

# Kaixiang Peng

## List of Publications by Year in descending order

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116  
papers

2,745  
citations

201575

27  
h-index

197736

49  
g-index

116  
all docs

116  
docs citations

116  
times ranked

1710  
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive Neural Control for Robotic Manipulators With Output Constraints and Uncertainties. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 5554-5564.	7.2	243
2	A Novel Scheme for Key Performance Indicator Prediction and Diagnosis With Application to an Industrial Hot Strip Mill. IEEE Transactions on Industrial Informatics, 2013, 9, 2239-2247.	7.2	223
3	A comparison and evaluation of key performance indicator-based multivariate statistics process monitoring approaches. Journal of Process Control, 2015, 33, 112-126.	1.7	164
4	Performance-based fault detection and fault-tolerant control for automatic control systems. Automatica, 2019, 99, 308-316.	3.0	114
5	A deep belief network based health indicator construction and remaining useful life prediction using improved particle filter. Neurocomputing, 2019, 361, 19-28.	3.5	94
6	Contribution rate plot for nonlinear quality-related fault diagnosis with application to the hot strip mill process. Control Engineering Practice, 2013, 21, 360-369.	3.2	90
7	Robust recursive filtering for uncertain stochastic systems with amplify-and-forward relays. International Journal of Systems Science, 2020, 51, 1188-1199.	3.7	82
8	Quality-Related Process Monitoring Based on Total Kernel PLS Model and Its Industrial Application. Mathematical Problems in Engineering, 2013, 2013, 1-14.	0.6	81
9	Adaptive total PLS based quality-relevant process monitoring with application to the Tennessee Eastman process. Neurocomputing, 2015, 154, 77-85.	3.5	81
10	Quality-related fault detection using linear and nonlinear principal component regression. Journal of the Franklin Institute, 2016, 353, 2159-2177.	1.9	79
11	Remaining Useful Life Prediction of Lithium-Ion Batteries Based on Conditional Variational Autoencoders-Particle Filter. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 8831-8843.	2.4	79
12	Quality-related prediction and monitoring of multi-mode processes using multiple PLS with application to an industrial hot strip mill. Neurocomputing, 2015, 168, 1094-1103.	3.5	62
13	Neural Networks-Based Fault Tolerant Control of a Robot via Fast Terminal Sliding Mode. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 4091-4101.	5.9	58
14	Quality-relevant fault detection and diagnosis for hot strip mill process with multi-specification and multi-batch measurements. Journal of the Franklin Institute, 2015, 352, 987-1006.	1.9	53
15	A Common and Individual Feature Extraction-Based Multimode Process Monitoring Method With Application to the Finishing Mill Process. IEEE Transactions on Industrial Informatics, 2018, 14, 4841-4850.	7.2	53
16	A novel data-based quality-related fault diagnosis scheme for fault detection and root cause diagnosis with application to hot strip mill process. Control Engineering Practice, 2017, 67, 43-51.	3.2	51
17	Hierarchical Monitoring and Root-Cause Diagnosis Framework for Key Performance Indicator-Related Multiple Faults in Process Industries. IEEE Transactions on Industrial Informatics, 2019, 15, 2091-2100.	7.2	50
18	Root cause diagnosis of quality-related faults in industrial multimode processes using robust Gaussian mixture model and transfer entropy. Neurocomputing, 2018, 285, 60-73.	3.5	42

#	ARTICLE	IF	CITATIONS
19	A KPI-based process monitoring and fault detection framework for large-scale processes. ISA Transactions, 2017, 68, 276-286.	3.1	41
20	Quality-relevant fault monitoring based on efficient projection to latent structures with application to hot strip mill process. IET Control Theory and Applications, 2015, 9, 1135-1145.	1.2	35
21	A Correlation-Based Distributed Fault Detection Method and Its Application to a Hot Tandem Rolling Mill Process. IEEE Transactions on Industrial Electronics, 2020, 67, 2380-2390.	5.2	35
22	Double-Layer Distributed Monitoring Based on Sequential Correlation Information for Large-Scale Industrial Processes in Dynamic and Static States. IEEE Transactions on Industrial Informatics, 2021, 17, 6419-6428.	7.2	35
23	Remaining Useful Life Prediction for a Roller in a Hot Strip Mill Based on Deep Recurrent Neural Networks. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 1345-1354.	8.5	34
24	A novel dynamic non-Gaussian approach for quality-related fault diagnosis with application to the hot strip mill process. Journal of the Franklin Institute, 2017, 354, 702-721.	1.9	33
25	Strip shape modeling and its setup strategy in hot strip mill process. International Journal of Advanced Manufacturing Technology, 2014, 72, 589-605.	1.5	32
26	A Fault Detection Approach for Nonlinear Systems Based on Data-Driven Realizations of Fuzzy Kernel Representations. IEEE Transactions on Fuzzy Systems, 2018, 26, 1800-1812.	6.5	29
27	A Novel Hierarchical Detection and Isolation Framework for Quality-Related Multiple Faults in Large-Scale Processes. IEEE Transactions on Industrial Electronics, 2020, 67, 1316-1327.	5.2	29
28	Modelling the strip thickness in hot steel rolling mills using least-squares support vector machines. Canadian Journal of Chemical Engineering, 2018, 96, 171-178.	0.9	27
29	An incipient fault detection and self-learning identification method based on robust SVDD and RBM-PNN. Journal of Process Control, 2020, 85, 173-183.	1.7	27
30	Nonlinear quality-related fault detection using combined deep variational information bottleneck and variational autoencoder. ISA Transactions, 2021, 114, 444-454.	3.1	26
31	Quality-related process monitoring for dynamic non-Gaussian batch process with multi-phase using a new data-driven method. Neurocomputing, 2016, 214, 317-328.	3.5	24
32	Implementing multivariate statistics-based process monitoring: A comparison of basic data modeling approaches. Neurocomputing, 2018, 290, 172-184.	3.5	24
33	Performance-Based Fault-Tolerant Control Approaches For Industrial Processes With Multiplicative Faults. IEEE Transactions on Industrial Informatics, 2020, 16, 4759-4768.	7.2	23
34	New kernel independent and principal components analysis-based process monitoring approach with application to hot strip mill process. IET Control Theory and Applications, 2014, 8, 1723-1731.	1.2	22
35	A Deep Belief Network-based Fault Detection Method for Nonlinear Processes. IFAC-PapersOnLine, 2018, 51, 9-14.	0.5	22
36	Data-driven design of fault-tolerant control systems based on recursive stable image representation. Automatica, 2020, 122, 109246.	3.0	22

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37	Sensor and Actuator Fault Diagnosis for Robot Joint Based on Deep CNN. <i>Entropy</i> , 2021, 23, 751.	1.1	22
38	A new key performance indicator oriented industrial process monitoring and operating performance assessment method based on improved Hessian locally linear embedding. <i>International Journal of Systems Science</i> , 2022, 53, 3538-3555.	3.7	22
39	Online Monitoring System Design for Roll Eccentricity in Rolling Mills. <i>IEEE Transactions on Industrial Electronics</i> , 2016, 63, 2559-2568.	5.2	21
40	Boundary Output Feedback Control for a Flexible Two-Link Manipulator System With High-Gain Observers. <i>IEEE Transactions on Control Systems Technology</i> , 2021, 29, 835-840.	3.2	21
41	Assessment of T2- and Q-statistics for detecting additive and multiplicative faults in multivariate statistical process monitoring. <i>Journal of the Franklin Institute</i> , 2017, 354, 668-688.	1.9	20
42	Joint Data-Driven Fault Diagnosis Integrating Causality Graph With Statistical Process Monitoring for Complex Industrial Processes. <i>IEEE Access</i> , 2017, 5, 25217-25225.	2.6	17
43	A novel key performance indicator oriented hierarchical monitoring and propagation path identification framework for complex industrial processes. <i>ISA Transactions</i> , 2020, 96, 1-13.	3.1	17
44	A new multimode process monitoring method based on a hierarchical Dirichlet process-Hidden semi-Markov model with application to the hot steel strip mill process. <i>Control Engineering Practice</i> , 2021, 110, 104767.	3.2	17
45	Event-triggered fault detection framework based on subspace identification method for the networked control systems. <i>Neurocomputing</i> , 2017, 239, 257-267.	3.5	16
46	Using the expected detection delay to assess the performance of different multivariate statistical process monitoring methods for multiplicative and drift faults. <i>ISA Transactions</i> , 2017, 67, 56-66.	3.1	15
47	A new data-driven process monitoring scheme for key performance indicators with application to hot strip mill process. <i>Journal of the Franklin Institute</i> , 2014, 351, 4555-4569.	1.9	14
48	A novel industrial process monitoring method based on improved local tangent space alignment algorithm. <i>Neurocomputing</i> , 2020, 405, 114-125.	3.5	14
49	A Novel Fault Detection Method Based on the Extraction of Slow Features for Dynamic Nonstationary Processes. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-11.	2.4	14
50	A practical propagation path identification scheme for quality-related faults based on nonlinear dynamic latent variable model and partitioned Bayesian network. <i>Journal of the Franklin Institute</i> , 2018, 355, 7570-7594.	1.9	13
51	A Novel Feature-Extraction-Based Process Monitoring Method for Multimode Processes With Common Features and Its Applications to a Rolling Process. <i>IEEE Transactions on Industrial Informatics</i> , 2021, 17, 6466-6475.	7.2	13
52	Online Contribution Rate Based Fault Diagnosis for Nonlinear Industrial Processes. <i>Zidonghua Xuebao/Acta Automatica Sinica</i> , 2014, 40, 423-430.	1.5	12
53	Data-Driven Quality Monitoring Techniques for Distributed Parameter Systems With Application to Hot-Rolled Strip Laminar Cooling Process. <i>IEEE Access</i> , 2018, 6, 16646-16654.	2.6	12
54	A novel plant-wide process monitoring framework based on distributed Gap-SVDD with adaptive radius. <i>Neurocomputing</i> , 2019, 350, 1-12.	3.5	11

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55	Fuzzy Fault Detection Filter Design for Nonlinear Distributed Parameter Systems. IEEE Access, 2019, 7, 11105-11113.	2.6	11
56	Monitoring of Nonlinear Processes With Multiple Operating Modes Through a Novel Gaussian Mixture Variational Autoencoder Model. IEEE Access, 2020, 8, 114487-114500.	2.6	11
57	A lifecycle operating performance assessment framework for hot strip mill process based on robust kernel canonical variable analysis. Control Engineering Practice, 2021, 107, 104698.	3.2	11
58	Quality Monitoring and Root Cause Diagnosis for Industrial Processes Based on Lasso-SAE-CCA. IEEE Access, 2019, 7, 90230-90242.	2.6	10
59	A nonlinear full condition process monitoring method for hot rolling process with dynamic characteristic. ISA Transactions, 2021, 112, 363-372.	3.1	10
60	A data-driven fault detection approach with performance optimization. Canadian Journal of Chemical Engineering, 2018, 96, 507-514.	0.9	9
61	An extensible quality-related fault isolation framework based on dual broad partial least squares with application to the hot rolling process. Expert Systems With Applications, 2021, 167, 114166.	4.4	9
62	A process monitoring and fault isolation framework based on variational autoencoders and branch and bound method. Journal of the Franklin Institute, 2022, 359, 1667-1691.	1.9	9
63	Intermittent Fault Detection for Uncertain Networked Systems. Mathematical Problems in Engineering, 2013, 2013, 1-10.	0.6	8
64	Fault detection for piecewise affine systems with application to ship propulsion systems. ISA Transactions, 2018, 78, 3-9.	3.1	8
65	A New Hierarchical Framework for Detection and Isolation of Multiple Faults in Complex Industrial Processes. IEEE Access, 2019, 7, 12006-12015.	2.6	8
66	Fault detection and quantitative assessment method for process industry based on feature fusion. Measurement: Journal of the International Measurement Confederation, 2022, 197, 111267.	2.5	8
67	Robust Backstepping Control for Cold Rolling Main Drive System with Nonlinear Uncertainties. Abstract and Applied Analysis, 2013, 2013, 1-7.	0.3	7
68	Local multi-model integrated soft sensor based on just-in-time learning for mechanical properties of hot strip mill process. Journal of Iron and Steel Research International, 2021, 28, 830-841.	1.4	7
69	Vector control of induction motor based on online identification and ant colony optimization. , 2010, , .		6
70	A Novel Robust Semisupervised Classification Framework for Quality-Related Coupling Faults in Manufacturing Industries. IEEE Transactions on Industrial Informatics, 2020, 16, 2946-2955.	7.2	6
71	Just-in-Time Learning-Based Soft Sensor for Mechanical Properties of Strip Steel via Multi-Block Weighted Semisupervised Models. IEEE Access, 2020, 8, 123869-123881.	2.6	6
72	A novel common and specific features extraction-based process monitoring approach with application to a hot rolling mill process. Control Engineering Practice, 2020, 104, 104628.	3.2	6

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73	Fault detection for chemical processes based on non-stationarity sensitive cointegration analysis. ISA Transactions, 2022, 129, 321-333.	3.1	6
74	A Comparison of Different Statistics for Detecting Multiplicative Faults in Multivariate Statistics-Based Fault Detection Approaches. IEEE Access, 2018, 6, 43808-43823.	2.6	5
75	Remaining Useful Life Prediction for Aircraft Engines Based on Grey Model. , 2019, , .		5
76	A Residual-Generator-Based Plug-and-Play Control Scheme Toward Enhancing Power Quality in AC Microgrids. IEEE Transactions on Industrial Electronics, 2022, 69, 8146-8156.	5.2	5
77	Adaptive Weighting Strategy based Multi-sensor Data Fusion Method for Condition Monitoring of Reciprocating Pump. , 2021, , .		5
78	A Practical Root Cause Diagnosis Framework for Quality-Related Faults in Manufacturing Processes With Irregular Sampling Measurements. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-9.	2.4	5
79	Unit-level modelling for KPI of batch hot strip mill process using dynamic partial least squares. IFAC-PapersOnLine, 2015, 48, 1005-1010.	0.5	4
80	Wide Area Coordinated Control of Multi-FACTS Devices to Damp Power System Oscillations. Energies, 2017, 10, 2130.	1.6	4
81	Recursive Subspace-based Predictive Control and Its Application to Fault-tolerant Control. IFAC-PapersOnLine, 2018, 51, 696-702.	0.5	4
82	Time-Varying Fault Diagnosis for Asynchronous Multisensor Systems Based on Augmented IMM and Strong Tracking Filtering. Journal of Control Science and Engineering, 2018, 2018, 1-8.	0.8	4
83	Exponentially convergent distributed Nash equilibrium seeking for constrained aggregative games. Autonomous Intelligent Systems, 2022, 2, 1.	2.0	4
84	A Novel Multilabel Classification Framework for Coupling Faults in Hot Rolling Processes. IEEE Transactions on Control Systems Technology, 2022, 30, 877-884.	3.2	3
85	Dynamic industrial process monitoring based on concurrent fast and slow time-varying feature analytics. Canadian Journal of Chemical Engineering, 2022, 100, .	0.9	3
86	A novel key performance indicator oriented process monitoring method based on multiple information extraction and support vector data description. Canadian Journal of Chemical Engineering, 2022, 100, 1013-1025.	0.9	3
87	Modeling and Monitoring for Laminar Cooling Process of Hot Steel Strip Rolling with Time-Space Nature. Processes, 2022, 10, 589.	1.3	3
88	Remaining Useful Life Estimation Based on Asynchronous Multisource Monitoring Information Fusion. Journal of Control Science and Engineering, 2017, 2017, 1-8.	0.8	2
89	An Efficient Quality-Related Fault Diagnosis Method for Real-Time Multimode Industrial Process. Journal of Control Science and Engineering, 2017, 2017, 1-13.	0.8	2
90	Routh table test for stability of commensurate fractional degree polynomials and their commensurate fractional order systems. Control Theory and Technology, 2019, 17, 297-306.	1.0	2

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91	A novel semisupervised classification framework for coupling faults in hot rolling mill process. ISA Transactions, 2021, 111, 376-386.	3.1	2
92	A recursive model of residual life prediction for human beings with health information from activities of daily living and memory. Systems Science and Control Engineering, 2021, 9, 529-541.	1.8	2
93	Fault classification based on variable-weighted dynamic sparse stacked autoencoder for industrial processes. Canadian Journal of Chemical Engineering, 2023, 101, 420-430.	0.9	2
94	Data augmentation for fault prediction of aircraft engine with generative adversarial networks. , 2021, , .		2
95	An output probabilistic constrained control algorithm based on adaptive dynamic matrix control. , 2018, , .		1
96	Integration of fault diagnosis and control based on residual decoupling. Systems Science and Control Engineering, 2019, 7, 210-221.	1.8	1
97	PA-OMT: A performance assessment and online monitoring toolbox for process monitoring and fault detection. , 2019, , .		1
98	A Health Indicator Construction Method based on Deep Belief Network for Remaining Useful Life Prediction. , 2019, , .		1
99	Distributed Optimization Over Unbalanced Graph: Integration of Surplus-Based Method and Push-DIGing Method. , 2019, , .		1
100	A Novel Propagation Path Identification Framework for Faults in Industrial Processes. IFAC-PapersOnLine, 2020, 53, 11878-11882.	0.5	1
101	Degradation Trend Monitoring and Remaining Useful Life Prediction of Aircraft Engines. , 2020, , .		1
102	Quality Anomaly Monitoring and Comprehensive Diagnosis Framework for Plant-wide Process Industries with Spatio-Temporal Coordination. , 2021, , .		1
103	Diagnostic Observer-based Fault Detection Approach for T-S Fuzzy Systems. , 2019, , .		0
104	A Kernel Canonical Correlation Analysis-Based Fault Detection Method with Application to a Hot Tandem Rolling Mill Process. , 2019, , .		0
105	A Novel Scheme for Remaining Useful Life Prediction and Safety Assessment Based on Hybrid Method. , 2019, , .		0
106	A Novel Lifecycle Operation Performance Evaluation Framework for Plant-Wide Industrial Processes. , 2021, , .		0
107	An Output Probabilistic Constrained Optimal Control Algorithm and Its Application to AGC System. , 2019, , .		0
108	Multimode Process Monitoring and Fault Diagnosis Based on Tensor Decomposition. IFAC-PapersOnLine, 2020, 53, 120-125.	0.5	0

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109	Nonlinear Fault Detection Based on Fault-related Multiphase Principle Polynomial Analysis for Al Stack Etch Process. IFAC-PapersOnLine, 2020, 53, 11860-11865.	0.5	0
110	A Data-Driven Operating Performance Assessment Method based on Weighted Multi-Sphere Support Vector Data Description. , 2020, , .		0
111	Distributed DBN-HSBoost Model for Hot Rolling Process Operating Performance Assessment with Partial Communication. , 2021, , .		0
112	A Quality-related Fault Detection Method for Nonlinear Industrial Processes Based on Mixed Kernel Partial Least Squares. , 2021, , .		0
113	Robust adaptive fault-tolerant control of nonlinear teleoperation systems with time-varying delays. , 2021, , .		0
114	Remaining Useful Life Prediction and Health Status Estimation Based on Joint-Loss Convolution Neural Networks. , 2021, , .		0
115	Fault Identification and Remaining Useful Life Prediction for Complex Equipment under Multiple Fault Modes. , 2021, , .		0
116	Review on Fault Diagnosis Techniques for Distributed Parameter Systems. , 2021, , .		0