Carlos R Barbosa

List of Publications by Year
in descending order

74 papers	461 citations	840776 11 h-index	888059 17 g-index
75 all docs	75 docs citations	75 times ranked	318 citing authors

#	ARTICLE	IF	CITATIONS
1	Optimization of flow rate measurement using piezoelectric accelerometers: Application in water industry. Measurement: Journal of the International Measurement Confederation, 2016, 91, 576-581.	5.0	27
2	High sensitivity giant magnetoimpedance (GMI) magnetic transducer: magnitude versus phase sensing. Measurement Science and Technology, 2011, 22, 035204.	2.6	26
3	Neural Network Simulation and Evolutionary Synthesis of QCA Circuits. IEEE Transactions on Computers, 2007, 56, 191-201.	3.4	23
4	Flow Measurement by Piezoelectric Accelerometers: Application in the Oil Industry. Petroleum Science and Technology, 2015, 33, 1402-1409.	1.5	23
5	Ring shaped magnetic field transducer based on the GMI effect. Measurement Science and Technology, 2008, 19, 025801.	2.6	22
6	Locating steel needles in the human body using a SQUID magnetometer. Physics in Medicine and Biology, 2000, 45, 2389-2402.	3.0	19
7	Evaluation of the electromechanical behavior of polyvinylidene fluoride used as a component of risers in the offshore oil industry. Oil and Gas Science and Technology, 2018, 73, 48.	1.4	19
8	Detection of reentry currents in atrial flutter by magnetocardiography. IEEE Transactions on Biomedical Engineering, 1992, 39, 818-824.	4.2	18
9	Development and Validation of LiDAR Sensor Simulators Based on Parallel Raycasting. Sensors, 2020, 20, 7186.	3.8	17
10	Quantum-Inspired Evolutionary Algorithms and Its Application to Numerical Optimization Problems. Lecture Notes in Computer Science, 2004, , 212-217.	1.3	16
11	Simulation of a plane wavefront propagating in cardiac tissue using a cellular automata model. Physics in Medicine and Biology, 2003, 48, 4151-4164.	3.0	15
12	Improvement of a technique for localization of steel needles in humans using a SQUID magnetometer. IEEE Transactions on Applied Superconductivity, 2001, 11, 677-680.	1.7	11
13	A survey of calibration procedures for SQUID gradiometers. Superconductor Science and Technology, 2003, 16, 427-431.	3.5	11
14	High sensitivity pressure transducer based on the phase characteristics of GMI magnetic sensors. Measurement Science and Technology, 2018, 29, 035106.	2.6	11
15	New magnetic techniques for inspection and metal-loss assessment of oil pipelines. Journal of Magnetism and Magnetic Materials, 2001, 226-230, 2061-2062.	2.3	10
16	Flowmeter based on a piezoelectric PVDF tube. Measurement: Journal of the International Measurement Confederation, 2019, 138, 368-378.	5.0	10
17	Localization of firearm projectiles in the human body using a superconducting quantum interference device magnetometer: A theoretical study. Review of Scientific Instruments, 2004, 75, 2098-2106.	1.3	9
18	Magnetic field transducers based on the phase characteristics of GMI sensors and aimed at biomedical applications. IFMBE Proceedings, 2009, , 652-656.	0.3	9

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19	Point matching: A new electronic method for homogenizing the phase characteristics of giant magnetoimpedance sensors. Review of Scientific Instruments, 2014, 85, 084708.	1.3	9
20	An enhanced electronic topology aimed at improving the phase sensitivity of GMI sensors. Measurement Science and Technology, 2014, 25, 115010.	2.6	9
21	Cultural Operators for a Quantum-Inspired Evolutionary Algorithm Applied to Numerical Optimization Problems. Lecture Notes in Computer Science, 2005, , 1-10.	1.3	8
22	Medição não-invasiva de ondas de pulso arterial utilizando transdutor de pressão MIG. IFMBE Proceedings, 2007, , 436-439.	0.3	8
23	Electronic approach for enhancing impedance phase sensitivity of GMI magnetic sensors. Electronics Letters, 2013, 49, 396-397.	1.0	7
24	Image processing techniques for NDE SQUID systems. IEEE Transactions on Applied Superconductivity, 1995, 5, 2478-2481.	1.7	6
25	Automation of SQUID nondestructive evaluation of steel plates by neural networks. IEEE Transactions on Applied Superconductivity, 1999, 9, 3475-3478.	1.7	6
26	Flux/voltage calibration of axial SQUID gradiometers using an optimization procedure. IEEE Transactions on Applied Superconductivity, 1999, 9, 3523-3526.	1.7	6
27	Fetal cardiac activity analysis during twin pregnancy using a multi-channel SQUID system. Physica C: Superconductivity and Its Applications, 2001, 354, 87-90.	1.2	6
28	Animal Experimentation Study of Atrial Activity Propagation Using a Multi-channel SQUID System. Biomedizinische Technik, 2001, 46, 70-72.	0.8	6
29	Tail-Chopped Lightning Impulses Time Parameters Estimated According to Standard IEC 60060-1:2010. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 1369-1372.	4.7	5
30	Biomedical comparison of magnetometers for non-ferromagnetic metallic foreign body detection. Journal of Physics: Conference Series, 2018, 1044, 012013.	0.4	5
31	Design of experiments to analyze the influence of water content and meter factor on the uncertainty of oil flow measurement with ultrasonic meters. Flow Measurement and Instrumentation, 2019, 70, 101627.	2.0	5
32	Partial decomposition approach to generate load curve forecasting scenarios. International Journal of Electrical Power and Energy Systems, 2020, 115, 105436.	5.5	5
33	Safe exposure distances for transcranial magnetic stimulation based on computer simulations. PeerJ, 2018, 6, e5034.	2.0	5
34	Application of a cellular automata model to the study of magnetic detection of slow-pathway in cardiac tissue. EPJ Applied Physics, 2000, 10, 67-71.	0.7	4
35	Nondestructive evaluation of steel structures using a superconducting quantum interference device magnetometer and a neural network system. Review of Scientific Instruments, 2000, 71, 3806.	1.3	4
36	Validation of a System for Evaluation of High-Voltage Impulses According to IEC 60060:2010. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 1378-1382.	4.7	4

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37	Neural Networks for Inflow Forecasting Using Precipitation Information. Lecture Notes in Computer Science, 2007, , 552-561.	1.3	4
38	Progress Toward a Hundredfold Enhancement in the Impedance Phase Sensitivity of GMI Magnetic Sensors aiming at Biomagnetic Measurements. IFMBE Proceedings, 2013, , 742-745.	0.3	4
39	Current density optimizations in actively shielded multipole magnets. IEEE Transactions on Magnetics, 1998, 34, 2908-2911.	2.1	3
40	Modelagem da sensibilidade de amostras GMI por redes neurais. Controle and Automacao, 2012, 23, 636-648.	0.2	3
41	Electronic circuit for excitation of inductive loads with high currents. Electronics Letters, 2015, 51, 1808-1809.	1.0	3
42	Multi-resolution wavelet analysis for noise reduction in impulse puncture voltage measurements. Measurement: Journal of the International Measurement Confederation, 2020, 153, 107416.	5.0	3
43	Development of a Low-Cost Data Acquisition System for Very Short-Term Photovoltaic Power Forecasting. Energies, 2021, 14, 6075.	3.1	3
44	An electronic approach to homogenize the impedance phase characteristics of heterogeneous GMI sensors. Acta IMEKO (2012), 2012, 1, 70.	0.7	3
45	Sensitivity improvement of GMI magnetic and pressure transducers for biomedical measurements. Revista Brasileira De Engenharia Biomedica, 2011, 27, 79-89.	0.3	3
46	Decision Support Methods. Studies in Computational Intelligence, 2009, , 23-96.	0.9	3
47	Application of a single-channel SQUID magnetometer for non-invasive study of cardiac tachyarrhythmias mechanisms. Physica C: Superconductivity and Its Applications, 2001, 354, 83-86.	1.2	2
48	Transdutor de pressÃ£o, baseado nas caracterÃsticas de fase do efeito GMI, destinado a aplicaÃ§Ãµes biomÃ©dicas. Controle and Automacao, 2010, 21, 598-608.	0.2	2
49	Estimation of time parameters of tail chopped lightning impulses - Clarification of the standard IEC 60060-1/2010. , 2014, , .		2
50	System for automatic evaluation of voltage impulses according to the standard IEC 60060/2010. , 2014, , .		2
51	Quality by Design approach in the development of a magnetic transducer for biomedical measurements: preliminary results on Design Space configuration. Journal of Physics: Conference Series, 2016, 772, 012016.	0.4	2
52	Methodology for evaluation of methods for volume correction of liquid oil derivatives. Measurement: Journal of the International Measurement Confederation, 2020, 153, 107388.	5.0	2
53	Comparative Analysis of Object Digitization Techniques Applied to the Characterization of Deformed Materials in Ballistic Tests. Sensors, 2020, 20, 5017.	3.8	2
54	Non-Intrusive Fluid Flow Measurement by FBG Sensing of Flow-Induced Vibrations. , 2018, , .		2

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55	Electric Current Injection NDE Using a SQUID Magnetometer. Research in Nondestructive Evaluation, 1996, 8, 165-175.	1.1	1
56	Molecular Circuit Design. , 0, , .		1
57	Neuro-genetic system for optimization of GMI samples sensitivity. Neural Networks, 2016, 75, 141-149.	5.9	1
58	Infrared optoelectronic device for counting and measuring velocity of abrasive sponge balls used as cleaning artefacts in heat exchangers. Journal of Physics: Conference Series, 2018, 1065, 152002.	0.4	1
59	Multi-parameter fuzzy design space for QbD approach applied in the development of biomedical devices. Journal of Physics: Conference Series, 2018, 1044, 012051.	0.4	1
60	System for Conformity Assessment of Electrocardiographs. IFMBE Proceedings, 2009, , 1124-1127.	0.3	1
61	Development of a fast and reliable system for the automatic characterization of Giant magnetoimpedance samples. Acta IMEKO (2012), 2013, 2, 21.	0.7	1
62	Modelo de Previsão de Vazão com Informação de Precipitação Utilizando Redes Neurais. Revista Brasileira De Recursos Hidricos, 2007, 12, 69-82.	0.5	1
63	Location of Reentry Currents in Isolated Rabbit Cardiac Tissues through Inverse Magnetocardiography. Biomedizinische Technik, 2001, 46, 63-65.	0.8	0
64	Bayesian neural networks on the inference of distillation product quality. , 0, , .		0
65	Evolvable Hardware Applied to Nanotechnology. , 2006, , .		0
66	Automated Evaluation of Dynamic Performance of Impulse Voltage Measurement Systems. Journal of Physics: Conference Series, 2015, 575, 012011.	0.4	0
67	Effect of the overshoot level in an alternative method for processing of tail chopped lightning impulses. Journal of Physics: Conference Series, 2016, 733, 012073.	0.4	0
68	Application of genetic algorithms to the solution of the biomagnetic inverse problem, using data acquired by a 16-Channel SQUID system. , 2016, , .		0
69	GMR Sensors and Neural Networks Applied to the Contactless Measurement of Direct Electrical Currents. Journal of Physics: Conference Series, 2018, 975, 012070.	0.4	0
70	A contactless ammeter based on GMR magnetometers. Journal of Physics: Conference Series, 2018, 1044, 012001.	0.4	0
71	Multichannel System for Measuring the Magnetic Flux Density Generated by TMS Devices. IFMBE Proceedings, 2019, , 507-511.	0.3	0
72	Virtual instrument for estimation of HVAC and HVDC test parameters according to IEC 60060-1:2010. Journal of Physics: Conference Series, 2021, 1826, 012104.	0.4	0

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73	Development and Validation of a Masking System for Mitigation of Low-Frequency Audible Noise from Electrical Substations. Applied Sciences (Switzerland), 2021, 11, 7771.	2.5	0
74	Multiparametric quality by design-fuzzy model applied in the development of a biomedical measuring system. International Journal of Metrology and Quality Engineering, 2020, 11, 12.	1.0	0