

Ivo Petras

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

83
papers

4,049
citations

25
h-index

63
g-index

95
ext. papers

4,883
ext. citations

2.7
avg, IF

6.23
L-index

#	Paper	IF	Citations
83	Fractional-order control: New control techniques 2022 , 71-106		
82	The fractional-order Lorenz-type systems: A review.. <i>Fractional Calculus and Applied Analysis</i> , 2022 , 1-16	2.7	2
81	Oscillators Based on Fractional-Order Memory Elements. <i>Fractal and Fractional</i> , 2022 , 6, 283	3	0
80	Cross-Platform GPU-Based Implementation of Lattice Boltzmann Method Solver Using ArrayFire Library. <i>Mathematics</i> , 2021 , 9, 1793	2.3	0
79	Novel Fractional-Order Model Predictive Control: State-Space Approach. <i>IEEE Access</i> , 2021 , 9, 92769-92775	3.5	1
78	Reduced Active Components Count Electronically Adjustable Fractional-Order Controllers: Two Design Examples. <i>Electronics (Switzerland)</i> , 2020 , 9, 63	2.6	6
77	Comments and Corrections to Design and Implementation of Novel Fractional-Order Controllers for Stabilized Platforms. <i>IEEE Access</i> , 2020 , 8, 132413-132414	3.5	
76	Comments on Chaotic oscillator based on memcapacitor and meminductor. <i>Nonlinear Dyn</i> , DOI: 10.1007/s11071-019-04781-5). <i>Nonlinear Dynamics</i> , 2020 , 102, 2945-2950	5	2
75	Simple Design of Fractional-Order DC Motor Controller 2019 ,		2
74	Anomalous diffusion modeling using ultracapacitors in domino ladder circuit. <i>Microelectronics Journal</i> , 2019 , 84, 136-141	1.8	2
73	Fractional Calculus as a Simple Tool for Modeling and Analysis of Long Memory Process in Industry. <i>Mathematics</i> , 2019 , 7, 511	2.3	13
72	Volume 6 Applications in Control 2019 ,		7
71	Modified versions of the fractional-order PID controller 2019 , 57-72		
70	Novel polarization index evaluation formula and fractional-order dynamics in electric motor insulation resistance. <i>Fractional Calculus and Applied Analysis</i> , 2018 , 21, 613-627	2.7	7
69	Testing non reciprocal motion of a swimming flexible small robot with single actuation 2018 ,		1
68	An introduction to class of fractional-order extremal control: First results 2018 ,		1
67	New analog implementation technique for fractional-order controller: A DC motor control. <i>AEU - International Journal of Electronics and Communications</i> , 2017 , 78, 192-200	2.8	84

66	Comments on "Coexistence of hidden chaotic attractors in a novel no-equilibrium system" (Nonlinear Dyn, doi:10.1007/s11071-016-3170-x). <i>Nonlinear Dynamics</i> , 2017 , 90, 749-754	5	5
65	Design of a MATLAB-based teaching tool in introductory fractional-order systems and controls 2017 ,		3
64	A note on fractional-order non-linear controller: possible neural network approach to design 2016 ,		3
63	Incorporation of fractional-order dynamics into an existing PI/PID DC motor control loop. <i>ISA Transactions</i> , 2016 , 60, 262-273	5.5	56
62	Fractional-order nonlinear controllers: Design and implementation notes 2016 ,		5
61	Toolboxes and programs for fractional-order system identification, modeling, simulation, and control 2016 ,		8
60	2016 ,		2
59	An effective algorithm for implementation of non-linear fractional-order controller on PLC 2016 ,		3
58	Measurement of para-xylene diffusivity in zeolites and analyzing desorption curves using the Mittag-Leffler function. <i>Fractional Calculus and Applied Analysis</i> , 2016 , 19, 551-560	2.7	2
57	Numerical solution of the fractional Euler-Lagrange equations of a thin elastica model. <i>Nonlinear Dynamics</i> , 2015 , 81, 97-102	5	11
56	Advances in fractional calculus: Control and signal processing applications 2015 ,		8
55	Diffusion process modeling by using fractional-order models. <i>Applied Mathematics and Computation</i> , 2015 , 257, 2-11	2.7	109
54	A note on time series data analysis using a fractional calculus technique 2014 ,		1
53	Practical aspects for implementation of fractional-order controllers 2014 ,		2
52	Conceptual design of a selectable fractional-order differentiator for industrial applications. <i>Fractional Calculus and Applied Analysis</i> , 2014 , 17,	2.7	37
51	Fractional Bateman-Beshbach Tikochinsky Oscillator. <i>Communications in Theoretical Physics</i> , 2014 , 61, 221-225	2.4	25
50	An adaptive fractional-order controller 2013 ,		3
49	Application of PID retuning method for laboratory feedback control system incorporating FO dynamics 2013 ,		4

48	A Fractional Variational Approach to the Fractional Basset-Type Equation. <i>Reports on Mathematical Physics</i> , 2013 , 72, 57-64	0.8	13
47	Modelling heat transfer in heterogeneous media using fractional calculus. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013 , 371, 20120146	3	123
46	On the mathematical properties of generalized fractional-order two-port networks using hybrid parameters 2013 ,		3
45	. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 459-466	4.8	71
44	Analogue Realization of Fractional-Order Dynamical Systems. <i>Entropy</i> , 2013 , 15, 4199-4214	2.8	101
43	Matrix approach to discrete fractional calculus III: non-equidistant grids, variable step length and distributed orders. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013 , 371, 20120153	3	41
42	Tuning and implementation methods for fractional-order controllers. <i>Fractional Calculus and Applied Analysis</i> , 2012 , 15,	2.7	78
41	Identification of Parameters of a Half-Order System. <i>IEEE Transactions on Signal Processing</i> , 2012 , 60, 5561-5566	4.8	43
40	CHAOS IN FRACTIONAL-ORDER POPULATION MODEL. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2012 , 22, 1250072	2	8
39	Modeling of the national economies in state-space: A fractional calculus approach. <i>Economic Modelling</i> , 2012 , 29, 1322-1327	3.4	67
38	Comparison of the electronic realization of the fractional-order system and its model 2012 ,		6
37	Fractional-order circuit elements with memory 2012 ,		12
36	Fitting of experimental data using Mittag-Leffler function 2012 ,		16
35	Data fitting using solutions of differential equations: Fractional-order model versus integer-order model 2012 ,		5
34	Fractional PaisDhlenbeck Oscillator. <i>International Journal of Theoretical Physics</i> , 2012 , 51, 1253-1258	1.1	17
33	Fractional-Order Nonlinear Systems. <i>Nonlinear Physical Science</i> , 2011 ,	0.1	685
32	Frequency response based identification of fractional order dynamical systems 2011 ,		1
31	Stability test procedure for a certain class of the fractional-order systems 2011 ,		5

30	Modeling of heat transfer process by using discrete fractional-order neural networks 2011 ,		6
29	Fractional-Order Systems. <i>Nonlinear Physical Science</i> , 2011 , 43-54	0.1	29
28	Fractional-Order Chaotic Systems. <i>Nonlinear Physical Science</i> , 2011 , 103-184	0.1	18
27	Stability of Fractional-Order Systems. <i>Nonlinear Physical Science</i> , 2011 , 55-101	0.1	5
26	Fractional Calculus. <i>Nonlinear Physical Science</i> , 2011 , 7-42	0.1	12
25	Control of Fractional-Order Chaotic Systems. <i>Nonlinear Physical Science</i> , 2011 , 185-199	0.1	4
24	Modeling Heat Transfer in Heterogeneous Media Using Fractional Calculus 2011 ,		6
23	An Effective Numerical Method and Its Utilization to Solution of Fractional Models Used in Bioengineering Applications. <i>Advances in Difference Equations</i> , 2011 , 2011, 1-14	3.6	12
22	Fractional Derivatives, Fractional Integrals, and Fractional Differential Equations in Matlab 2011 ,		33
21	Identification of model parameters and control of heater on laboratory object PCT40 2011 ,		2
20	Modeling and numerical analysis of fractional-order Bloch equations. <i>Computers and Mathematics With Applications</i> , 2011 , 61, 341-356	2.7	51
19	Simulation of Drug Uptake in a Two Compartmental Fractional Model for a Biological System. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2011 , 16, 4588-4595	3.7	70
18	Discrete Fractional Calculus: Non-Equidistant Grids and Variable Step Length 2011 ,		2
17	Least Squares or Least Circles?. <i>Chance</i> , 2010 , 23, 38-42	1	5
16	Fractional-Order Memristor-Based Chua's Circuit. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2010 , 57, 975-979	3.5	159
15	Discussion on: Simple Fractional Order Model Structures and their Applications in Control System Design <i>European Journal of Control</i> , 2010 , 16, 697-698	2.5	2
14	Least Squares or Least Circles?. <i>Chance</i> , 2010 , 23, 38-42	1	1
13	A note on the fractional-order Volta system. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2010 , 15, 384-393	3.7	28

12	Fractional Order Systems. <i>World Scientific Series on Nonlinear Science, Series A</i> , 2010 ,	3.3	379
11	Analogue Fractional-Order Generalized Memristive Devices 2009 ,		21
10	Chaos in the fractional-order Voltař system: modeling and simulation. <i>Nonlinear Dynamics</i> , 2009 , 57, 157-170	5	82
9	Fractional-order memristive systems 2009 ,		15
8	Fractional order control - A tutorial 2009 ,		401
7	Fractional - order chaotic systems 2009 ,		12
6	A note on the fractional-order Chuař system. <i>Chaos, Solitons and Fractals</i> , 2008 , 38, 140-147	9.3	163
5	State space description of national economies: The V4 countries. <i>Computational Statistics and Data Analysis</i> , 2007 , 52, 1223-1233	1.6	20
4	Two direct Tustin discretization methods for fractional-order differentiator/integrator. <i>Journal of the Franklin Institute</i> , 2003 , 340, 349-362	4	264
3	Using Fractional Order Adjustment Rules and Fractional Order Reference Models in Model-Reference Adaptive Control. <i>Nonlinear Dynamics</i> , 2002 , 29, 269-279	5	158
2	Analogue Realizations of Fractional-Order Controllers. <i>Nonlinear Dynamics</i> , 2002 , 29, 281-296	5	374
1	Fractional Calculus and its Applications 355-396		1