Xihui Liang

List of Publications by Year in descending order

78 papers	3,584 citations	201674 27 h-index	138484 58 g-index
78 all docs	78 docs citations	78 times ranked	2056 citing authors

#	Article	IF	Citations
1	Dynamic modeling of gearbox faults: A review. Mechanical Systems and Signal Processing, 2018, 98, 852-876.	8.0	346
2	Analytically evaluating the influence of crack on the mesh stiffness of a planetary gear set. Mechanism and Machine Theory, 2014, 76, 20-38.	4.5	260
3	The Entropy Algorithm and Its Variants in the Fault Diagnosis of Rotating Machinery: A Review. IEEE Access, 2018, 6, 66723-66741.	4.2	207
4	Application of Bandwidth EMD and Adaptive Multiscale Morphology Analysis for Incipient Fault Diagnosis of Rolling Bearings. IEEE Transactions on Industrial Electronics, 2017, 64, 6506-6517.	7.9	190
5	Vibration signal modeling of a planetary gear set for tooth crack detection. Engineering Failure Analysis, 2015, 48, 185-200.	4.0	183
6	A fault diagnosis scheme for planetary gearboxes using adaptive multi-scale morphology filter and modified hierarchical permutation entropy. Mechanical Systems and Signal Processing, 2018, 105, 319-337.	8.0	155
7	Early fault diagnosis of rolling bearings based on hierarchical symbol dynamic entropy and binary tree support vector machine. Journal of Sound and Vibration, 2018, 428, 72-86.	3.9	139
8	A new deep auto-encoder method with fusing discriminant information for bearing fault diagnosis. Mechanical Systems and Signal Processing, 2021, 150, 107233.	8.0	137
9	The influence of tooth pitting on the mesh stiffness of a pair of external spur gears. Mechanism and Machine Theory, 2016, 106, 1-15.	4.5	134
10	A novel deep output kernel learning method for bearing fault structural diagnosis. Mechanical Systems and Signal Processing, 2019, 117, 293-318.	8.0	106
11	Evaluating the time-varying mesh stiffness of a planetary gear set using the potential energy method. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2014, 228, 535-547.	2.1	105
12	Early fault feature extraction of rolling bearing based on ICD and tunable Q-factor wavelet transform. Mechanical Systems and Signal Processing, 2017, 86, 204-223.	8.0	103
13	A fault diagnosis method for planetary gearboxes under non-stationary working conditions using improved Vold-Kalman filter and multi-scale sample entropy. Journal of Sound and Vibration, 2019, 439, 271-286.	3.9	93
14	A New Online Detection Approach for Rolling Bearing Incipient Fault via Self-Adaptive Deep Feature Matching. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 443-456.	4.7	88
15	A windowing and mapping strategy for gear tooth fault detection of a planetary gearbox. Mechanical Systems and Signal Processing, 2016, 80, 445-459.	8.0	81
16	Diagonal slice spectrum assisted optimal scale morphological filter for rolling element bearing fault diagnosis. Mechanical Systems and Signal Processing, 2017, 85, 146-161.	8.0	81
17	Vibration signal modeling of a planetary gear set with transmission path effect analysis. Measurement: Journal of the International Measurement Confederation, 2016, 85, 20-31.	5.0	80
18	Three new models for evaluation of standard involute spur gear mesh stiffness. Mechanical Systems and Signal Processing, 2018, 101, 424-434.	8.0	73

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19	Online detection for bearing incipient fault based on deep transfer learning. Measurement: Journal of the International Measurement Confederation, 2020, 152, 107278.	5.0	73
20	Train axle bearing fault detection using a feature selection scheme based multi-scale morphological filter. Mechanical Systems and Signal Processing, 2018, 101, 435-448.	8.0	67
21	Machine learning-based methods in structural reliability analysis: A review. Reliability Engineering and System Safety, 2022, 219, 108223.	8.9	67
22	Health condition identification of planetary gearboxes based on variational mode decomposition and generalized composite multi-scale symbolic dynamic entropy. ISA Transactions, 2018, 81, 329-341.	5.7	60
23	Online detection of bearing incipient fault with semi-supervised architecture and deep feature representation. Journal of Manufacturing Systems, 2020, 55, 179-198.	13.9	57
24	Early Fault Diagnosis of Rotating Machinery by Combining Differential Rational Spline-Based LMD and Kâ€"L Divergence. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 3077-3090.	4.7	46
25	A new strategy of using a time-varying structure element for mathematical morphological filtering. Measurement: Journal of the International Measurement Confederation, 2017, 106, 53-65.	5.0	46
26	Sparse time series modeling of the baseline vibration from a gearbox under time-varying speed condition. Mechanical Systems and Signal Processing, 2019, 134, 106342.	8.0	37
27	An improved singular value decomposition-based method for gear tooth crack detection and severity assessment. Journal of Sound and Vibration, 2020, 468, 115068.	3.9	31
28	Propagation path and failure behavior analysis of cracked gears under different initial angles. Mechanical Systems and Signal Processing, 2018, 110, 90-109.	8.0	30
29	An analytical method for dynamic analysis of a ball bearing with offset and bias local defects in the outer race. Journal of Sound and Vibration, 2019, 461, 114919.	3.9	28
30	A New Structured Domain Adversarial Neural Network for Transfer Fault Diagnosis of Rolling Bearings Under Different Working Conditions. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-13.	4.7	28
31	Effects of friction and stochastic load on transient characteristics of a spur gear pair. Nonlinear Dynamics, 2018, 93, 599-609.	5.2	27
32	An Integrated Prognostics Method for Failure Time Prediction of Gears Subject to the Surface Wear Failure Mode. IEEE Transactions on Reliability, 2018, 67, 316-327.	4.6	25
33	Construction of Health Indicators for Rotating Machinery Using Deep Transfer Learning With Multiscale Feature Representation. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-13.	4.7	25
34	A method based on refined composite multi-scale symbolic dynamic entropy and ISVM-BT for rotating machinery fault diagnosis. Neurocomputing, 2018, 315, 246-260.	5.9	24
35	Dynamic and quasi-static modeling of planetary gear set considering carrier misalignment error and varying line of action along tooth width. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2015, 229, 1348-1360.	2.1	23
36	Model-based analysis and fault diagnosis of a compound planetary gear set with damaged sun gear. Journal of Mechanical Science and Technology, 2018, 32, 3081-3096.	1.5	23

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37	A new deep domain adaptation method with joint adversarial training for online detection of bearing early fault. ISA Transactions, 2022, 122, 444-458.	5.7	23
38	A dependence-based feature vector and its application on planetary gearbox fault classification. Journal of Sound and Vibration, 2018, 431, 192-211.	3.9	22
39	Remaining Useful Life Early Prediction of Batteries Based on the Differential Voltage and Differential Capacity Curves. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-9.	4.7	21
40	Wheelset bearing fault detection using morphological signal and image analysis. Structural Control and Health Monitoring, 2020, 27, e2619.	4.0	19
41	Nonlinear stochastic dynamics of a rub-impact rotor system with probabilistic uncertainties. Nonlinear Dynamics, 2020, 102, 2229-2246.	5.2	18
42	An Interpretable Deep Transfer Learning-Based Remaining Useful Life Prediction Approach for Bearings With Selective Degradation Knowledge Fusion. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-16.	4.7	17
43	Coordinated control for path-following of an autonomous four in-wheel motor drive electric vehicle. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 6335-6346.	2.1	16
44	Incipient fault detection for the planetary gearbox in rotorcraft based on a statistical metric of the analog tachometer signal. Measurement: Journal of the International Measurement Confederation, 2020, 151, 107069.	5.0	14
45	A hybrid model for wear prediction of a single revolute joint considering a time-varying lubrication condition. Wear, 2020, 442-443, 203124.	3.1	14
46	Development of a morphological convolution operator for bearing fault detection. Journal of Sound and Vibration, 2018, 421, 220-233.	3.9	13
47	Dynamic simulation of a cylindrical roller bearing with a local defect by combining finite element and lumped parameter models. Measurement Science and Technology, 2021, 32, 125111.	2.6	13
48	Maintenance Process Simulation Based Maintainability Evaluation by Using Stochastic Colored Petri Net. Applied Sciences (Switzerland), 2019, 9, 3262.	2.5	12
49	Understanding vibration properties of a planetary gear set for fault detection. , 2014, , .		11
50	Remaining useful life prediction of a mechanism considering wear correlation of multiple joints. Mechanical Systems and Signal Processing, 2021, 149, 107328.	8.0	11
51	Model-Based Safety Analysis for the Fly-by-Wire System by Using Monte Carlo Simulation. Processes, 2020, 8, 90.	2.8	9
52	Dynamics-Based Vibration Signal Modeling for Tooth Fault Diagnosis of Planetary Gearboxes. , 0, , .		8
53	Markov process based time limited dispatch analysis with constraints of both dispatch reliability and average safety levels. Reliability Engineering and System Safety, 2017, 167, 84-94.	8.9	7
54	Planetary Gearbox Fault Diagnosis via Torsional Vibration Signal Analysis in Resonance Region. Shock and Vibration, 2017, 2017, 1-18.	0.6	7

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55	Online Bearing Fault Diagnosis using Support Vector Machine and Stacked Auto-Encoder. , 2018, , .		7
56	Evaluating the Time-Varying Mesh Stiffness of a Planetary Gear Set Using the Potential Energy Method. Lecture Notes in Mechanical Engineering, 2015, , 365-374.	0.4	6
57	Study on Framework of STEP-NC Controller with On-machine Inspection. , 2009, , .		5
58	A mesh stiffness evaluation model to reflect tooth pitting growth of a pair of external spur gears. , 2016, , .		5
59	A New Unsupervised Online Early Fault Detection Framework of Rolling Bearings Based on Granular Feature Forecasting. IEEE Access, 2021, 9, 159684-159698.	4.2	5
60	Special feature on rotating machinery condition monitoring by connecting physics-based and data-driven methods. Measurement Science and Technology, 2022, 33, 010103.	2.6	4
61	Effect of sliding friction on transient characteristics of a gear transmission under random loading. , 2017, , .		3
62	Adaptive Cost Function Ridge Estimation for Rolling Bearing Fault Diagnosis Under Variable Speed Conditions. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-12.	4.7	3
63	Simulation of a Cylindrical Roller Bearing with an Embedded Piezoelectric Sensor for Local Fault Detection. , 2021, , .		3
64	Time series modeling of vibration signals from a gearbox under varying speed and load condition. , 2018, , .		2
65	Improved ensemble local mean decomposition based on cubic trigonometric cardinal spline interpolation and its application for rotating machinery fault diagnosis. Advances in Mechanical Engineering, 2020, 12, 168781402094195.	1.6	2
66	A Detailed Investigation of Gear Body-Induced Tooth Deflections and Development of an Improved Analytical Solution. Applied Sciences (Switzerland), 2020, 10, 2292.	2.5	2
67	Dynamic Modeling of Gear Tooth Pitting Propagation to Neighbouring and Mating Teeth. , 2018, , .		1
68	Machine Learning Based Dynamic Failure Criteria for Reliability Analysis of Bearings. , 2019, , .		1
69	Time Series Modelling of Non-stationary Vibration Signals for Gearbox Fault Diagnosis. , 2021, , 337-354.		1
70	Research on the Electromagnetic Conversion Method of Stator Current for Local Fault Detection of a Planetary Gearbox. Machines, 2021, 9, 277.	2.2	1
71	Research on STEP-NC Based Machining and On-Machine Inspecting Simulation System. , 2009, , .		0
72	A Feature-Based Approach to Path Planning for in-Process Probing Operations in STEP-Compliant NC Manufacture. Advanced Materials Research, 2011, 422, 326-330.	0.3	0

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73	Notice of Retraction Lifetime assessment of inertial navigation devices. , 2013, , .		0
74	Dynamic simulation of a planetary gear set and estimation of fault growth on the sun gear. , 2013, , .		0
75	Dependence analysis of planetary gearbox vibration marginals. , 2016, , .		0
76	Health indicator extraction based on sparse representation of vibration signal for planetary gearbox. , 2016, , .		0
77	A Selection Strategy for Kriging Based Design of Experiments by Spectral Clustering and Learning Function. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2021, 7, .	1.1	0
78	Information Theory and Its Application in Machine Condition Monitoring. Entropy, 2022, 24, 206.	2.2	0