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	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
2	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
3	Frequency Analysis of the Railway Track under Loads Caused by the Hunting Phenomenon. Mathematics, 2022, 10, 2286.	2.2	2
4	Harmonic PMU and Fuzzy Logic for Online Detection of Short-Circuited Turns in Transformers. Electric Power Systems Research, 2021, 190, 106862.	3.6	5
5	Wavelet Energy Accumulation Method Applied on the Rio Papaloapan Bridge for Damage Identification. Mathematics, 2021, 9, 422.	2.2	6
6	EARLY PREDICTION OF SUDDEN CARDIAC DEATH USING FRACTAL DIMENSION AND ECG SIGNALS. Fractals, 2021, 29, 2150077.	3.7	3
7	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
8	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
9	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
10	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
11	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
12	Imbalance Detection in Low Power Turbine Through Vibration Signals and Convolutional Neural Networks. , 2021, , .		1
13	Detection of Short-Circuited Turns in Transformer Vibration Signals using MUSIC-Empirical Wavelet Transform and Fractal Dimension. , 2021, , .		1
14	Fatigue Cracks Detection and Quantification in a Four-Story Building using a Nonlinear Index and Vibration Signals. , 2021, , .		0
15	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
16	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
17	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
18	A New Methodology Based on EMD and Nonlinear Measurements for Sudden Cardiac Death Detection. Sensors, 2020, 20, 9.	3.8	26

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19	FRACTAL DIMENSION ANALYSIS FOR ASSESSING THE HEALTH CONDITION OF A TRUSS STRUCTURE USING VIBRATION SIGNALS. Fractals, 2020, 28, 2050127.	3.7	3
20	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
21	Wavelet Transform-Statistical Time Features-Based Methodology for Epileptic Seizure Prediction Using Electrocardiogram Signals. Mathematics, 2020, 8, 2125.	2.2	9
22	A Robust Electric Spring Model and Modified Backward Forward Solution Method for Microgrids with Distributed Generation. Mathematics, 2020, 8, 1326.	2.2	0
23	Improved Performance of M-Class PMUs Based on a Magnitude Compensation Model for Wide Frequency Deviations. Mathematics, 2020, 8, 1361.	2.2	3
24	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
25	Predictive Data Mining Techniques for Fault Diagnosis of Electric Equipment: A Review. Applied Sciences (Switzerland), 2020, 10, 950.	2.5	20
26	Vibration Signal Processing-Based Detection of Short-Circuited Turns in Transformers: A Nonlinear Mode Decomposition Approach. Mathematics, 2020, 8, 575.	2.2	11
27	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
28	Model reference Neural Network-based methodology for vibration control in a five-story steel structure.. , 2020, , .		1
29	Hilbert filter based FPGA architecture for power quality monitoring. Measurement: Journal of the International Measurement Confederation, 2019, 147, 106819.	5.0	7
30	Complete Ensemble Empirical Mode Decomposition on FPGA for Condition Monitoring of Broken Bars in Induction Motors. Mathematics, 2019, 7, 783.	2.2	11
31	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
32	Harmonic PMU Algorithm Based on Complex Filters and Instantaneous Single-Sideband Modulation. Electronics (Switzerland), 2019, 8, 135.	3.1	3
33	Methodology based on statistical features and linear discriminant analysis for damage detection in a truss-type bridge. , 2019, , .		3
34	Adaptive Notch Filter for Induction Motor Condition Monitoring. , 2019, , .		1
35	Data compression based on discrete Wavelet transform and fault detection of short-circuit faults in transformers. , 2019, , .		2
36	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

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37	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
38	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
39	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
40	Sensors Used in Structural Health Monitoring. Archives of Computational Methods in Engineering, 2018, 25, 901-918.	10.2	48
41	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
42	Time-Domain Diagnosing Algorithm for Automatic Broken Rotor Bar Detection in Induction Motors. , 2018, , .		3
43	Homogeneity-PMU-Based Method for Detection and Classification of Power Quality Disturbances. Electronics (Switzerland), 2018, 7, 433.	3.1	7
44	EMD-Shannon Entropy-Based Methodology to Detect Incipient Damages in a Truss Structure. Applied Sciences (Switzerland), 2018, 8, 2068.	2.5	27
45	Thermal-Impact-Based Protection of Induction Motors Under Voltage Unbalance Conditions. IEEE Transactions on Energy Conversion, 2018, 33, 1748-1756.	5.2	18
46	A Novel Wavelet Transform-Homogeneity Model for Sudden Cardiac Death Prediction Using ECG Signals. Journal of Medical Systems, 2018, 42, 176.	3.6	37
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	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
49	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
50	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
51	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
52	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
53	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
54	Methodology for filtering and tracking frequency-changing components during motor start-up. , 2017, , .		1

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55	A scheme based on PMU data for power quality disturbances monitoring. , 2017, , .		3
56	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
57	Current Efforts for Prediction and Assessment of Natural Disasters: Earthquakes, Tsunamis, Volcanic eruptions, Hurricanes, Tornados, and Floods. Scientia Iranica, 2017, .	0.4	6
58	Shannon Entropy and K-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
59	Tracking of voltage variations by means of an adaptive filter and fuzzy logic. , 2016, , .		0
60	Fractal dimension theory-based approach for bearing fault detection in induction motors. , 2016, , .		2
61	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
62	A New Methodology for Tracking and Instantaneous Characterization of Voltage Variations. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1596-1604.	4.7	18
63	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
64	Novel Downsampling Empirical Mode Decomposition Approach for Power Quality Analysis. IEEE Transactions on Industrial Electronics, 2016, 63, 2369-2378.	7.9	83
65	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
66	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
67	Time-frequency techniques for modal parameters identification of civil structures from acquired dynamic signals. Journal of Vibroengineering, 2016, 18, 3164-3185.	1.0	48
68	Neurocomputing in Civil Infrastructure. Scientia Iranica, 2016, 23, 2417-2428.	0.4	34
69	Time-frequency analysis of power quality signals using compact kernel distribution technique. , 2015, , .		2
70	Compact kernel distribution-based approach for broken bars detection on induction motors. , 2015, , .		3
71	The application of EMD methods to power quality signals. , 2015, , .		3
72	Automatic detection and classification of electrical disturbances by means of empirical mode decomposition method. , 2015, , .		5

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73	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
74	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
75	Dynamic Behavior Modeling of Civil Structures Using Wavenets and Neural Networks: A Comparative Study. , 2014, , .		0
76	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
77	Efficient discrete wavelet representation of electrical power disturbances by measuring energy concentration in the tiled time-frequency plane. , 2014, , .		3
78	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
79	A Hilbert Transform-Based Smart Sensor for Detection, Classification, and Quantification of Power Quality Disturbances. Sensors, 2013, 13, 5507-5527.	3.8	39
80	FPGA-based instantaneous estimation of unbalance/symmetrical components through the Hilbert transform. , 2013, , .		4
81	Reconfigurable instrument for neural-network-based power-quality monitoring in 3-phase power systems. IET Generation, Transmission and Distribution, 2013, 7, 1498-1507.	2.5	14
82	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