Martin Valtierra-Rodriguez

List of Publications by Year
in descending order

82 papers	1,896 citations	279798 23 h-index	276875 41 g-index
82 all docs	82 docs citations	82 times ranked	1828 citing authors

#	Article	IF	Citations
1	Detection and Classification of Single and Combined Power Quality Disturbances Using Neural Networks. IEEE Transactions on Industrial Electronics, 2014, 61, 2473-2482.	7.9	248
2	Recurrent neural network model with Bayesian training and mutual information for response prediction of large buildings. Engineering Structures, 2019, 178, 603-615.	5.3	148
3	New methodology for modal parameters identification of smart civil structures using ambient vibrations and synchrosqueezed wavelet transform. Engineering Applications of Artificial Intelligence, 2016, 48, 1-12.	8.1	128
4	Solving fractional differential equations of variable-order involving operators with Mittag-Leffler kernel using artificial neural networks. Chaos, Solitons and Fractals, 2017, 103, 382-403.	5.1	84
5	Novel Downsampling Empirical Mode Decomposition Approach for Power Quality Analysis. IEEE Transactions on Industrial Electronics, 2016, 63, 2369-2378.	7.9	83
6	Incipient Broken Rotor Bar Detection in Induction Motors Using Vibration Signals and the Orthogonal Matching Pursuit Algorithm. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 2058-2068.	4.7	59
7	The application of EMD-based methods for diagnosis of winding faults in a transformer using transient and steady state currents. Measurement: Journal of the International Measurement Confederation, 2018, 117, 371-379.	5.0	49
8	Sensors Used in Structural Health Monitoring. Archives of Computational Methods in Engineering, 2018, 25, 901-918.	10.2	48
9	Time-frequency techniques for modal parameters identification of civil structures from acquired dynamic signals. Journal of Vibroengineering, 2016, 18, 3164-3185.	1.0	48
10	Synchronization of chaotic systems involving fractional operators of Liouvilleâ€“Caputo type with variable-order. Physica A: Statistical Mechanics and Its Applications, 2017, 487, 1-21.	2.6	45
11	Synchrosqueezing transform-based methodology for broken rotor bars detection in induction motors. Measurement: Journal of the International Measurement Confederation, 2016, 90, 519-525.	5.0	44
12	Instantaneous Power Quality Indices Based on Single-Sideband Modulation and Wavelet Packet-Hilbert Transform. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 1021-1031.	4.7	44
13	Enhanced FFT-based method for incipient broken rotor bar detection in induction motors during the startup transient. Measurement: Journal of the International Measurement Confederation, 2018, 124, 277-285.	5.0	44
14	FPGA-based entropy neural processor for online detection of multiple combined faults on induction motors. Mechanical Systems and Signal Processing, 2012, 30, 123-130.	8.0	43
15	Empirical Mode Decomposition and Neural Networks on FPGA for Fault Diagnosis in Induction Motors. Scientific World Journal, The, 2014, 2014, 1-17.	2.1	43
16	Convolutional Neural Network and Motor Current Signature Analysis during the Transient State for Detection of Broken Rotor Bars in Induction Motors. Sensors, 2020, 20, 3721.	3.8	41
17	A Hilbert Transform-Based Smart Sensor for Detection, Classification, and Quantification of Power Quality Disturbances. Sensors, 2013, 13, 5507-5527.	3.8	39
18	A Novel Wavelet Transform-Homogeneity Model for Sudden Cardiac Death Prediction Using ECG Signals. Journal of Medical Systems, 2018, 42, 176.	3.6	37

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19	Neurocomputing in Civil Infrastructure. Scientia Iranica, 2016, 23, 2417-2428.	0.4	34
20	Fractal dimension and fuzzy logic systems for broken rotor bar detection in induction motors at start-up and steady-state regimes. Measurement Science and Technology, 2017, 28, 075001.	2.6	33
21	EMD-Shannon Entropy-Based Methodology to Detect Incipient Damages in a Truss Structure. Applied Sciences (Switzerland), 2018, 8, 2068.	2.5	27
22	Shannon Entropy and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M1"><mml:mrow><mml:mi>K</mml:mi></mml:mrow></mml:math>-Means Method for Automatic Diagnosis of Broken Rotor Bars in Induction Motors Using Vibration Signals. Shock and Vibration, 2016, 2016, 1-10.	0.6	26
23	A New Methodology Based on EMD and Nonlinear Measurements for Sudden Cardiac Death Detection. Sensors, 2020, 20, 9.	3.8	26
24	Statistical time features for global corrosion assessment in a truss bridge from vibration signals. Measurement: Journal of the International Measurement Confederation, 2020, 160, 107858.	5.0	24
25	FPGA-based neural network harmonic estimation for continuous monitoring of the power line in industrial applications. Electric Power Systems Research, 2013, 98, 51-57.	3.6	23
26	Short-Circuited Turn Fault Diagnosis in Transformers by Using Vibration Signals, Statistical Time Features, and Support Vector Machines on FPGA. Sensors, 2021, 21, 3598.	3.8	21
27	Fractal dimension-based approach for detection of multiple combined faults on induction motors. JVC/Journal of Vibration and Control, 2016, 22, 3638-3648.	2.6	20
28	Predictive Data Mining Techniques for Fault Diagnosis of Electric Equipment: A Review. Applied Sciences (Switzerland), 2020, 10, 950.	2.5	20
29	An Explainable Machine Learning Approach Based on Statistical Indexes and SVM for Stress Detection in Automobile Drivers Using Electromyographic Signals. Sensors, 2021, 21, 3155.	3.8	20
30	A neural network-based model for MCSA of inter-turn short-circuit faults in induction motors and its power hardware in the loop simulation. Computers and Electrical Engineering, 2021, 93, 107234.	4.8	20
31	A Two-Step Strategy for System Identification of Civil Structures for Structural Health Monitoring Using Wavelet Transform and Genetic Algorithms. Applied Sciences (Switzerland), 2017, 7, 111.	2.5	19
32	A New Methodology for Tracking and Instantaneous Characterization of Voltage Variations. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1596-1604.	4.7	18
33	Correlation Model Between Voltage Unbalance and Mechanical Overload Based on Thermal Effect at the Induction Motor Stator. IEEE Transactions on Energy Conversion, 2017, 32, 1602-1610.	5.2	18
34	Thermal-Impact-Based Protection of Induction Motors Under Voltage Unbalance Conditions. IEEE Transactions on Energy Conversion, 2018, 33, 1748-1756.	5.2	18
35	EEMD-MUSIC-Based Analysis for Natural Frequencies Identification of Structures Using Artificial and Natural Excitations. Scientific World Journal, The, 2014, 2014, 1-12.	2.1	15
36	Reconfigurable instrument for neuralâ€networkâ€based powerâ€quality monitoring in 3â€phase power systems. IET Generation, Transmission and Distribution, 2013, 7, 1498-1507.	2.5	14

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37	Experimental data-based transient-stationary current model for inter-turn fault diagnostics in a transformer. Electric Power Systems Research, 2017, 152, 306-315.	3.6	14
38	Fractal dimension and data mining for detection of short-circuited turns in transformers from vibration signals. Measurement Science and Technology, 2020, 31, 025902.	2.6	13
39	A New Phasor Estimator for PMU Applications: P Class and M Class. Journal of Modern Power Systems and Clean Energy, 2020, 8, 55-66.	5.4	13
40	A New Damage Index Based on Statistical Features, PCA, and Mahalanobis Distance for Detecting and Locating Cables Loss in a Cable-Stayed Bridge. International Journal of Structural Stability and Dynamics, 2021, 21, 2150127.	2.4	13
41	Complete Ensemble Empirical Mode Decomposition on FPGA for Condition Monitoring of Broken Bars in Induction Motors. Mathematics, 2019, 7, 783.	2.2	11
42	Shannon Entropy Index and a Fuzzy Logic System for the Assessment of Stator Winding Short-Circuit Faults in Induction Motors. Electronics (Switzerland), 2019, 8, 90.	3.1	11
43	Location of Multiple Damage Types in a Truss-Type Structure Using Multiple Signal Classification Method and Vibration Signals. Mathematics, 2020, 8, 932.	2.2	11
44	Vibration Signal Processing-Based Detection of Short-Circuited Turns in Transformers: A Nonlinear Mode Decomposition Approach. Mathematics, 2020, 8, 575.	2.2	11
45	Novel ST-MUSIC-based spectral analysis for detection of ULF geomagnetic signals anomalies associated with seismic events in Mexico. Geomatics, Natural Hazards and Risk, 2016, 7, 1162-1174.	4.3	9
46	Wavelet Transform-Statistical Time Features-Based Methodology for Epileptic Seizure Prediction Using Electrocardiogram Signals. Mathematics, 2020, 8, 2125.	2.2	9
47	A Phasor Estimation Algorithm based on Hilbert Transform for P-class PMUs. Advances in Electrical and Computer Engineering, 2018, 18, 97-104.	0.9	9
48	Homogeneity-PMU-Based Method for Detection and Classification of Power Quality Disturbances. Electronics (Switzerland), 2018, 7, 433.	3.1	7
49	Hilbert filter based FPGA architecture for power quality monitoring. Measurement: Journal of the International Measurement Confederation, 2019, 147, 106819.	5.0	7
50	Nonlinear mode decomposition-based methodology for modal parameters identification of civil structures using ambient vibrations. Measurement Science and Technology, 2020, 31, 015007.	2.6	7
51	Wavelet Energy Accumulation Method Applied on the Rio Papaloapan Bridge for Damage Identification. Mathematics, 2021, 9, 422.	2.2	6
52	Current Efforts for Prediction and Assessment of Natural Disasters: Earthquakes, Tsunamis, Volcanic eruptions, Hurricanes, Tornados, and Floods. Scientia Iranica, 2017, .	0.4	6
53	Automatic detection and classification of electrical disturbances by means of empirical mode decomposition method. , 2015, , .		5
54	Harmonic PMU and Fuzzy Logic for Online Detection of Short-Circuited Turns in Transformers. Electric Power Systems Research, 2021, 190, 106862.	3.6	5

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55	FPGA-based instantaneous estimation of unbalance/symmetrical components through the Hilbert transform. , 2013, , .		4
56	A Shannon Entropy-Based Methodology to Detect and Locate Cables Loss in a Cable-Stayed Bridge. International Journal of Applied Mechanics, 2021, 13, .	2.2	4
57	Modeling of electric springs and their multi-objective voltage control based on continuous genetic algorithm for unbalanced distribution networks. International Journal of Electrical Power and Energy Systems, 2022, 138, 107979.	5.5	4
58	Efficient discrete wavelet representation of electrical power disturbances by measuring energy concentration in the tiled time-frequency plane. , 2014, , .		3
59	Compact kernel distribution-based approach for broken bars detection on induction motors. , 2015, , .		3
60	The application of EMD methods to power quality signals. , 2015, , .		3
61	A scheme based on PMU data for power quality disturbances monitoring. , 2017, , .		3
62	Time-Domain Diagnosing Algorithm for Automatic Broken Rotor Bar Detection in Induction Motors. , 2018, , .		3
63	Harmonic PMU Algorithm Based on Complex Filters and Instantaneous Single-Sideband Modulation. Electronics (Switzerland), 2019, 8, 135.	3.1	3
64	Methodology based on statistical features and linear discriminant analysis for damage detection in a truss-type bridge. , 2019, , .		3
65	FRACTAL DIMENSION ANALYSIS FOR ASSESSING THE HEALTH CONDITION OF A TRUSS STRUCTURE USING VIBRATION SIGNALS. Fractals, 2020, 28, 2050127.	3.7	3
66	Improved Performance of M-Class PMUs Based on a Magnitude Compensation Model for Wide Frequency Deviations. Mathematics, 2020, 8, 1361.	2.2	3
67	EARLY PREDICTION OF SUDDEN CARDIAC DEATH USING FRACTAL DIMENSION AND ECG SIGNALS. Fractals, 2021, 29, 2150077.	3.7	3
68	Convolutional Neural Network-Based Methodology for Detecting, Locating and Quantifying Corrosion Damage in a Truss-Type Bridge Through the Autocorrelation of Vibration Signals. Arabian Journal for Science and Engineering, 2023, 48, 1119-1141.	3.0	3
69	Time-frequency analysis of power quality signals using compact kernel distribution technique. , 2015, , .		2
70	Fractal dimension theory-based approach for bearing fault detection in induction motors. , 2016, , .		2
71	Data compression based on discrete Wavelet transform and fault detection of short-circuit faults in transformers. , 2019, , .		2
72	Frequency Analysis of the Railway Track under Loads Caused by the Hunting Phenomenon. Mathematics, 2022, 10, 2286.	2.2	2

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73	Methodology for filtering and tracking frequency-changing components during motor start-up. , 2017, , .		1
74	Adaptive Notch Filter for Induction Motor Condition Monitoring. , 2019, , .		1
75	Model reference Neural Network-based methodology for vibration control in a five-story steel structure.. , 2020, , .		1
76	Imbalance Detection in Low Power Turbine Through Vibration Signals and Convolutional Neural Networks. , 2021, , .		1
77	Detection of Short-Circuited Turns in Transformer Vibration Signals using MUSIC-Empirical Wavelet Transform and Fractal Dimension. , 2021, , .		1
78	Dynamic Behavior Modeling of Civil Structures Using Wavenets and Neural Networks: A Comparative Study. , 2014, , .		0
79	Tracking of voltage variations by means of an adaptive filter and fuzzy logic. , 2016, , .		0
80	DWT-based methodology for detection of seismic precursors on electric field signals in Mexico. Geomatics, Natural Hazards and Risk, 2018, 9, 281-294.	4.3	0
81	A Robust Electric Spring Model and Modified Backward Forward Solution Method for Microgrids with Distributed Generation. Mathematics, 2020, 8, 1326.	2.2	0
82	Fatigue Cracks Detection and Quantification in a Four-Story Building using a Nonlinear Index and Vibration Signals. , 2021, , .		0