RenÃ©-Vinicio SÃ¡nchez

List of Publications by Year
in descending order

75 papers	3,505 citations	236833 25 h-index	189801 50 g-index
76 all docs	76 docs citations	76 times ranked	2821 citing authors

#	Article	IF	Citations
1	A review on data-driven fault severity assessment in rolling bearings. Mechanical Systems and Signal Processing, 2018, 99, 169-196.	4.4	493
2	Gearbox fault diagnosis based on deep random forest fusion of acoustic and vibratory signals. Mechanical Systems and Signal Processing, 2016, 76-77, 283-293.	4.4	339
3	Fault diagnosis in spur gears based on genetic algorithm and random forest. Mechanical Systems and Signal Processing, 2016, 70-71, 87-103.	4.4	248
4	Multimodal deep support vector classification with homologous features and its application to gearbox fault diagnosis. Neurocomputing, 2015, 168, 119-127.	3.5	245
5	Gearbox Fault Identification and Classification with Convolutional Neural Networks. Shock and Vibration, 2015, 2015, 1-10.	0.3	208
6	Fault Diagnosis for Rotating Machinery Using Vibration Measurement Deep Statistical Feature Learning. Sensors, 2016, 16, 895.	2.1	189
7	Deep neural networks-based rolling bearing fault diagnosis. Microelectronics Reliability, 2017, 75, 327-333.	0.9	187
8	Rolling element bearing defect detection using the generalized synchrosqueezing transform guided by timeâ€“frequency ridge enhancement. ISA Transactions, 2016, 60, 274-284.	3.1	120
9	Attribute clustering using rough set theory for feature selection in fault severity classification of rotating machinery. Expert Systems With Applications, 2017, 71, 69-86.	4.4	92
10	Bayesian approach and time series dimensionality reduction to LSTM-based model-building for fault diagnosis of a reciprocating compressor. Neurocomputing, 2020, 380, 51-66.	3.5	90
11	Extracting repetitive transients for rotating machinery diagnosis using multiscale clustered grey infogram. Mechanical Systems and Signal Processing, 2016, 76-77, 157-173.	4.4	87
12	A Systematic Review of Fuzzy Formalisms for Bearing Fault Diagnosis. IEEE Transactions on Fuzzy Systems, 2019, 27, 1362-1382.	6.5	86
13	Multi-Stage Feature Selection by Using Genetic Algorithms for Fault Diagnosis in Gearboxes Based on Vibration Signal. Sensors, 2015, 15, 23903-23926.	2.1	76
14	Feature ranking for multi-fault diagnosis of rotating machinery by using random forest and KNN. Journal of Intelligent and Fuzzy Systems, 2018, 34, 3463-3473.	0.8	75
15	A comparison of fuzzy clustering algorithms for bearing fault diagnosis. Journal of Intelligent and Fuzzy Systems, 2018, 34, 3565-3580.	0.8	74
16	Automatic feature extraction of time-series applied to fault severity assessment of helical gearbox in stationary and non-stationary speed operation. Applied Soft Computing Journal, 2017, 58, 53-64.	4.1	59
17	Fault Diagnosis of Wind Turbine Gearbox Based on the Optimized LSTM Neural Network with Cosine Loss. Sensors, 2020, 20, 2339.	2.1	59
18	Hierarchical feature selection based on relative dependency for gear fault diagnosis. Applied Intelligence, 2016, 44, 687-703.	3.3	56

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19	A statistical comparison of neuroclassifiers and feature selection methods for gearbox fault diagnosis under realistic conditions. Neurocomputing, 2016, 194, 192-206.	3.5	54
20	Generative Adversarial Networks Selection Approach for Extremely Imbalanced Fault Diagnosis of Reciprocating Machinery. IEEE Access, 2019, 7, 70643-70653.	2.6	48
21	Observer-biased bearing condition monitoring: From fault detection to multi-fault classification. Engineering Applications of Artificial Intelligence, 2016, 50, 287-301.	4.3	47
22	Fault diagnosis of spur gearbox based on random forest and wavelet packet decomposition. Frontiers of Mechanical Engineering, 2015, 10, 277-286.	2.5	46
23	A Bayesian approach to consequent parameter estimation in probabilistic fuzzy systems and its application to bearing fault classification. Knowledge-Based Systems, 2017, 129, 39-60.	4.0	39
24	Fusing convolutional generative adversarial encoders for 3D printer fault detection with only normal condition signals. Mechanical Systems and Signal Processing, 2021, 147, 107108.	4.4	33
25	Finite-time and fixed-time impulsive synchronization of chaotic systems. Journal of the Franklin Institute, 2020, 357, 11545-11557.	1.9	27
26	A fuzzy transition based approach for fault severity prediction in helical gearboxes. Fuzzy Sets and Systems, 2018, 337, 52-73.	1.6	26
27	Fuzzy determination of informative frequency band for bearing fault detection. Journal of Intelligent and Fuzzy Systems, 2016, 30, 3513-3525.	0.8	24
28	Spur Gear Fault Diagnosis Using a Multilayer Gated Recurrent Unit Approach With Vibration Signal. IEEE Access, 2019, 7, 56880-56889.	2.6	24
29	Vibration signal analysis using symbolic dynamics for gearbox fault diagnosis. International Journal of Advanced Manufacturing Technology, 2019, 104, 2195-2214.	1.5	23
30	Gear and bearing fault classification under different load and speed by using PoincarÃ© plot features and SVM. Journal of Intelligent Manufacturing, 2022, 33, 1031-1055.	4.4	22
31	A comparative feature analysis for gear pitting level classification by using acoustic emission, vibration and current signals. IFAC-PapersOnLine, 2018, 51, 346-352.	0.5	19
32	Using a Support Vector Machine Based Decision Stage to Improve the Fault Diagnosis on Gearboxes. Computational Intelligence and Neuroscience, 2019, 2019, 1-13.	1.1	19
33	Vibration-based gearbox fault diagnosis using deep neural networks. Journal of Vibroengineering, 2017, 19, 2475-2496.	0.5	18
34	Reciprocating Compressor Multi-Fault Classification Using Symbolic Dynamics and Complex Correlation Measure. Applied Sciences (Switzerland), 2020, 10, 2512.	1.3	16
35	Feature engineering based on ANOVA, cluster validity assessment and KNN for fault diagnosis in bearings. Journal of Intelligent and Fuzzy Systems, 2018, 34, 3451-3462.	0.8	15
36	From fault detection to one-class severity discrimination of 3D printers with one-class support vector machine. ISA Transactions, 2021, 110, 357-367.	3.1	15

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37	One-Shot Fault Diagnosis of Three-Dimensional Printers Through Improved Feature Space Learning. IEEE Transactions on Industrial Electronics, 2021, 68, 8768-8776.	5.2	15
38	Multi-fault Diagnosis of Rotating Machinery by Using Feature Ranking Methods and SVM-based Classifiers. , 2017, , .		14
39	Exploiting Generative Adversarial Networks as an Oversampling Method for Fault Diagnosis of an Industrial Robotic Manipulator. Applied Sciences (Switzerland), 2020, 10, 7712.	1.3	13
40	AutoML for Feature Selection and Model Tuning Applied to Fault Severity Diagnosis in Spur Gearboxes. Mathematical and Computational Applications, 2022, 27, 6.	0.7	13
41	Rolling bearing fault diagnosis based on Deep Boltzmann machines. , 2016, , .		12
42	Echo state network and variational autoencoder for efficient one-class learning on dynamical systems. Journal of Intelligent and Fuzzy Systems, 2018, 34, 3799-3809.	0.8	12
43	Finite-time leaderless consensus control of a group of Euler-Lagrangian systems with backlash nonlinearities. Journal of the Franklin Institute, 2019, 356, 9286-9301.	1.9	11
44	A hybrid prototype selection-based deep learning approach for anomaly detection in industrial machines. Expert Systems With Applications, 2022, 204, 117528.	4.4	10
45	Gearbox fault classification using dictionary sparse based representations of vibration signals. Journal of Intelligent and Fuzzy Systems, 2018, 34, 3605-3618.	0.8	9
46	Deep Learning-Based Gear Pitting Severity Assessment Using Acoustic Emission, Vibration and Currents Signals. , 2019, , .		9
47	Knowledge extraction from deep convolutional neural networks applied to cyclo-stationary time-series classification. Information Sciences, 2020, 524, 1-14.	4.0	9
48	Gearbox Fault Diagnosis Based on a Novel Hybrid Feature Reduction Method. IEEE Access, 2018, 6, 75813-75823.	2.6	8
49	A semi-supervised approach based on evolving clusters for discovering unknown abnormal condition patterns in gearboxes. Journal of Intelligent and Fuzzy Systems, 2018, 34, 3581-3593.	0.8	8
50	Evaluation of Time and Frequency Condition Indicators from Vibration Signals for Crack Detection in Railway Axles. Applied Sciences (Switzerland), 2020, 10, 4367.	1.3	7
51	Some Preliminary Results on the Comparison of FCM, GK, FCMFP and FN-DBSCAN for Bearing Fault Diagnosis. , 2017, , .		6
52	ANOVA and Cluster Distance Based Contributions for Feature Empirical Analysis to Fault Diagnosis in Rotating Machinery. , 2017, , .		5
53	Convolutional Neural Networks Using Fourier Transform Spectrogram to Classify the Severity of Gear Tooth Breakage. , 2018, , .		5
54	Gear Crack Level Classification by Using KNN and Time-Domain Features from Acoustic Emission Signals Under Different Motor Speeds and Loads. , 2018, , .		5

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55	Accelerometer Placement Comparison for Crack Detection in Railway Axles Using Vibration Signals and Machine Learning. , 2019, , .		5
56	A hybrid heuristic algorithm for evolving models in simultaneous scenarios of classification and clustering. Knowledge and Information Systems, 2019, 61, 755-798.	2.1	5
57	Deep Ensemble-Based Classifier for Transfer Learning in Rotating Machinery Fault Diagnosis. IEEE Access, 2022, 10, 29778-29787.	2.6	5
58	SOA Based Integrated Software to Develop Fault Diagnosis Models Using Machine Learning in Rotating Machinery. , 2017, , .		3
59	PoincarÃ© plot features from vibration signal for gearbox fault diagnosis. , 2017, , .		3
60	A LSTM Neural Network Approach using Vibration Signals for Classifying Faults in a Gearbox. , 2019, , .		3
61	Fast feature selection based on cluster validity index applied on data-driven bearing fault detection. , 2020, , .		3
62	An adaptive genomic difference based genetic algorithm and its application to memetic continuous optimization. Intelligent Data Analysis, 2018, 22, 363-382.	0.4	2
63	SOA based smartphone system for the fault detection in rotating machines. , 2020, , .		2
64	Fault Diagnosis for Controlled Continuous Systems from a Hybrid Approach: A Case Study. , 2015, , .		1
65	A methodological framework using statistical tests for comparing machine learning based models applied to fault diagnosis in rotating machinery. , 2016, , .		1
66	Clustering algorithm using rough set theory for unsupervised feature selection. , 2016, , .		1
67	GKFP: A New Fuzzy Clustering Method Applied to Bearings Diagnosis. , 2018, , .		1
68	Multilayer Gated Recurrent Unit for Spur Gear Fault Diagnosis. , 2019, , .		1
69	Introduction to the special issue on the VIII Latin-American Congress on Mechanical Engineering. Frontiers of Mechanical Engineering, 2015, 10, 219-220.	2.5	0
70	Framework for Discovering Unknown Abnormal Condition Patterns in Gearboxes Using a Semi-supervised Approach. , 2017, , .		0
71	A Dictionary Sparse Based Representation of Vibration Signals for Gearbox Fault Detection. , 2017, , .		0
72	Influence of Accelerometer Position on Gearbox Fault Severity Classification through Evaluation of Deep Learning Models. , 2019, , .		0

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73	Using the Kullback-Leibler Divergence and Kolmogorov-Smirnov Test to Select Input Sizes to the Fault Diagnosis Problem Based on a CNN Model. Learning and Nonlinear Models, 2021, 18, 16-26.	0.2	0
74	A Method for the Estimation of the Constant Load Torque by Using the Steady-State Electrical Torque Signal. , 2021, , .		0
75	Data-Driven Gearbox Fault Severity Diagnosis Based on Concept Drift. , 2021, , .		0