Kang Zhang

List of Publications by Year
in descending order

109 papers	5,054 citations	87888 38 h-index	91884 69 g-index
112 all docs	112 docs citations	112 times ranked	3312 citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive Fault-Tolerant Tracking Control of Near-Space Vehicle Using Takagi–Sugeno Fuzzy Models. IEEE Transactions on Fuzzy Systems, 2010, 18, 1000-1007.	9.8	342
2	Cooperative Adaptive Fuzzy Tracking Control for Networked Unknown Nonlinear Multiagent Systems With Time-Varying Actuator Faults. IEEE Transactions on Fuzzy Systems, 2014, 22, 494-504.	9.8	297
3	A Review of Fault Detection and Diagnosis for the Traction System in High-Speed Trains. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 450-465.	8.0	258
4	Data-Driven Fault Diagnosis for Traction Systems in High-Speed Trains: A Survey, Challenges, and Perspectives. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 1700-1716.	8.0	244
5	Neural-networked adaptive tracking control for switched nonlinear pure-feedback systems under arbitrary switching. Automatica, 2015, 61, 119-125.	5.0	173
6	A novel nonlinear resilient control for a quadrotor UAV via backstepping control and nonlinear disturbance observer. Nonlinear Dynamics, 2016, 85, 1281-1295.	5.2	171
7	A Descriptor System Approach for Estimation of Incipient Faults With Application to High-Speed Railway Traction Devices. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, 49, 2108-2118.	9.3	169
8	Fault diagnosis based on adaptive observer for a class of non-linear systems with unknown parameters. International Journal of Control, 2004, 77, 367-383.	1.9	167
9	Fuzzy Logic System-Based Adaptive Fault-Tolerant Control for Near-Space Vehicle Attitude Dynamics With Actuator Faults. IEEE Transactions on Fuzzy Systems, 2013, 21, 289-300.	9.8	159
10	An adaptive technique for robust diagnosis of faults with independent effects on system outputs. International Journal of Control, 2002, 75, 792-802.	1.9	152
11	Deep PCA Based Real-Time Incipient Fault Detection and Diagnosis Methodology for Electrical Drive in High-Speed Trains. IEEE Transactions on Vehicular Technology, 2018, 67, 4819-4830.	6.3	137
12	Data-driven Detection and Diagnosis of Incipient Faults in Electrical Drives of High-Speed Trains. IEEE Transactions on Industrial Electronics, 2019, 66, 4716-4725.	7.9	128
13	Adaptive Sliding Mode Fault-Tolerant Fuzzy Tracking Control With Application to Unmanned Marine Vehicles. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 6691-6700.	9.3	105
14	Adjustable Parameter-Based Distributed Fault Estimation Observer Design for Multiagent Systems With Directed Graphs. IEEE Transactions on Cybernetics, 2016, 47, 1-9.	9.5	103
15	Fault recoverability and fault tolerant control for a class of interconnected nonlinear systems. Automatica, 2015, 54, 49-55.	5.0	98
16	An improved incipient fault detection method based on Kullback-Leibler divergence. ISA Transactions, 2018, 79, 127-136.	5.7	84
17	Fixed-Time Fault-Tolerant Formation Control for Heterogeneous Multi-Agent Systems With Parameter Uncertainties and Disturbances. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 2121-2133.	5.4	80
18	Adaptive Fault-Tolerant Sliding-Mode Control for High-Speed Trains With Actuator Faults and Uncertainties. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 2449-2460.	8.0	77

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19	Sliding mode observer based incipient sensor fault detection with application to high-speed railway traction device. ISA Transactions, 2016, 63, 49-59.	5.7	76
20	Incipient Fault Detection for Traction Motors of High-Speed Railways Using an Interval Sliding Mode Observer. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 2703-2714.	8.0	65
21	Sensor Fault Detection for Rail Vehicle Suspension Systems With Disturbances and Stochastic Noises. IEEE Transactions on Vehicular Technology, 2017, 66, 4691-4705.	6.3	64
22	Probability-Relevant Incipient Fault Detection and Diagnosis Methodology With Applications to Electric Drive Systems. IEEE Transactions on Control Systems Technology, 2019, 27, 2766-2773.	5.2	64
23	Recent Advances in Recombinant Protein Production by <i>Bacillus subtilis</i>. Annual Review of Food Science and Technology, 2020, 11, 295-318.	9.9	63
24	Hierarchical-Structure-Based Fault Estimation and Fault-Tolerant Control for Multiagent Systems. IEEE Transactions on Control of Network Systems, 2019, 6, 586-597.	3.7	59
25	A Risk-Averse Remaining Useful Life Estimation for Predictive Maintenance. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 412-422.	13.1	59
26	Multiple incipient sensor faults diagnosis with application to high-speed railway traction devices. ISA Transactions, 2017, 67, 183-192.	5.7	54
27	A Data-Driven Aero-Engine Degradation Prognostic Strategy. IEEE Transactions on Cybernetics, 2021, 51, 1531-1541.	9.5	54
28	Stabilization of Switched Nonlinear Systems with Unstable Modes. Studies in Systems, Decision and Control, 2014, , .	1.0	50
29	Fault Tolerant Formations Control of UAVs Subject to Permanent and Intermittent Faults. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 73, 589-602.	3.4	50
30	A Newly Robust Fault Detection and Diagnosis Method for High-Speed Trains. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 2198-2208.	8.0	50
31	Adaptive Compensation of Traction System Actuator Failures for High-Speed Trains. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 2950-2963.	8.0	49
32	A Multi-mode Incipient Sensor Fault Detection and Diagnosis Method for Electrical Traction Systems. International Journal of Control, Automation and Systems, 2018, 16, 1783-1793.	2.7	49
33	Decentralized Fault Tolerant Control for a Class of Interconnected Nonlinear Systems. IEEE Transactions on Cybernetics, 2018, 48, 178-186.	9.5	48
34	Incipient Voltage Sensor Fault Isolation for Rectifier in Railway Electrical Traction Systems. IEEE Transactions on Industrial Electronics, 2017, 64, 6763-6774.	7.9	46
35	Composite Adaptive Disturbance Observer-Based Decentralized Fractional-Order Fault-Tolerant Control of Networked UAVs. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 799-813.	9.3	45
36	Data-driven and deep learning-based detection and diagnosis of incipient faults with application to electrical traction systems. Neurocomputing, 2020, 396, 429-437.	5.9	43

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37	Model-Free Cooperative Adaptive Sliding-Mode-Constrained-Control for Multiple Linear Induction Traction Systems. IEEE Transactions on Cybernetics, 2020, 50, 4076-4086.	9.5	41
38	Adaptive Sliding Mode Observerâ€Based Robust Fault Reconstruction for a Helicopter With Actuator Fault. Asian Journal of Control, 2016, 18, 1558-1565.	3.0	40
39	Decentralized Output Sliding-Mode Fault-Tolerant Control for Heterogeneous Multiagent Systems. IEEE Transactions on Cybernetics, 2020, 50, 4934-4945.	9.5	38
40	Interval Sliding Mode Observer Based Incipient Sensor Fault Detection With Application to a Traction Device in China Railway High-Speed. IEEE Transactions on Vehicular Technology, 2019, 68, 2585-2597.	6.3	36
41	Directed-Graph-Observer-Based Model-Free Cooperative Sliding Mode Control for Distributed Energy Storage Systems in DC Microgrid. IEEE Transactions on Industrial Informatics, 2020, 16, 1224-1235.	11.3	35
42	Data-Driven Fault Detection for Dynamic Systems With Performance Degradation: A Unified Transfer Learning Framework. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-12.	4.7	34
43	Data-Driven Incipient Sensor Fault Estimation with Application in Inverter of High-Speed Railway. Mathematical Problems in Engineering, 2017, 2017, 1-13.	1.1	33
44	Adaptive Actuator Compensation of Position Tracking for High-Speed Trains With Disturbances. IEEE Transactions on Vehicular Technology, 2018, 67, 5706-5717.	6.3	33
45	Edge Computing-Aided Framework of Fault Detection for Traction Control Systems in High-Speed Trains. IEEE Transactions on Vehicular Technology, 2020, 69, 1309-1318.	6.3	33
46	Incipient Fault Diagnosis for High-Speed Train Traction Systems via Stacked Generalization. IEEE Transactions on Cybernetics, 2022, 52, 7624-7633.	9.5	32
47	Model-free adaptive command-filtered-backstepping sliding mode control for discrete-time high-order nonlinear systems. Information Sciences, 2019, 485, 141-153.	6.9	30
48	Adaptive Actuator Failure Compensation for Possibly Nonminimum-Phase Systems Using Control Separation Based LQ Design. IEEE Transactions on Automatic Control, 2019, 64, 143-158.	5.7	30
49	Disturbance-Observer-Based Terminal Sliding Mode Control for Linear Traction System With Prescribed Performance. IEEE Transactions on Transportation Electrification, 2021, 7, 649-658.	7.8	30
50	Nonsingular Fast Terminal Sliding Mode Control for Permanent Magnet Linear Synchronous Motor via High-Order Super-Twisting Observer. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1651-1659.	5.8	30
51	Fault-Tolerant Control for Systems With Unmatched Actuator Faults and Disturbances. IEEE Transactions on Automatic Control, 2021, 66, 1725-1732.	5.7	28
52	Fault-Tolerant Time-Varying Elliptical Formation Control of Multiple Fixed-Wing UAVs for Cooperative Forest Fire Monitoring. Journal of Intelligent and Robotic Systems: Theory and Applications, 2021, 101, 1.	3.4	28
53	Trajectory tracking of a quadrotor with unknown parameters and its fault-tolerant control via sliding mode fault observer. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2015, 229, 279-292.	1.0	27
54	Incipient fault diagnosis for Tâ€"S fuzzy systems with application to highâ€speed railway traction devices. IET Control Theory and Applications, 2016, 10, 2286-2297.	2.1	26

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55	Real-time incipient fault detection for electrical traction systems of CRH2. Neurocomputing, 2018, 306, 119-129.	5.9	26
56	Dynamic Predictive Maintenance Scheduling Using Deep Learning Ensemble for System Health Prognostics. IEEE Sensors Journal, 2021, 21, 26878-26891.	4.7	24
57	Two-Level Game-Based Distributed Optimal Fault-Tolerant Control for Nonlinear Interconnected Systems. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 4892-4906.	11.3	23
58	A data-driven predictive maintenance strategy based on accurate failure prognostics. Eksploatacja I Niezawodnosc, 2021, 23, 387-394.	2.0	23
59	Multi-mode kernel principal component analysisâ€"based incipient fault detection for pulse width modulated inverter of China Railway High-speed 5. Advances in Mechanical Engineering, 2017, 9, 168781401772738.	1.6	22
60	Robust Asymptotic Fault Estimation of Discrete-Time Interconnected Systems With Sensor Faults. IEEE Transactions on Cybernetics, 2022, 52, 1691-1700.	9.5	22
61	Adaptive Fault-Tolerant H-Infinity Output Feedback Control for Lead-Wing Close Formation Flight. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, , 1-11.	9.3	21
62	Fault Tolerant Control of Switched Systems: A Generalized Separation Principle. IEEE Transactions on Control Systems Technology, 2019, 27, 553-565.	5.2	21
63	Fault Estimation and Accommodation of Fractional-Order Nonlinear, Switched, and Interconnected Systems. IEEE Transactions on Cybernetics, 2022, 52, 1443-1453.	9.5	21
64	Backstepping-Based Decentralized Fault-Tolerant Control of Hypersonic Vehicles in PDE-ODE Form. IEEE Transactions on Automatic Control, 2022, 67, 1210-1225.	5.7	21
65	Multiple-Model-Based Diagnosis of Multiple Faults With High-Speed Train Applications Using Second-Level Adaptation. IEEE Transactions on Industrial Electronics, 2021, 68, 6257-6266.	7.9	19
66	Distributed Optimal Fault Estimation and Fault-Tolerant Control for Interconnected Systems: A Stackelberg Differential Graphical Game Approach. IEEE Transactions on Automatic Control, 2022, 67, 926-933.	5.7	19
67	Data-driven predictive maintenance strategy considering the uncertainty in remaining useful life prediction. Neurocomputing, 2022, 494, 79-88.	5.9	19
68	Incipient sensor fault estimation and accommodation for inverter devices in electric railway traction systems. International Journal of Adaptive Control and Signal Processing, 2017, 31, 785-804.	4.1	18
69	A Novel Multi-Agent Model-Free Control for State-of-Charge Balancing Between Distributed Battery Energy Storage Systems. IEEE Transactions on Emerging Topics in Computational Intelligence, 2021, 5, 679-688.	4.9	16
70	A Cascade Broad Neural Network for Concrete Structural Crack Damage Automated Classification. IEEE Transactions on Industrial Informatics, 2021, 17, 2737-2742.	11.3	16
71	Distributed-observer-based Fault Tolerant Control Design for Nonlinear Multi-agent Systems. International Journal of Control, Automation and Systems, 2019, 17, 3149-3157.	2.7	15
72	Interval sliding mode observer-based fault accommodation for non-minimum phase LPV systems with online control allocation. International Journal of Control, 2020, 93, 2675-2689.	1.9	14

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73	Data-driven Detection and Diagnosis of Faults in Traction Systems of High-speed Trains. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , .	0.5	13
74	Identification of Sensor Replay Attacks and Physical Faults for Cyber-Physical Systems. , 2022, 6, 1178-1183.		13
75	Direct self-repairing control for a helicopter via quantum multi-model and disturbance observer. International Journal of Systems Science, 2016, 47, 533-543.	5.5	11
76	Fixed-Time Fault-Tolerant Formation Control for a Cooperative Heterogeneous Multiagent System With Prescribed Performance. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2023, 53, 462-474.	9.3	11
77	Fault-Tolerant Control of Multilayer Interconnected Nonlinear Systems: An Inclusion Principle Approach. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 2403-2414.	9.3	10
78	Detecting stealthy integrity attacks in a class of nonlinear cyber–physical systems: A backward-in-time approach. Automatica, 2022, 141, 110262.	5.0	10
79	Distributed Adaptive Fault-Tolerant Time-Varying Formation Control of Unmanned Airships With Limited Communication Ranges Against Input Saturation for Smart City Observation. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 1891-1904.	11.3	9
80	Adaptive robust fault-tolerant control for linear MIMO systems with unmatched uncertainties. International Journal of Control, 2017, 90, 2253-2269.	1.9	8
81	Data-Driven Optimal Test Selection Design for Fault Detection and Isolation Based on CCVKL Method and PSO. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-10.	4.7	8
82	Adaptive Compensation of Persistent Actuator Failures Using Control-Separation-Based LQ Design. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 5030-5045.	9.3	7
83	Directed-Graph-Learning-Based Diagnosis of Multiple Faults for High Speed Train With Switched Dynamics. IEEE Transactions on Cybernetics, 2023, 53, 1712-1724.	9.5	7
84	Distributed Adaptive Fault-Tolerant Formation Control for Heterogeneous Multiagent Systems With Communication Link Faults. IEEE Transactions on Aerospace and Electronic Systems, 2022, , 1-11.	4.7	7
85	Data-based incipient actuator fault detection and diagnosis for three-phase PWM voltage source inverter. , 2016, , .		6
86	Physical intrusion monitoring via local-global network and deep isolation forest based on heterogeneous signals. Neurocomputing, 2021, 441, 25-35.	5.9	6
87	Small-Time Local Controllability of Switched Nonlinear Systems. IEEE Transactions on Automatic Control, 2021, 66, 5422-5428.	5.7	6
88	Adaptive Output Feedback Control for Switched Stochastic Nonlinear Systems with Time-varying Parameters and Unknown Output Functions. International Journal of Control, Automation and Systems, 2019, 17, 2807-2818.	2.7	5
89	Sensors Information Fusion System with Fault Detection Based on Multi-Manifold Regularization Neighborhood Preserving Embedding. Sensors, 2019, 19, 1440.	3.8	5
90	Shaping of the Air Gap in a V-Typed IPMSM for Compressed-Air System Applications. IEEE Transactions on Magnetics, 2021, 57, 1-5.	2.1	5

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91	Robust Model Predictive Control for Linear Systems via Self-Triggered Pseudo Terminal Ingredients. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1312-1322.	5.4	5
92	Joint Distribution-Based Test Selection for Fault Detection and Isolation Under Multiple Faults Condition. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-13.	4.7	4
93	A novel sliding mode fault–tolerant control strategy for variable–mass quadrotor. International Journal of Robust and Nonlinear Control, 2023, 33, 10199-10226.	3.7	4
94	Multitask Maximum Likelihood Identification for ARX Model With Multisensor. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-10.	4.7	4
95	EEMD based incipient fault diagnosis for sensors faults in high-speed train traction systems. , 2017, , .		3
96	Adaptive compensation of persistent actuator failures of nonlinear systems. International Journal of Adaptive Control and Signal Processing, 2021, 35, 373-400.	4.1	3
97	Fault-Tolerant Optimal Spacecraft Attitude Maneuver: An Incremental Model Approach. Journal of Guidance, Control, and Dynamics, 2022, 45, 1676-1691.	2.8	3
98	Composite Fault Diagnosis of Rotor Broken Bar and Air Gap Eccentricity Based on Park Vector Module and Decision Tree Algorithm. , 2019, , .		2
99	Composite fault detection and diagnosis for IGBT and current sensor in CRH2 through modified EEMD and KPCA methods. , 2019, , .		1
100	Adaptive LQ Control Using Reduced Hamiltonian for Continuous-Time Systems with Unmatched Input Disturbances. SIAM Journal on Control and Optimization, 2021, 59, 3625-3660.	2.1	1
101	Accessibility, Observability, and Fault-Tolerant Control Structure Selection of Network Nonlinear Systems. IEEE Transactions on Control of Network Systems, 2022, 9, 75-87.	3.7	1
102	Incipient sensor fault detection for inverter devices in electric railway traction systems. , 2017, , .		0
103	State and Parameter Estimation for a Class of Nonlinearly Parameterized Systems Using Sliding Mode Techniques. , 2018, , .		0
104	Probability-Relevant PCA-based FDD Methods. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 81-98.	0.5	0
105	PCA and Kullback-Leibler Divergence-Based FDD Methods. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 119-135.	0.5	0
106	Traction Systems and Experimental Platforms. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 33-41.	0.5	0
107	Basics of Data-Driven FDD Methods. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 43-61.	0.5	0
108	Multi-mode PCA-based FDD Methods. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 65-80.	0.5	0

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109	Second-Order Consensus for Heterogeneous Nonlinear Multi-agent Systems with Actuator Faults. , 2020, , .		0