

Ivo Petras

List of Publications by Year in descending order

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87
papers

5,547
citations

236612

25
h-index

189595

50
g-index

95
all docs

95
docs citations

95
times ranked

3065
citing authors

#	ARTICLE	IF	CITATIONS
1	Fractional-Order Nonlinear Systems. Nonlinear Physical Science, 2011, , .	0.2	958
2	Fractional order control - A tutorial. , 2009, , .		612
3	Analogue Realizations of Fractional-Order Controllers. Nonlinear Dynamics, 2002, 29, 281-296.	2.7	484
4	Two direct Tustin discretization methods for fractional-order differentiator/integrator. Journal of the Franklin Institute, 2003, 340, 349-362.	1.9	320
5	A note on the fractional-order Chua's system. Chaos, Solitons and Fractals, 2008, 38, 140-147.	2.5	212
6	Analogue Realization of Fractional-Order Dynamical Systems. Entropy, 2013, 15, 4199-4214.	1.1	212
7	Title is missing!. Nonlinear Dynamics, 2002, 29, 269-279.	2.7	207
8	Fractional-Order Memristor-Based Chua's Circuit. IEEE Transactions on Circuits and Systems II: Express Briefs, 2010, 57, 975-979.	2.2	189
9	Modelling heat transfer in heterogeneous media using fractional calculus. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120146.	1.6	163
10	Diffusion process modeling by using fractional-order models. Applied Mathematics and Computation, 2015, 257, 2-11.	1.4	130
11	New analog implementation technique for fractional-order controller: A DC motor control. AEU - International Journal of Electronics and Communications, 2017, 78, 192-200.	1.7	110
12	Tuning and implementation methods for fractional-order controllers. Fractional Calculus and Applied Analysis, 2012, 15, 282-303.	1.2	107
13	Chaos in the fractional-order Volta's system: modeling and simulation. Nonlinear Dynamics, 2009, 57, 157-170.	2.7	100
14	Simulation of drug uptake in a two compartmental fractional model for a biological system. Communications in Nonlinear Science and Numerical Simulation, 2011, 16, 4588-4595.	1.7	95
15	Experimental Evidence of Variable-Order Behavior of Ladders and Nested Ladders. IEEE Transactions on Control Systems Technology, 2013, 21, 459-466.	3.2	89
16	Incorporation of fractional-order dynamics into an existing PI/PID DC motor control loop. ISA Transactions, 2016, 60, 262-273.	3.1	86
17	Modeling of the national economies in state-space: A fractional calculus approach. Economic Modelling, 2012, 29, 1322-1327.	1.8	80
18	Fractional-Order Systems. Nonlinear Physical Science, 2011, , 43-54.	0.2	76

#	ARTICLE	IF	CITATIONS
19	Modeling and numerical analysis of fractional-order Bloch equations. Computers and Mathematics With Applications, 2011, 61, 341-356.	1.4	58
20	Fractional Derivatives, Fractional Integrals, and Fractional Differential Equations in Matlab. , 0, , .		54
21	Identification of Parameters of a Half-Order System. IEEE Transactions on Signal Processing, 2012, 60, 5561-5566.	3.2	53
22	Matrix approach to discrete fractional calculus III: non-equidistant grids, variable step length and distributed orders. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120153.	1.6	49
23	Conceptual design of a selectable fractional-order differentiator for industrial applications. Fractional Calculus and Applied Analysis, 2014, 17, 697-716.	1.2	46
24	A note on the fractional-order Volta's system. Communications in Nonlinear Science and Numerical Simulation, 2010, 15, 384-393.	1.7	38
25	Fractional-Order Chaotic Systems. Nonlinear Physical Science, 2011, , 103-184.	0.2	31
26	Analogue Fractional-Order Generalized Memristive Devices. , 2009, , .		28
27	Fractional Calculus as a Simple Tool for Modeling and Analysis of Long Memory Process in Industry. Mathematics, 2019, 7, 511.	1.1	28
28	Fractional-order memristive systems. , 2009, , .		26
29	Fractional Bateman's Feshbach Tikochinsky Oscillator. Communications in Theoretical Physics, 2014, 61, 221-225.	1.1	26
30	State space description of national economies: The V4 countries. Computational Statistics and Data Analysis, 2007, 52, 1223-1233.	0.7	23
31	Fitting of experimental data using Mittag-Leffler function. , 2012, , .		20
32	Fractional Pais's Uhlenbeck Oscillator. International Journal of Theoretical Physics, 2012, 51, 1253-1258.	0.5	20
33	Fractional - order chaotic systems. , 2009, , .		19
34	Advances in fractional calculus: Control and signal processing applications. , 2015, , .		19
35	A Fractional Variational Approach to the Fractional Basset-Type Equation. Reports on Mathematical Physics, 2013, 72, 57-64.	0.4	17
36	An Effective Numerical Method and Its Utilization to Solution of Fractional Models Used in Bioengineering Applications. Advances in Difference Equations, 2011, 2011, 1-14.	3.5	16

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37	Fractional-order circuit elements with memory. , 2012, , .		15
38	Numerical solution of the fractional Euler-Lagrange's equations of a thin elastica model. Nonlinear Dynamics, 2015, 81, 97-102.	2.7	14
39	Fractional Calculus. Nonlinear Physical Science, 2011, , 7-42.	0.2	12
40	Comparison of the electronic realization of the fractional-order system and its model. , 2012, , .		11
41	CHAOS IN FRACTIONAL-ORDER POPULATION MODEL. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250072.	0.7	10
42	Novel Polarization Index Evaluation Formula and Fractional-Order Dynamics in Electric Motor Insulation Resistance. Fractional Calculus and Applied Analysis, 2018, 21, 613-627.	1.2	10
43	The fractional-order Lorenz-type systems: A review. Fractional Calculus and Applied Analysis, 2022, 25, 362-377.	1.2	10
44	Least Squares or Least Circles?. Chance, 2010, 23, 38-42.	0.1	9
45	Modeling of heat transfer process by using discrete fractional-order neural networks. , 2011, , .		9
46	Stability of Fractional-Order Systems. Nonlinear Physical Science, 2011, , 55-101.	0.2	9
47	Modeling Heat Transfer in Heterogeneous Media Using Fractional Calculus. , 2011, , .		9
48	Fractional-order nonlinear controllers: Design and implementation notes. , 2016, , .		9
49	Stability test procedure for a certain class of the fractional-order systems. , 2011, , .		8
50	Data fitting using solutions of differential equations: Fractional-order model versus integer-order model. , 2012, , .		8
51	Toolboxes and programs for fractional-order system identification, modeling, simulation, and control. , 2016, , .		8
52	Reduced Active Components Count Electronically Adjustable Fractional-Order Controllers: Two Design Examples. Electronics (Switzerland), 2020, 9, 63.	1.8	8
53	Novel Fractional-Order Model Predictive Control: State-Space Approach. IEEE Access, 2021, 9, 92769-92775.	2.6	7
54	Design of a MATLAB-based teaching tool in introductory fractional-order systems and controls. , 2017, , .		6

#	ARTICLE	IF	CITATIONS
55	Application of PID retuning method for laboratory feedback control system incorporating FO dynamics. , 2013, , .		5
56	On the mathematical properties of generalized fractional-order two-port networks using hybrid parameters. , 2013, , .		5
57	Comments on "Coexistence of hidden chaotic attractors in a novel no-equilibrium system"(Nonlinear) Tj ETQq1 0.784314 rgBT /Ov	2.7	5
58	An adaptive fractional-order controller. , 2013, , .		4
59	A note on time series data analysis using a fractional calculus technique. , 2014, , .		4
60	A note on fractional-order non-linear controller: possible neural network approach to design. , 2016, , .		4
61	Simple Design of Fractional-Order DC Motor Controller. , 2019, , .		4
62	Anomalous diffusion modeling using ultracapacitors in domino ladder circuit. Microelectronics Journal, 2019, 84, 136-141.	1.1	4
63	Cross-Platform GPU-Based Implementation of Lattice Boltzmann Method Solver Using ArrayFire Library. Mathematics, 2021, 9, 1793.	1.1	4
64	Identification of model parameters and control of heater on laboratory object PCT40. , 2011, , .		3
65	A new discrete approximation of the fractional-order operator. , 2012, , .		3
66	Practical aspects for implementation of fractional-order controllers. , 2014, , .		3
67	An effective algorithm for implementation of non-linear fractional-order controller on PLC. , 2016, , .		3
68	Measurement of Para-Xylene Diffusivity in Zeolites and Analyzing Desorption Curves Using the Mittag-Leffler Function. Fractional Calculus and Applied Analysis, 2016, 19, 551-560.	1.2	3
69	Comments on "Chaotic oscillator based on memcapacitor and meminductor"(Nonlinear Dyn, DOI:) Tj ETQq1 1 0.784314 rgBT /Ov	2.7	3
70	Least squares or least circles?. Chance, 2010, 23, 38-42.	0.1	2
71	Discussion on: "Simple Fractional Order Model Structures and their Applications in Control System Design". European Journal of Control, 2010, 16, 697-698.	1.6	2
72	Control system of mobile robot. , 2011, , .		2

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73	Frequency response based identification of fractional order dynamical systems. , 2011, , .		2
74	Discrete Fractional Calculus: Non-Equidistant Grids and Variable Step Length. , 2011, , .		2
75	Fractional-order models in motor polarization index measurements. , 2016, , .		2
76	Testing non reciprocal motion of a swimming flexible small robot with single actuation. , 2018, , .		2
77	Fractional-order control. , 2022, , 71-106.		2
78	Practical Aspects of Tuning and Implementation of Fractional-Order Controllers. , 2011, , .		1
79	Posicast control of a class of fractional-order processes. Open Physics, 2013, 11, .	0.8	1
80	Creation of fractional-order PI ^{&#x03BB;} </sup>D ^{&#x03BC;} </sup> controller function block in Automation Studio environment. , 2015, , .		1
81	An introduction to class of fractional-order extremal control: First results. , 2018, , .		1
82	Oscillators Based on Fractional-Order Memory Elements. Fractal and Fractional, 2022, 6, 283.	1.6	1
83	Tuning of the non-linear fractional-order controller. , 2019, , .		0
84	Modified versions of the fractional-order PID controller. , 2019, , 57-72.		0
85	Comments and Corrections to "Design and Implementation of Novel Fractional-Order Controllers for Stabilized Platforms" IEEE Access, 2020, 8, 132413-132414.	2.6	0
86	STATE SPACE DESCRIPTION OF NATIONAL ECONOMIES:. , 2007, , 425-431.		0
87	Unified Software Interface for Numerical Evaluation of Integrals and Derivatives of Fractional Order. , 2020, , .		0