Kazuo Tanaka

List of Publications by Year
in descending order

104 papers	1,909 citations	394286 19 h-index	265120 42 g-index
106 all docs	106 docs citations	106 times ranked	987 citing authors

#	Article	IF	Citations
1	Local body shape control of an articulated mobile robot and an application for recovery from a stuck state. Advanced Robotics, 2022, 36, 488-500.	1.1	1
2	Path-Following-Based Design for Guaranteed Cost Control of Polynomial Fuzzy Systems. International Journal of Fuzzy Systems, 2021, 23, 1-12.	2.3	11
3	Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. IEEE Transactions on Cybernetics, 2021, 51, 2093-2106.	6.2	8
4	A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. IEEE Transactions on Cybernetics, 2021, 51, 2993-3003.	6.2	8
5	Control of a snake robot for passing through a self-closing door. Advanced Robotics, 2021, 35, 635-647.	1.1	3
6	Relaxed Sum-of-squares Approach to Stabilization of Polynomial Fuzzy Systems. International Journal of Control, Automation and Systems, 2021, 19, 2921-2930.	1.6	4
7	Serret-Frenet Frame-based Path Tracking Stabilization of a Powered Paraglider Type UAV with Input Constraints. , 2021, , .		1
8	A polynomial-fuzzy-model-based synchronization methodology for the multi-scroll Chen chaotic secure communication system. Engineering Applications of Artificial Intelligence, 2020, 87, 103251.	4.3	46
9	Simultaneous Control of Two Points for Snake Robot and Its Application to Transportation. IEEE Robotics and Automation Letters, 2020, 5, 111-118.	3.3	10
10	A Rational Polynomial Tracking Control Approach to a Common System Representation for Unmanned Aerial Vehicles. IEEE/ASME Transactions on Mechatronics, 2020, 25, 919-930.	3.7	11
11	Three-dimensional steering for an articulated mobile robot with prismatic joints with consideration of hardware limitations. Advanced Robotics, 2020, 34, 767-779.	1.1	4
12	Control of an articulated wheeled mobile robot in pipes. Advanced Robotics, 2019, 33, 1072-1086.	1.1	23
13	Longitudinal Fuzzy Model Construction of a Flying-Wing Unmanned Aerial Vehicle and a Nonlinear Guaranteed Cost Control Approach to Altitude Stabilization. , 2019, , .		2
14	3-D Flight Path Tracking Control for Unmanned Aerial Vehicles Under Wind Environments. IEEE Transactions on Vehicular Technology, 2019, 68, 11621-11634.	3.9	17
15	Practical Model Construction and Stable Control of an Unmanned Aerial Vehicle With a Parafoil-Type Wing. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, 49, 1291-1297.	5.9	15
16	Fuzzy Model-Based Nonlinear Control Using Sum of Squares. Journal of Japan Society for Fuzzy Theory and Intelligent Informatics, 2019, 31, 65-74.	0.0	0
17	Motion control of a snake robot moving between two non-parallel planes. Advanced Robotics, 2018, 32, 559-573.	1.1	18
18	Development and Control of Articulated Mobile Robot for Climbing Steep Stairs. IEEE/ASME Transactions on Mechatronics, 2018, 23, 531-541.	3.7	55

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19	A Practical SSVEP-Based Algorithm for Perceptual Dominance Estimation in Binocular Rivalry. IEEE Transactions on Cognitive and Developmental Systems, 2018, 10, 476-482.	2.6	1
20	A Waypoint Following Control Design for a Paraglider Model With Aerodynamic Uncertainty. IEEE/ASME Transactions on Mechatronics, 2018, 23, 518-523.	3.7	9
21	Stabilization and Robust Stabilization of Polynomial Fuzzy Systems: A Piecewise Polynomial Lyapunov Function Approach. International Journal of Fuzzy Systems, 2018, 20, 1423-1438.	2.3	7
22	Control Synthesis for Polynomial Fuzzy Systems Using Line-Integral Polynomial Fuzzy Lyapunov Function. , 2018, , .		2
23	A New Nonconvex Design Algorithm for Optimal Polynomial Fuzzy Control. , 2018, , .		2
24	An SOS-Based Control Lyapunov Function Design for Polynomial Fuzzy Control of Nonlinear Systems. IEEE Transactions on Fuzzy Systems, 2017, 25, 775-787.	6.5	37
25	Positivstellensatz relaxation for sum-of-squares stabilization conditions of polynomial fuzzy systems. , 2017, , .		0
26	Shape Control of a Snake Robot With Joint Limit and Self-Collision Avoidance. IEEE Transactions on Control Systems Technology, 2017, 25, 1441-1448.	3.2	21
27	Stability analysis for polynomial fuzzy systems based on line-integral fuzzy Lyapunov function: A copositive relaxation approach. , 2017, , .		2
28	Mixed Integer Programming-Based Semiautonomous Step Climbing of a Snake Robot Considering Sensing Strategy. IEEE Transactions on Control Systems Technology, 2016, 24, 252-264.	3.2	17
29	Smooth control of an articulated mobile robot with switching constraints. Advanced Robotics, 2016, 30, 29-40.	1.1	16
30	A New Sum-of-Squares Design Framework for Robust Control of Polynomial Fuzzy Systems With Uncertainties. IEEE Transactions on Fuzzy Systems, 2016, 24, 94-110.	6.5	69
31	Stair climbing of an articulated mobile robot via sequential shift. , 2015, , .		4
32	A Simple Passive Attitude Stabilizer for Palm-size Aerial Vehicles. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	3.7	2
33	Control of a Snake Robot for Ascending and Descending Steps. IEEE Transactions on Robotics, 2015, 31, 511-520.	7.3	56
34	Stability Analysis and Region-of-Attraction Estimation Using Piecewise Polynomial Lyapunov Functions: Polynomial Fuzzy Model Approach. IEEE Transactions on Fuzzy Systems, 2015, 23, 1314-1322.	6.5	52
35	Approximate Path-Tracking Control of Snake Robot Joints With Switching Constraints. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1633-1641.	3.7	30
36	Range-Sensor-Based Semiautonomous Whole-Body Collision Avoidance of a Snake Robot. IEEE Transactions on Control Systems Technology, 2015, 23, 1927-1934.	3.2	46

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37	Collision Avoidance Control for Multi-point Contact of a Redundant Serial-link Robot. Transactions of the Society of Instrument and Control Engineers, 2015, 51, 226-232.	0.1	0
38	A nonmonotonically decreasing relaxation approach of Lyapunov functions to guaranteed cost control for discrete fuzzy systems. IET Control Theory and Applications, 2014, 8, 1716-1722.	1.2	24
39	Stabilization analysis of single-input polynomial fuzzy systems using control Lyapunov functions. , 2014, , .		4
40	Discrete polynomial fuzzy systems control. IET Control Theory and Applications, 2014, 8, 288-296.	1.2	33
41	Stability region analysis for polynomial fuzzy systems by polynomial Lyapunov functions. , 2014, , .		1
42	Nonconvex stabilization criterion for polynomial fuzzy systems. , 2013, , .		4
43	A practical design approach to automatic model construction and controller design for F16 aircraft. , 2013, , .		0
44	Development of an autonomous flying robot and its verification via flight control experiment. , 2013, , .		6
45	Climbing and descending control of a snake robot on step environments based on kinematics. , 2013, , .		7
46	Stability and stabilization conditions for Takagi-Sugeno fuzzy model via polyhedral Lyapunov functions. , 2013, , .		1
47	Piecewise polynomial lyapunov functions based stability analysis for polynomial fuzzy systems. , 2013, , .		0
48	A Takagi-Sugeno fuzzy model approach to vision-based control of a micro helicopter. , 2012, , .		1
49	A descriptor system approach to servo control for nonlinear systems. , 2012, , .		1
50	Polynomial Fuzzy Observer Designs: A Sum-of-Squares Approach. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 1330-1342.	5.5	93
51	Wireless Vision-Based Stabilization of Indoor Microhelicopter. IEEE/ASME Transactions on Mechatronics, 2012, 17, 519-524.	3.7	26
52	Shared Nonlinear Control in Wireless-Based Remote Stabilization: A Theoretical Approach. IEEE/ASME Transactions on Mechatronics, 2012, 17, 443-453.	3.7	10
53	An SOS-based observer design for polynomial fuzzy systems. , 2011, , .		10
54	A polynomial observer design for a wider class of polynomial fuzzy systems. , 2011, , .		11

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55	An improved approach to fuzzy model construction and servo control with constraints based on error dynamics. , 2011, , .		1
56	Stability analysis for the polynomial fuzzy systems by utilizing equality constraints of sum-of-squares program. , 2010, , .		4
57	Fuzzy model-based servo control with constraints on both of inputs and states. , 2010, , .		1
58	Stability analysis of nonlinear systems via multiple mixed max-min based Lyapunov functions. , 2010, , .		1
59	Guaranteed cost control of T-S fuzzy systems using piecewise Lyapunov function based switching fuzzy controller. , 2009, , .		3
60	Improved controller design for switching fuzzy model-based control. , 2009, , .		0
61	Fuzzy model-based servo control for nonlinear systems with input constraint. , 2009, , .		15
62	Relaxed stabilization conditions of T-S fuzzy systems using piecewise lyapunov function based switching fuzzy controller. , 2009, , .		3
63	Stabilization of complex switched networks with two types of delays via impulsive control. , 2009, , .		1
64	Development of a Flying Robot With a Pantograph-Based Variable Wing Mechanism. IEEE Transactions on Robotics, 2009, 25, 79-87.	7.3	9
65	H<inf>&#x221E;</inf> control of T-S fuzzy systems using piecewise Lyapunov function based switching fuzzy controller. , 2009, , .		0
66	Improvement of simulation model and development of control mechanism of force direction for a flying robot with cyclogyro wing. , 2009, , .		1
67	Polynomial fuzzy observer design: A sum of squares approach. , 2009, , .		15
68	Switching fuzzy model construction based on optimal dividing planes. , 2009, , .		4
69	Guaranteed Cost Control of Polynomial Fuzzy Systems via a Sum of Squares Approach. IEEE Transactions on Systems, Man, and Cybernetics, 2009, 39, 561-567.	5.5	153
70	Sensor Reduction for Backing-Up Control of a Vehicle With Triple Trailers. IEEE Transactions on Industrial Electronics, 2009, 56, 497-509.	5.2	20
71	A Sum-of-Squares Approach to Modeling and Control of Nonlinear Dynamical Systems With Polynomial Fuzzy Systems. IEEE Transactions on Fuzzy Systems, 2009, 17, 911-922.	6.5	399
72	Micro helicopter control: LMI approach vs SOS approach. , 2008, , .		9

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73	The quadruped locomotion robot with the flexible materials. , 2008, , .		0
74	Autonomous flight control of flapping-of-wings robot using GPS. , 2008, , .		1
75	Passive dynamic walking with elastic energy. , 2008, , .		5
76	Delay independent synchronization of complex network via hybrid control. , 2008, , .		6
77	Development of a multiple parallel link rotor for flying robots. , 2008, , .		0
78	Stochastic controlling tolerable fault of Network Control Systems. , 2008, , .		0
79	Fuzzy model-based servo control for discrete-time nonlinear systems. , 2008, , .		6
80	Development of a variable-wing mechanism based on flapping motion of birds. , 2008, , .		1
81	Adaptive Spanning-tree on Changing Topologies: Towards Emergent Behaviors in Autonomous Multi-Agent Systems. Proceedings of the American Control Conference, 2007, , .	0.0	2
82	Development of a Flying Robot with Pantograph-based Variable Wing Mechanism. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	5
83	Application of FFP-Actuators to Legged Locomotion Robots. , 2007, , .		2
84	A Descriptor System Approach to Fuzzy Control System Design via Fuzzy Lyapunov Functions. IEEE Transactions on Fuzzy Systems, 2007, 15, 333-341.	6.5	303
85	Passive Dynamic Walking with Elastic Energy. Transactions of the Society of Instrument and Control Engineers, 2007, 43, 998-1000.	0.1	0
86	Fast Calculating Method for Eliminating the Impulsive Noise. Nippon Kikai Gakkai Ronbunshu, C Hen/Transactions of the Japan Society of Mechanical Engineers, Part C, 2004, 70, 62-68.	0.2	2
87	Electroencephalogram-based Control of a Mobile Robot. IEEJ Transactions on Electronics, Information and Systems, 2004, 124, 890-896.	0.1	3
88	Fuzzy modeling via sector nonlinearity concept. Integrated Computer-Aided Engineering, 2003, 10, 333-341.	2.5	67
89	A Flapping Robot with Membrane Wings. Journal of the Robotics Society of Japan, 2003, 21, 916-922.	0.0	0
90	Fuzzy Model Following Control. Transactions of the Society of Instrument and Control Engineers, 2000, 36, 204-210.	0.1	1

#	ARTICLE	IF	CITATIONS
91	Fuzzy Control of Nonlinear Time-Delay Systems. , 0, , 291-302.		2
92	Takagi-Sugeno Fuzzy Model and Parallel Distributed Compensation. , 0, , 5-48.		5
93	Optimal Fuzzy Control. , 0, , 109-120.		0
94	Fuzzy Observer Design. , 0, , 83-96.		6
95	T-S Fuzzy Model as Universal Approximator. , 0, , 277-289.		2
96	Nonlinear Model Following Control. , 0, , 217-228.		1
97	Fuzzy Modeling and Control of Chaotic Systems. , 0, , 153-193.		0
98	New Stability Conditions and Dynamic Feedback Designs. , 0, , 229-257.		1
99	Fuzzy Descriptor Systems and Control. , 0, , 195-215.		0
100	Multiobjective Control via Dynamic Parallel Distributed Compensation. , 0, , 259-275.		0
101	LMI Control Performance Conditions and Designs. , 0, , 49-82.		5
102	Robust Fuzzy Control. , 0, , 97-108.		0
103	Robust-Optimal Fuzzy Control. , 0, , 121-131.		1
104	Trajectory Control of a Vehicle with Multiple Trailers. , 0, , 133-152.		0