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	Optimization of fractional-order chaotic cellular neural networks by metaheuristics. European Physical Journal: Special Topics, 2022, 231, 2037-2043.	1.2	15
2	An Image Encryption Scheme Synchronizing Optimized Chaotic Systems Implemented on Raspberry Pis. Mathematics, 2022, 10, 1907.	1.1	15
3	Optimization of the Kaplan-Yorke dimension in fractional-order chaotic oscillators by metaheuristics. Applied Mathematics and Computation, 2021, 394, 125831.	1.4	20
4	Differential Evolution under Fixed Point Arithmetic and FP16 Numbers. Mathematical and Computational Applications, 2021, 26, 13.	0.7	2
5	Designing an authenticated Hash function with a 2D chaotic map. Nonlinear Dynamics, 2021, 104, 4569-4580.	2.7	25
6	Estimating the Highest Time-Step in Numerical Methods to Enhance the Optimization of Chaotic Oscillators. Mathematics, 2021, 9, 1938.	1.1	16
7	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
8	On the Sizing of CMOS Operational Amplifiers by Applying Many-Objective Optimization Algorithms. Electronics (Switzerland), 2021, 10, 3148.	1.8	16
9	Single-Objective Optimization of a CMOS VCO Considering PVT and Monte Carlo Simulations. Mathematical and Computational Applications, 2020, 25, 76.	0.7	5
10	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
11	Sizing CMOS Amplifiers by PSO and MOL to Improve DC Operating Point Conditions. Electronics (Switzerland), 2020, 9, 1027.	1.8	20
12	High-Q and Wide-Bandwidth Capacitor Multiplier Optimized by NSGA-II. IETE Journal of Research, 2019, 65, 661-666.	1.8	3
13	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
14	FPGA-based implementation of different families of fractional-order chaotic oscillators applying Grünwald–Letnikov method. Communications in Nonlinear Science and Numerical Simulation, 2019, 72, 516-527.	1.7	63
15	Optimizing the Kaplan–Yorke Dimension of Chaotic Oscillators Applying DE and PSO. Technologies, 2019, 7, 38.	3.0	13
16	FPGA Implementation of Chaotic Oscillators, Their Synchronization, and Application to Secure Communications. , 2019, , 301-328.		6
17	Optimizing the Maximal Perturbation in Point Sets while Preserving the Order Type. Mathematical and Computational Applications, 2019, 24, 97.	0.7	0
18	Optimization and CMOS design of chaotic oscillators robust to PVT variations: INVITED. The Integration VLSI Journal, 2019, 65, 32-42.	1.3	40

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19	Fitting Multiple Ellipses with PEARL and a Multi-objective Genetic Algorithm. Studies in Computational Intelligence, 2019, , 89-107.	0.7	0
20	Symbolic Analysis and Synthesis of Analog Circuits Using Nullors and Pathological Mirror Elements. Lecture Notes in Electrical Engineering, 2018, , 3-30.	0.3	0
21	A fiducial tag invariant to rotation, translation, and perspective transformations. Pattern Recognition, 2018, 81, 213-223.	5.1	5
22	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
23	A Multi-objective Robust Ellipse Fitting Algorithm. Studies in Computational Intelligence, 2018, , 141-158.	0.7	0
24	Order type dataset analysis for fiducial markers. Data in Brief, 2018, 20, 1068-1072.	0.5	2
25	FPGA-Based Implementation of a Multilayer Perceptron Suitable for Chaotic Time Series Prediction. Technologies, 2018, 6, 90.	3.0	23
26	A Lightweight Library for Augmented Reality Applications. Lecture Notes in Computer Science, 2018, , 221-228.	1.0	0
27	Linearizing the Transconductance of an OTA Through the Optimal Sizing by Applying NSGA-II. , 2018, , .		1
28	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
29	Hardware implementation of pseudo-random number generators based on chaotic maps. Nonlinear Dynamics, 2017, 90, 1661-1670.	2.7	107
30	On the Selection of Solutions in Multiobjective Analog Circuit Design. Studies in Computational Intelligence, 2017, , 377-389.	0.7	2
31	Symbolic sensitivity analysis in the multi-objective optimization of CMOS operational amplifiers. , 2017, , .		2
32	On the FPGA implementation of random number generators from chaotic maps. , 2017, , .		1
33	Multi-ellipse Fitting with PEARL and a Multi-Objective Genetic Algorithm. , 2017, , .		0
34	VHDL Descriptions for the FPGA Implementation of PWL-Function-Based Multi-Scroll Chaotic Oscillators. PLoS ONE, 2016, 11, e0168300.	1.1	24
35	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
36	Engineering Applications of FPGAs. , 2016, , .		31

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37	A scalar optimization approach for averaged Hausdorff approximations of the Pareto front. Engineering Optimization, 2016, 48, 1593-1617.	1.5	12
38	Optimizing an amplifier by a many-objective algorithm based on R2 indicator. , 2015, , .		3
39	Optimizing operational amplifiers by metaheuristics and considering tolerance analysis. , 2015, , .		3
40	OCBA in the yield optimization of analog integrated circuits by evolutionary algorithms. , 2015, , .		8
41	CDCTA and OTA Realizations of a Multi-phase Sinusoidal Oscillator. IETE Technical Review (Institution) Tj ETQq1 1 0.784314 rgBT /Overl	2.1	14
42	A very fast procedure to calculate the smallest singular value. , 2015, , .		1
43	Automatic extraction of geometric models from 3D point cloud datasets. , 2014, , .		5
44	Design of an academic microcontroller and its application to Authenticated Encryption. , 2014, , .		0
45	Selection of the Optimal Sizes of Analog Integrated Circuits by Fuzzy Sets Intersection. IEEE Latin America Transactions, 2014, 12, 1005-1011.	1.2	2
46	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
47	Optimizing the maximum Lyapunov exponent and phase space portraits in multi-scroll chaotic oscillators. Nonlinear Dynamics, 2014, 76, 1503-1515.	2.7	45
48	Processing video frames in iPad for augmented reality applications. , 2014, , .		0
49	Richardson extrapolation-based sensitivity analysis in the multi-objective optimization of analog circuits. Applied Mathematics and Computation, 2013, 222, 167-176.	1.4	39
50	Binary Genetic Encoding for the Synthesis of Mixed-Mode Circuit Topologies. Circuits, Systems, and Signal Processing, 2012, 31, 849-863.	1.2	34
51	Fitting an ellipse is equivalent to find the roots of a cubic equation. , 2011, , .		3
52	Robust detection of several circles or ellipses with heuristics. , 2011, , .		1
53	Fitness function evaluation for the detection of multiple ellipses using a genetic algorithm. , 2011, , .		3
54	Non-steady-state photo-EMF effect induced by an arbitrary 1-D periodical light distribution. Proceedings of SPIE, 2010, , .	0.8	0

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55	Adaptive photodetector versus conventional method for localization of the Talbot self-images. Proceedings of SPIE, 2010, , .	0.8	0
56	Sizing mixed-mode circuits by multi-objective evolutionary algorithms. , 2010, , .		2
57	Robust fitting of ellipses with heuristics. , 2010, , .		3
58	Problem of Talbot self-images localization: adaptive photo-EMF-based detector vs. CCD-based methods. , 2010, , .		0
59	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
60	Systems Science for selecting urban freight solution: Application to La Rochelle. , 2008, , .		1
61	Direct 3D metric reconstruction from two views using differential evolution. , 2008, , .		8
62	Deformable Volumetric Simplex Meshes. Lecture Notes in Computer Science, 2008, , 328-337.	1.0	0
63	Ellipse fitting using Neider-Mead and Differential Evolution. , 2008, , .		0
64	Automatic Calculation of the Pupil Response from Digital Video. , 2006, , .		0
65	Normalizing projection images: a study of image normalizing procedures for single particle three-dimensional electron microscopy. Ultramicroscopy, 2004, 101, 129-138.	0.8	27
66	Self‐organizing tree‐growing network for the classification of protein sequences. Protein Science, 1998, 7, 2613-2622.	3.1	31
67	Xmipp: An Image Processing Package for Electron Microscopy. Journal of Structural Biology, 1996, 116, 237-240.	1.3	188
68	A variant to the "random approximation" of the reference-free alignment algorithm. Ultramicroscopy, 1996, 66, 5-10.	0.8	65
69	Confidence limits for resolution estimation in image averaging by random subsampling. Ultramicroscopy, 1995, 60, 385-391.	0.8	18