

Jose J Rangel-Magdaleno

List of Publications by Year in descending order

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101
papers

2,207
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257357

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43
g-index

101
all docs

101
docs citations

101
times ranked

1751
citing authors

#	ARTICLE	IF	CITATIONS
1	FPGA realization of multi-scroll chaotic oscillators. Communications in Nonlinear Science and Numerical Simulation, 2015, 27, 66-80.	1.7	180
2	FPGA realization of a chaotic communication system applied to image processing. Nonlinear Dynamics, 2015, 82, 1879-1892.	2.7	111
3	Empirical Mode Decomposition Analysis for Broken-Bar Detection on Squirrel Cage Induction Motors. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 1118-1128.	2.4	93
4	An Approach on MCSA-Based Fault Detection Using Independent Component Analysis and Neural Networks. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 1353-1361.	2.4	91
5	Generating a 50-scroll chaotic attractor at 66MHz by using FPGAs. Nonlinear Dynamics, 2016, 85, 2143-2157.	2.7	89
6	Novel Methodology for Online Half-Broken-Bar Detection on Induction Motors. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 1690-1698.	2.4	85
7	Arduino-based chaotic secure communication system using multi-directional multi-scroll chaotic oscillators. Nonlinear Dynamics, 2017, 87, 2203-2217.	2.7	83
8	Deep Learning Classification for Diabetic Foot Thermograms. Sensors, 2020, 20, 1762.	2.1	73
9	FPGA-Based Broken Bars Detection on Induction Motors Under Different Load Using Motor Current Signature Analysis and Mathematical Morphology. IEEE Transactions on Instrumentation and Measurement, 2014, 63, 1032-1040.	2.4	70
10	Parameter Identification of PMSMs Using Experimental Measurements and a PSO Algorithm. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 2146-2154.	2.4	68
11	A Comparison on Finite-Set Model Predictive Torque Control Schemes for PMSMs. IEEE Transactions on Power Electronics, 2018, 33, 8838-8847.	5.4	66
12	FPGA-Based Multiple-Channel Vibration Analyzer for Industrial Applications in Induction Motor Failure Detection. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 63-72.	2.4	64
13	Narrative review: Diabetic foot and infrared thermography. Infrared Physics and Technology, 2016, 78, 105-117.	1.3	62
14	Automatic grain size determination in microstructures using image processing. Measurement: Journal of the International Measurement Confederation, 2013, 46, 249-258.	2.5	59
15	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.	2.4	59
16	Hilbert spectrum analysis of induction motors for the detection of incipient broken rotor bars. Measurement: Journal of the International Measurement Confederation, 2017, 109, 247-255.	2.5	57
17	Quantitative Estimation of Temperature Variations in Plantar Angiosomes: A Study Case for Diabetic Foot. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-10.	0.7	55
18	Plantar Thermogram Database for the Study of Diabetic Foot Complications. IEEE Access, 2019, 7, 161296-161307.	2.6	41

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19	A quantitative index for classification of plantar thermal changes in the diabetic foot. Infrared Physics and Technology, 2017, 81, 242-249.	1.3	37
20	Automatic classification of thermal patterns in diabetic foot based on morphological pattern spectrum. Infrared Physics and Technology, 2015, 73, 149-157.	1.3	36
21	FPGA-Based Vibration Analyzer for Continuous CNC Machinery Monitoring With Fused FFT-DWT Signal Processing. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 3184-3194.	2.4	34
22	On the synchronization techniques of chaotic oscillators and their FPGA-based implementation for secure image transmission. PLoS ONE, 2019, 14, e0209618.	1.1	34
23	Startup current analysis of incipient broken rotor bar in induction motors using high-resolution spectral analysis. , 2011, , .		33
24	Engineering Applications of FPGAs. , 2016, , .		31
25	Vibration Analysis of Partially Damaged Rotor Bar in Induction Motor under Different Load Condition Using DWT. Shock and Vibration, 2016, 2016, 1-11.	0.3	30
26	Diagnostic of Combined Mechanical and Electrical Faults in ASD-Powered Induction Motor Using MODWT and a Lightweight 1-D CNN. IEEE Transactions on Industrial Informatics, 2022, 18, 4688-4697.	7.2	28
27	Modified model predictive torque control for a PMSM drive with torque ripple minimisation. IET Power Electronics, 2019, 12, 1033-1042.	1.5	26
28	VHDL Descriptions for the FPGA Implementation of PWL-Function-Based Multi-Scroll Chaotic Oscillators. PLoS ONE, 2016, 11, e0168300.	1.1	24
29	Bearing Fault Detection in Adjustable Speed Drive-Powered Induction Machine by Using Motor Current Signature Analysis and Goodness-of-Fit Tests. IEEE Transactions on Industrial Informatics, 2021, 17, 8265-8274.	7.2	24
30	Novel Oversampling Technique for Improving Signal-to-Quantization Noise Ratio on Accelerometer-Based Smart Jerk Sensors in CNC Applications. Sensors, 2009, 9, 3767-3789.	2.1	22
31	Broken bars detection on induction motor using MCSA and mathematical morphology: An experimental study. , 2013, , .		20
32	Gyroscope-Driven Mouse Pointer with an EMOTIVÂ® EEG Headset and Data Analysis Based on Empirical Mode Decomposition. Sensors, 2013, 13, 10561-10583.	2.1	20
33	Single-pixel imaging: An overview of different methods to be used for 3D space reconstruction in harsh environments. Review of Scientific Instruments, 2021, 92, 111501.	0.6	19
34	Parameter Identification of a Permanent Magnet Synchronous Machine based on Current Decay Test and Particle Swarm Optimization. IEEE Latin America Transactions, 2013, 11, 1176-1181.	1.2	17
35	Automatic progressive damage detection of rotor bar in induction motor using vibration analysis and multiple classifiers. Journal of Mechanical Science and Technology, 2017, 31, 2651-2662.	0.7	16
36	Use of kurtosis for locating deep blood vessels in raw speckle imaging using a homogeneity representation. Journal of Biomedical Optics, 2017, 22, 066004.	1.4	15

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37	Fabrication of Microbolometer Arrays Based on Polymorphous Silicon-Germanium. Sensors, 2020, 20, 2716.	2.1	15
38	FPGA-in-the-loop simulation of a grid-connected photovoltaic system by using a predictive control. Electrical Engineering, 2018, 100, 1327-1337.	1.2	14
39	Detection of unbalanced blade on UAV by means of audio signal. , 2018, , .		14
40	FPGA-Matlab-based open core for three-time controllers in automatic control applications. Computer Applications in Engineering Education, 2013, 21, E132.	2.2	13
41	Thermal image processing for quantitative determination of temperature variations in plantar angiosomes. , 2013, , .		13
42	Bearing fault detection in induction motors using MCSA and statistical analysis. , 2018, , .		13
43	Induction Machines Fault Detection: An Overview. IEEE Instrumentation and Measurement Magazine, 2021, 24, 63-71.	1.2	12
44	Evaluation of thermal patterns and distribution applied to the study of diabetic foot. , 2015, , .		11
45	Digital simulation of a predictive current control for photovoltaic system based on the MPPT strategy. , 2016, , .		11
46	Improved grid-photovoltaic system based on variable-step MPPT, predictive control, and active/reactive control. IEEE Latin America Transactions, 2017, 15, 2064-2070.	1.2	10
47	Broken bar detection on squirrel cage induction motors with MCSA and EMD. , 2014, , .		9
48	Measuring changes in the plantar temperature distribution in diabetic patients. , 2017, , .		9
49	Statistical Approximation of Plantar Temperature Distribution on Diabetic Subjects Based on Beta Mixture Model. IEEE Access, 2019, 7, 28383-28391.	2.6	9
50	A Smart Switch to Connect and Disconnect Electrical Devices at Home by Using Internet. IEEE Latin America Transactions, 2016, 14, 1575-1581.	1.2	8
51	HIL simulation of the DTC for a three-level inverter fed a PMSM with neutral-point balancing control based on FPGA. Electrical Engineering, 2018, 100, 1441-1454.	1.2	8
52	FPGA Implementation of a Novel Algorithm for on-line Bar Breakage Detection on Induction Motors. , 2008, , .		7
53	Genetic algorithms based on a granular surrogate model and fuzzy aptitude functions. , 2016, , .		7
54	Intelligent identification of induction motor conditions at several mechanical loads. , 2016, , .		7

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55	FPGA-based broken bar detection on IM using OMP algorithm. , 2017, , .		7
56	Homogeneity-PMU-Based Method for Detection and Classification of Power Quality Disturbances. Electronics (Switzerland), 2018, 7, 433.	1.8	7
57	Bearing Fault Detection Technique by using Thermal Images: A case of Study. , 2019, , .		7
58	Bearing Fault Detection in ASD-Powered Induction Machine Using MODWT and Image Edge Detection. IEEE Access, 2022, 10, 24181-24193.	2.6	7
59	On maximizing the positive Lyapunov exponent of chaotic oscillators applying DE and PSO. International Journal of Dynamics and Control, 2019, 7, 1157-1172.	1.5	6
60	FPGA Implementation of Chaotic Oscillators, Their Synchronization, and Application to Secure Communications. , 2019, , 301-328.		6
61	Single-Pixel Near-Infrared 3D Image Reconstruction in Outdoor Conditions. Micromachines, 2022, 13, 795.	1.4	6
62	A Real-Time FPGA Based Platform for Applications in Mechatronics. , 2008, , .		5
63	Simulink-HDL cosimulation of direct torque control of a PM synchronous machine based FPGA. , 2014, , .		5
64	FPGA-based matrix inversion using an iterative Chebyshev-type method in the context of compressed sensing. , 2014, , .		5
65	Cataract Detection and Classification Systems Using Computational Intelligence: A Survey. Archives of Computational Methods in Engineering, 2021, 28, 1761-1774.	6.0	5
66	FPGA Open Architecture Design for a VGA Driver. Procedia Technology, 2012, 3, 324-333.	1.1	4
67	Half-broken rotor bar detection on IM by using sparse representation under different load conditions. , 2017, , .		4
68	Technique for Signal Noise Reduction based on Sparse Representation. , 2018, , .		4
69	Induction motors fault detection using independent component analysis on phase current signals. , 2018, , .		4
70	Localization of blood vessels in in-vitro LSCI images with K-means. , 2021, , .		4
71	Identification of Epilepsy Seizures Using Multi-resolution Analysis and Artificial Neural Networks. Studies in Computational Intelligence, 2014, , 337-351.	0.7	4
72	Hardware parallel architecture proposed to accelerate the orthogonal matching pursuit compressive sensing reconstruction. , 2020, , .		4

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73	An Open-Access Educational Tool for Teaching Motion Dynamics in Multi-Axis Servomotor Control. IEEE Transactions on Education, 2012, 55, 218-225.	2.0	3
74	Modeling a biped robot on Matlab/SimMechanics. , 2013, , .		3
75	MATLAB and FPGA-based interactive tool for exploring concepts on compressed sensing. Computer Applications in Engineering Education, 2015, 23, 921-930.	2.2	3
76	FPGA implementation of Orthogonal Matching Pursuit algorithm. , 2016, , .		3
77	Implementation of direct torque control for a PM synchronous machine based on FPGA. , 2016, , .		3
78	Keeping a moving target within the field of view of a Drone's onboard camera via stochastic estimation. , 2017, , .		3
79	Half-broken bar detection using MCSA and statistical analysis. , 2017, , .		3
80	Similarity Measures to identify changes in Plantar Temperature Distribution in Diabetic Subjects. , 2018, , .		3
81	ECG-Based Identification of Sudden Cardiac Death through Sparse Representations. Sensors, 2021, 21, 7666.	2.1	3
82	Induction Machine Bearing Fault Detection Using Empirical Wavelet Transform. Shock and Vibration, 2022, 2022, 1-12.	0.3	3
83	Simulink/PSim/Active-HDL co-simulation of passivity-based speed control of PMSM. , 2016, , .		2
84	Prediction of chaotic time-series with different MLE values using FPGA-based ANNs. , 2017, , .		2
85	EEG motor imagery signals classification using maximum overlap wavelet transform and support vector machine. , 2017, , .		2
86	Surrogate modeling based on granular models and fuzzy aptitude functions. Applied Soft Computing Journal, 2018, 65, 21-32.	4.1	2
87	Comparison of Induction Machine Bearing Fault Detection Methods using MCSA, SA and GoFT. , 2019, , .		2
88	SOM-Like Neural Network and Differential Evolution for Multi-level Image Segmentation and Classification in Slit-Lamp Images. Communications in Computer and Information Science, 2018, , 26-37.	0.4	2
89	Towards a 3D Vision System based on Single-Pixel imaging and indirect Time-of-Flight for drone applications. , 2020, , .		2
90	Control algorithm using trajectory-based MPC for MPPT application. , 2015, , .		1

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91	Automatic stellar spectral classification with multiple intelligent classifiers. , 2017, , .		1
92	Real Time Monitoring of 3 Axis Accelerometer using an FPGA Zynq®-7000 and Embedded Linux through Ethernet. , 2018, , .		1
93	Visualization of blood vessels in in vitro raw speckle images using an energy-based on DWT coefficients. Biomedical Signal Processing and Control, 2021, 69, 102892.	3.5	1
94	Step Length Estimation and Activity Detection in a PDR System Based on a Fuzzy Model with Inertial Sensors. Studies in Computational Intelligence, 2014, , 631-645.	0.7	1
95	Multiclass Incremental Learning for Fault Diagnosis in Induction Motors Using Fine-Tuning with a Memory of Exemplars and Nearest Centroid Classifier. Shock and Vibration, 2021, 2021, 1-12.	0.3	1
96	Noise Reduction in Electrical Signal Using OMP Algorithm Based on DCT and DSC Dictionaries. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	2.4	1
97	Simulation of the predictive direct torque control for a PM synchronous machine. , 2015, , .		0
98	FPGA-based delay compensation on model predictive control for a PM synchronous machine. , 2015, , .		0
99	Robust laser speckle contrast images suitable for blood vessel visualization. , 2017, , .		0
100	First performance evaluation of MexSiC - a readout ASIC for analog SiPM based Cherenkov detectors. , 2019, , .		0
101	Spectral Characterization of Content Level Based on Acoustic Resonance: Neural Network and Feedforward Fuzzy Net Approaches. Studies in Computational Intelligence, 2017, , 207-224.	0.7	0