Luis Gerardo de la Fraga

List of Publications by Year
in descending order

69 papers	**1,157** citations	471061 **17** h-index	414034 **32** g-index
71 all docs	**71** docs citations	**71** times ranked	**1157** citing authors

#	Article	IF	Citations
1	Xmipp: An Image Processing Package for Electron Microscopy. Journal of Structural Biology, 1996, 116, 237-240.	1.3	188
2	Hardware implementation of pseudo-random number generators based on chaotic maps. Nonlinear Dynamics, 2017, 90, 1661-1670.	2.7	107
3	Dynamics, FPGA realization and application of a chaotic system with an infinite number of equilibrium points. Nonlinear Dynamics, 2017, 89, 1129-1139.	2.7	68
4	A variant to the â€œrandom approximationâ€•of the reference-free alignment algorithm. Ultramicroscopy, 1996, 66, 5-10.	0.8	65
5	FPGA-based implementation of different families of fractional-order chaotic oscillators applying GrÃ¼nwaldâ€"Letnikov method. Communications in Nonlinear Science and Numerical Simulation, 2019, 72, 516-527.	1.7	63
6	FPAA-based implementation of fractional-order chaotic oscillators using first-order active filter blocks. Journal of Advanced Research, 2020, 25, 77-85.	4.4	56
7	Optimizing the maximum Lyapunov exponent and phase space portraits in multi-scroll chaotic oscillators. Nonlinear Dynamics, 2014, 76, 1503-1515.	2.7	45
8	Optimization and CMOS design of chaotic oscillators robust to PVT variations: INVITED. The Integration VLSI Journal, 2019, 65, 32-42.	1.3	40
9	Richardson extrapolation-based sensitivity analysis in the multi-objective optimization of analog circuits. Applied Mathematics and Computation, 2013, 222, 167-176.	1.4	39
10	Binary Genetic Encoding for the Synthesis of Mixed-Mode Circuit Topologies. Circuits, Systems, and Signal Processing, 2012, 31, 849-863.	1.2	34
11	Selfâ€organizing treeâ€growing network for the classification of protein sequences. Protein Science, 1998, 7, 2613-2622.	3.1	31
12	Engineering Applications of FPGAs. , 2016, , .		31
13	Normalizing projection images: a study of image normalizing procedures for single particle three-dimensional electron microscopy. Ultramicroscopy, 2004, 101, 129-138.	0.8	27
14	Designing an authenticated Hash function with a 2D chaotic map. Nonlinear Dynamics, 2021, 104, 4569-4580.	2.7	25
15	VHDL Descriptions for the FPGA Implementation of PWL-Function-Based Multi-Scroll Chaotic Oscillators. PLoS ONE, 2016, 11, e0168300.	1.1	24
16	FPGA-Based Implementation of a Multilayer Perceptron Suitable for Chaotic Time Series Prediction. Technologies, 2018, 6, 90.	3.0	23
17	Sizing CMOS Amplifiers by PSO and MOL to Improve DC Operating Point Conditions. Electronics (Switzerland), 2020, 9, 1027.	1.8	20
18	Optimization of the Kaplan-Yorke dimension in fractional-order chaotic oscillators by metaheuristics. Applied Mathematics and Computation, 2021, 394, 125831.	1.4	20

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19	Confidence limits for resolution estimation in image averaging by random subsampling. Ultramicroscopy, 1995, 60, 385-391.	0.8	18
20	Estimating the Highest Time-Step in Numerical Methods to Enhance the Optimization of Chaotic Oscillators. Mathematics, 2021, 9, 1938.	1.1	16
21	Pipeline FPGA-Based Implementations of ANNs for the Prediction of up to 600-Steps-Ahead of Chaotic Time Series. Journal of Circuits, Systems and Computers, 2021, 30, 2150164.	1.0	16
22	On the Sizing of CMOS Operational Amplifiers by Applying Many-Objective Optimization Algorithms. Electronics (Switzerland), 2021, 10, 3148.	1.8	16
23	Optimization of fractional-order chaotic cellular neural networks by metaheuristics. European Physical Journal: Special Topics, 2022, 231, 2037-2043.	1.2	15
24	An Image Encryption Scheme Synchronizing Optimized Chaotic Systems Implemented on Raspberry Pis. Mathematics, 2022, 10, 1907.	1.1	15
25	CDCTA and OTA Realizations of a Multi-phase Sinusoidal Oscillator. IETE Technical Review (Institution) Tj ETQq1 1 0.784314 rgBT /Ove	2.1	14
26	Direct Calibration by Fitting of Cuboids to a Single Image Using Differential Evolution. International Journal of Computer Vision, 2009, 81, 119-127.	10.9	13
27	Optimizing the Kaplan–Yorke Dimension of Chaotic Oscillators Applying DE and PSO. Technologies, 2019, 7, 38.	3.0	13
28	Maximizing Lyapunov Exponents in a Chaotic Oscillator by Applying Differential Evolution. International Journal of Nonlinear Sciences and Numerical Simulation, 2014, 15, 11-17.	0.4	12
29	A scalar optimization approach for averaged Hausdorff approximations of the Pareto front. Engineering Optimization, 2016, 48, 1593-1617.	1.5	12
30	Direct 3D metric reconstruction from two views using differential evolution. , 2008, , .		8
31	OCBA in the yield optimization of analog integrated circuits by evolutionary algorithms. , 2015, , .		8
32	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
33	FPGA Implementation of Chaotic Oscillators, Their Synchronization, and Application to Secure Communications. , 2019, , 301-328.		6
34	Automatic extraction of geometric models from 3D point cloud datasets. , 2014, , .		5
35	A fiducial tag invariant to rotation, translation, and perspective transformations. Pattern Recognition, 2018, 81, 213-223.	5.1	5
36	Single-Objective Optimization of a CMOS VCO Considering PVT and Monte Carlo Simulations. Mathematical and Computational Applications, 2020, 25, 76.	0.7	5

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37	Robust fitting of ellipses with heuristics. , 2010, , .		3
38	Fitting an ellipse is equivalent to find the roots of a cubic equation. , 2011, , .		3
39	Fitness function evaluation for the detection of multiple ellipses using a genetic algorithm. , 2011, , .		3
40	Optimizing an amplifier by a many-objective algorithm based on R2 indicator. , 2015, , .		3
41	Optimizing operational amplifiers by metaheuristics and considering tolerance analysis. , 2015, , .		3
42	High-Q and Wide-Bandwidth Capacitor Multiplier Optimized by NSGA-II. IETE Journal of Research, 2019, 65, 661-666.	1.8	3
43	Sizing mixed-mode circuits by multi-objective evolutionary algorithms. , 2010, , .		2
44	Selection of the Optimal Sizes of Analog Integrated Circuits by Fuzzy Sets Intersection. IEEE Latin America Transactions, 2014, 12, 1005-1011.	1.2	2
45	On the Selection of Solutions in Multiobjective Analog Circuit Design. Studies in Computational Intelligence, 2017, , 377-389.	0.7	2
46	Symbolic sensitivity analysis in the multi-objective optimization of CMOS operational amplifiers. , 2017, , .		2
47	Order type dataset analysis for fiducial markers. Data in Brief, 2018, 20, 1068-1072.	0.5	2
48	Differential Evolution under Fixed Point Arithmetic and FP16 Numbers. Mathematical and Computational Applications, 2021, 26, 13.	0.7	2
49	Systems Science for selecting urban freight solution: Application to La Rochelle. , 2008, , .		1
50	Robust detection of several circles or ellipses with heuristics. , 2011, , .		1
51	A very fast procedure to calculate the smallest singular value. , 2015, , .		1
52	On the FPGA implementation of random number generators from chaotic maps. , 2017, , .		1
53	Optimal Sizing of Amplifiers by Evolutionary Algorithms with Integer Encoding and g_m/I_D Design Method. Studies in Computational Intelligence, 2018, , 263-279.	0.7	1
54	Linearizing the Transconductance of an OTA Through the Optimal Sizing by Applying NSGA-II. , 2018, , .		1

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55	Automatic Calculation of the Pupil Response from Digital Video. , 2006, , .		0
56	Non-steady-state photo-EMF effect induced by an arbitrary 1-D periodical light distribution. Proceedings of SPIE, 2010, , .	0.8	0
57	Adaptive photodetector versus conventional method for localization of the Talbot self-images. Proceedings of SPIE, 2010, , .	0.8	0
58	Design of an academic microcontroller and its application to Authenticated Encryption. , 2014, , .		0
59	Processing video frames in iPad for augmented reality applications. , 2014, , .		0
60	On the Verification for Realizing Multi-scroll Chaotic Attractors with High Maximum Lyapunov Exponent and Entropy. Studies in Computational Intelligence, 2016, , 311-336.	0.7	0
61	Multi-ellipse Fitting with PEARL and a Multi-Objective Genetic Algorithm. , 2017, , .		0
62	Symbolic Analysis and Synthesis of Analog Circuits Using Nullors and Pathological Mirror Elements. Lecture Notes in Electrical Engineering, 2018, , 3-30.	0.3	0
63	A Multi-objective Robust Ellipse Fitting Algorithm. Studies in Computational Intelligence, 2018, , 141-158.	0.7	0
64	A Lightweight Library for Augmented Reality Applications. Lecture Notes in Computer Science, 2018, , 221-228.	1.0	0
65	Optimizing the Maximal Perturbation in Point Sets while Preserving the Order Type. Mathematical and Computational Applications, 2019, 24, 97.	0.7	0
66	Deformable Volumetric Simplex Meshes. Lecture Notes in Computer Science, 2008, , 328-337.	1.0	0
67	Ellipse fitting using Neider-Mead and Differential Evolution. , 2008, , .		0
68	Problem of Talbot self-images localization: adaptive photo-EMF-based detector vs. CCD-based methods. , 2010, , .		0
69	Fitting Multiple Ellipses with PEARL and a Multi-objective Genetic Algorithm. Studies in Computational Intelligence, 2019, , 89-107.	0.7	0