 2005, 28, 659-666.	2.8	91
10	Probability of Collision Error Analysis. <i>Space Debris</i> , 1999, 1, 21-35.	0.7	85
11	Safety Control for Spacecraft Autonomous Rendezvous and Docking Under Motion Constraints. <i>Journal of Guidance, Control, and Dynamics</i> , 2017, 40, 1680-1692.	2.8	75
12	Dual-Quaternion-Based Spacecraft Autonomous Rendezvous and Docking Under Six-Degree-of-Freedom Motion Constraints. <i>Journal of Guidance, Control, and Dynamics</i> , 2018, 41, 1150-1162.	2.8	64
13	Unstart Detection in a Simplified-Geometry Hypersonic Inlet-Isolator Flow. <i>Journal of Propulsion and Power</i> , 2010, 26, 1059-1071.	2.2	63
14	Non-certainty equivalent adaptive control for robot manipulator systems. <i>Systems and Control Letters</i> , 2009, 58, 304-308.	2.3	59
15	Finite-Time Fault-Tolerant Spacecraft Attitude Control with Torque Saturation. <i>Journal of Guidance, Control, and Dynamics</i> , 2017, 40, 2524-2537.	2.8	58
16	Separation Property for the Rigid-Body Attitude Tracking Control Problem. <i>Journal of Guidance, Control, and Dynamics</i> , 2007, 30, 1569-1576.	2.8	55
17	Anti-Unwinding Attitude Control of Spacecraft with Forbidden Pointing Constraints. <i>Journal of Guidance, Control, and Dynamics</i> , 2019, 42, 822-835.	2.8	55
18	Partial Lyapunov Strictification: Smooth Angular Velocity Observers for Attitude Tracking Control. <i>Journal of Guidance, Control, and Dynamics</i> , 2015, 38, 442-451.	2.8	49

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19	Differentiator-Free Nonlinear Proportional-Integral Controllers for Rigid-Body Attitude Stabilization. <i>Journal of Guidance, Control, and Dynamics</i> , 2004, 27, 1092-1096.	2.8	45
20	Switching Angular Velocity Observer for Rigid-Body Attitude Stabilization and Tracking Control. <i>Journal of Guidance, Control, and Dynamics</i> , 2014, 37, 869-878.	2.8	42
21	Attitude Stabilization with Unknown Bounded Delay in Feedback Control Implementation. <i>Journal of Guidance, Control, and Dynamics</i> , 2011, 34, 533-542.	2.8	32
22	A novel parameter projection mechanism for smooth and stable adaptive control. <i>Systems and Control Letters</i> , 2005, 54, 43-51.	2.3	29
23	High-Frequency Pressure Measurements for Unstart Detection in Scramjet Isolators. , 2010, , .		29
24	Rigid-Body Attitude Tracking with Vector Measurements and Unknown Gyro Bias. <i>Journal of Guidance, Control, and Dynamics</i> , 2011, 34, 1474-1484.	2.8	28
25	Adaptive Realization of Linear Closed-Loop Tracking Dynamics in the Presence of Large System Model Errors. <i>Journal of the Astronautical Sciences</i> , 2000, 48, 537-551.	1.5	28
26	Rigid body attitude control with inclinometer and low-cost gyro measurements. <i>Systems and Control Letters</i> , 2003, 49, 151-159.	2.3	26
27	Dynamically Scaled Immersion and Invariance Adaptive Control for Euler-Lagrange Mechanical Systems. <i>Journal of Guidance, Control, and Dynamics</i> , 2017, 40, 2844-2856.	2.8	25
28	Experimental Identification of Transient Dynamics for Supersonic Inlet Unstart. <i>Journal of Propulsion and Power</i> , 2014, 30, 1605-1612.	2.2	24
29	Adaptive Pose Tracking Control for Spacecraft Proximity Operations Under Motion Constraints. <i>Journal of Guidance, Control, and Dynamics</i> , 2019, 42, 2258-2271.	2.8	23
30	Novel potential-function-based control scheme for non-holonomic multi-agent systems to prevent the local minimum problem. <i>International Journal of Systems Science</i> , 2015, 46, 2150-2164.	5.5	22
31	Closed-Loop Control of Shock-Train Location in a Combusting Scramjet. <i>Journal of Propulsion and Power</i> , 2018, 34, 660-667.	2.2	21
32	Reduced Attitude Control for Boresight Alignment With Dynamic Pointing Constraints. <i>IEEE/ASME Transactions on Mechatronics</i> , 2019, 24, 2942-2952.	5.8	21
33	Partial Lyapunov Strictification: Dual-Quaternion-Based Observer for 6-DOF Tracking Control. <i>IEEE Transactions on Control Systems Technology</i> , 2019, 27, 2453-2469.	5.2	21
34	Immersion and Invariance Observers for Gyro-Free Attitude Control Systems. <i>Journal of Guidance, Control, and Dynamics</i> , 2016, 39, 2570-2577.	2.8	20
35	Persistence filter-based control for systems with time-varying control gains. <i>Systems and Control Letters</i> , 2009, 58, 413-420.	2.3	18
36	Covariance analysis of Lambert's problem via Lagrange's transfer-time formulation. <i>Aerospace Science and Technology</i> , 2018, 77, 765-773.	4.8	18

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37	Nonlinear Control Methods for High-Energy Limit-Cycle Oscillations. Journal of Guidance, Control, and Dynamics, 2001, 24, 185-192.	2.8	17
38	Anatomy of the Constant Radial Thrust Problem. Journal of Guidance, Control, and Dynamics, 2002, 25, 563-570.	2.8	16
39	Gyro-Free Rigid-Body Attitude Stabilization Using only Vector Measurements. Journal of Guidance, Control, and Dynamics, 2015, 38, 811-818.	2.8	16
40	Closed-Loop-Based Control Allocation for Spacecraft Attitude Stabilization with Actuator Fault. Journal of Guidance, Control, and Dynamics, 2018, 41, 944-953.	2.8	16
41	Treffitz indirect method applied to nonlinear potential problems. Engineering Analysis With Boundary Elements, 2000, 24, 459-465.	3.7	15
42	Structured Model Reference Adaptive Control for a Wing Section with Structural Nonlinearity. JVC/Journal of Vibration and Control, 2002, 8, 553-573.	2.6	15
43	Adaptive Dynamic Inversion Control of Linear Plants With Control Position Constraints. IEEE Transactions on Control Systems Technology, 2012, 20, 918-933.	5.2	15
44	Lyapunov-Based Guidance for Orbit Transfers and Rendezvous in Levi-Civita Coordinates. Journal of Guidance, Control, and Dynamics, 2014, 37, 1170-1181.	2.8	15
45	Composite Adaptive Attitude-Tracking Control With Parameter Convergence Under Finite Excitation. IEEE Transactions on Control Systems Technology, 2020, 28, 2657-2664.	5.2	15
46	Structured model reference adaptive control with actuator saturation limits. , 1998, , .		14
47	Adaptive Controlâ€”A Departure from the Certainty-Equivalence Paradigm. Journal of the Astronautical Sciences, 2004, 52, 75-91.	1.5	13
48	Detection and Transient Dynamics Modeling of Experimental Hypersonic Inlet Unstart. , 2012, , .		12
49	Spacecraft Swarm Finite-Thrust Cooperative Control for Common Orbit Convergence. Journal of Guidance, Control, and Dynamics, 2015, 38, 478-488.	2.8	12
50	Attracting manifolds for attitude estimation in flatland and otherlands. Journal of the Astronautical Sciences, 2006, 54, 635-655.	1.5	11
51	New numerically stable solutions for minimum-snap quadcopter aggressive maneuvers. , 2017, , .		11
52	Precision Attitude Stabilization: Incorporating Rise and Fall Times in Gas-Based Thrusters. Journal of Guidance, Control, and Dynamics, 2011, 34, 317-323.	2.8	10
53	Energy preserving low-thrust guidance for orbit transfers in KS variables. Celestial Mechanics and Dynamical Astronomy, 2016, 125, 107-132.	1.4	9
54	Adaptive Kalman Filter for Detectable Linear Time-Invariant Systems. Journal of Guidance, Control, and Dynamics, 2019, 42, 2197-2205.	2.8	9

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55	Uniform Exponential Stability Result for the Rigid-Body Attitude Tracking Control Problem. Journal of Guidance, Control, and Dynamics, 2020, 43, 39-45.	2.8	9
56	Closed-loop Control of Shock Location in Mach 1.8 Direct Connect Wind Tunnel. , 2014, , .		8
57	Arbitrarily fast exponentially stabilizing controller for multi-input, persistently exciting singular control gain systems. Automatica, 2015, 54, 279-283.	5.0	8
58	Avoiding the local-minimum problem in multi-agent systems with limited sensing and communication. International Journal of Systems Science, 2016, 47, 1943-1952.	5.5	8
59	On Low Radial Thrust Spacecraft Motion. Journal of the Astronautical Sciences, 2000, 48, 149-161.	1.5	8
60	Stabilized continuation methods for boundary value problems. Applied Mathematics and Computation, 2000, 112, 317-332.	2.2	7
61	Adaptive Estimation and Control Algorithms for Certain Independent Control Axis Misalignments. Journal of Guidance, Control, and Dynamics, 2014, 37, 72-85.	2.8	6
62	Quaternion-based stabilization of attitude dynamics subject to pointwise delay in the input. , 2014, , .		6
63	Energy-Conserving Planar Spacecraft Motion with Constant-Thrust Acceleration. Journal of Guidance, Control, and Dynamics, 2015, 38, 2309-2323.	2.8	6
64	Multi-Stage Stabilized Continuation for Indirect Optimal Control of Hypersonic Trajectories. , 2020, , .		5
65	QuateRA: The Quaternion Regression Algorithm. Journal of Guidance, Control, and Dynamics, 2020, 43, 1600-1616.	2.8	5
66	Closed-Loop Control of Unstart in a Mach 1.8 Isolator. Journal of Propulsion and Power, 2020, 36, 153-157.	2.2	5
67	Multistage Stabilized Continuation for Indirect Optimal Control of Three-Dimensional Hypersonic Trajectories. Journal of Spacecraft and Rockets, 2022, 59, 1904-1913.	1.9	5
68	Adaptive realization of desired constraint stabilization dynamics in the control of multibody systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2001, 359, 2231-2249.	3.4	4
69	Persistence Filters for Estimation: Applications to Control in Shared-Sensing Reversible Transducer Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2012, 134, .	1.6	4
70	Quaternion-Based Stabilization of Attitude Dynamics Subject to Pointwise Delay in the Input. Journal of Guidance, Control, and Dynamics, 2016, 39, 1697-1705.	2.8	4
71	Autonomous rendezvous and docking of spacecraft under 6-DOF motion constraints. , 2017, , .		4
72	Partial Lyapunov Strictification: Smooth Angular Velocity Observers for Attitude Tracking Control. , 2014, , .		3

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73	Closed-Loop Control of Isolator Shock Trains in a Mach 2.2 Direct-Connect Scramjet. , 2017, , .		3
74	An Information-Driven Algorithm in Flocking Systems for an Improved Obstacle Avoidance. , 2019, , .		3
75	Robot Navigation in a Decentralized Landmark-Free Sensor Network. Journal of Intelligent and Robotic Systems: Theory and Applications, 2010, 60, 553-576.	3.4	2
76	Stabilizing controllers for multi-input, singular control gain systems. , 2012, , .		2
77	Adaptive Estimation and Control Algorithms for Certain Classes of Actuator Misalignment Uncertainties. , 2012, , .		2
78	Output feedback, attitude dynamics, robustness. , 2015, , .		2
79	Time-delayed gyro-free attitude stabilization. , 2015, , .		2
80	Ultimate Boundedness Results for Noise-Corrupted Quaternion Output Feedback Attitude Tracking Controllers. Journal of Guidance, Control, and Dynamics, 2017, 40, 3265-3273.	2.8	2
81	Closed-Loop Control of Unstart in a Mach 1.8 Isolator. , 2019, , .		2
82	Attitude Stabilization with Network Delay in Feedback Control Implementation. , 2009, , .		1
83	Adaptive control schemes specially designed for systems with unknown orthogonal matrix parameters. Aerospace Science and Technology, 2012, 18, 63-68.	4.8	1
84	Stability of Nonlinear Systems with Unknown Time-varying Feedback Delay. Journal of the Astronautical Sciences, 2013, 60, 278-302.	1.5	1
85	Tracking error convergence for multi-input multi-output model reference adaptive control with known nonminimum phase zeros. , 2015, , .		1
86	Adaptive Control for Spacecraft Autonomous Rendezvous and Docking under 6-DOF Motion Constraints. , 2019, , .		1
87	New Class of Attitude Controllers Guaranteed to Converge within Specified Finite-Time. Journal of the Astronautical Sciences, 2020, 67, 552-570.	1.5	1
88	A Non-Certainty Equivalence Approach to Decentralized Adaptive Control. , 2007, , .		0
89	Dynamic scaling based adaptive controllers for aeroelastic systems. , 2016, , .		0
90	Stabilizing controllers for systems with inputs scaled by persistently exciting diagonal matrices. , 2017, , .		0

#	ARTICLE	IF	CITATIONS
91	Covariance Matching Kalman Filter for Observable LTI Systems. , 2018, , .		0
92	Low-Thrust Real-Time Guidance Algorithm for Proximity Operations about an Asteroid. , 2019, , .		0
93	Maruthi R. Akella [People in Control]. IEEE Control Systems, 2021, 41, 25-27.	0.8	0
94	Editorial. Journal of the Astronautical Sciences, 2021, 68, 1-3.	1.5	0
95	Adaptive Attitude Tracking Control Preserving the Self-Reduction Property. Journal of Guidance, Control, and Dynamics, 0, , 1-8.	2.8	0
96	Angular Velocity and Covariance Estimates for Rigid Bodies in Near Pure-Spin Using Orientation Measurements. Journal of the Astronautical Sciences, 0, , .	1.5	0