Ivo Petras

List of Publications by Citations

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 Nonlinear Systems. *Nonlinear Physical Science*, **2011**,	0.1	685
82	Fractional order control - A tutorial **2009**,		401
81	Fractional Order Systems. *World Scientific Series on Nonlinear Science, Series A*, **2010**,	3.3	379
80	Analogue Realizations of Fractional-Order Controllers. *Nonlinear Dynamics*, **2002**, 29, 281-296	5	374
79	Two direct Tustin discretization methods for fractional-order differentiator/integrator. *Journal of the Franklin Institute*, **2003**, 340, 349-362	4	264
78	A note on the fractional-order Chua system. *Chaos, Solitons and Fractals*, **2008**, 38, 140-147	9.3	163
77	Fractional-Order Memristor-Based Chua's Circuit. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2010**, 57, 975-979	3.5	159
76	Using Fractional Order Adjustment Rules and Fractional Order Reference Models in Model-Reference Adaptive Control. *Nonlinear Dynamics*, **2002**, 29, 269-279	5	158
75	Modelling heat transfer in heterogeneous media using fractional calculus. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2013**, 371, 20120146	3	123
74	Diffusion process modeling by using fractional-order models. *Applied Mathematics and Computation* , **2015**, 257, 2-11	2.7	109
73	Analogue Realization of Fractional-Order Dynamical Systems. *Entropy*, **2013**, 15, 4199-4214	2.8	101
72	New analog implementation technique for fractional-order controller: A DC motor control. *AEU - International Journal of Electronics and Communications*, **2017**, 78, 192-200	2.8	84
71	Chaos in the fractional-order Volta system: modeling and simulation. *Nonlinear Dynamics*, **2009**, 57, 157-170	5	82
70	Tuning and implementation methods for fractional-order controllers. *Fractional Calculus and Applied Analysis*, **2012**, 15,	2.7	78
69	. *IEEE Transactions on Control Systems Technology*, **2013**, 21, 459-466	4.8	71
68	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	3.7	70
67	Modeling of the national economies in state-space: A fractional calculus approach. *Economic Modelling*, **2012**, 29, 1322-1327	3.4	67

66	Incorporation of fractional-order dynamics into an existing PI/PID DC motor control loop. *ISA Transactions*, **2016**, 60, 262-273	5.5	56
65	Modeling and numerical analysis of fractional-order Bloch equations. *Computers and Mathematics With Applications*, **2011**, 61, 341-356	2.7	51
64	Identification of Parameters of a Half-Order System. *IEEE Transactions on Signal Processing*, **2012**, 60, 5561-5566	4.8	43
63	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	3	41
62	Conceptual design of a selectable fractional-order differentiator for industrial applications. *Fractional Calculus and Applied Analysis*, **2014**, 17,	2.7	37
61	Fractional Derivatives, Fractional Integrals, and Fractional Differential Equations in Matlab **2011**,		33
60	Fractional-Order Systems. *Nonlinear Physical Science*, **2011**, 43-54	0.1	29
59	A note on the fractional-order Volta system. *Communications in Nonlinear Science and Numerical Simulation*, **2010**, 15, 384-393	3.7	28
58	Fractional Bateman Feshbach Tikochinsky Oscillator. *Communications in Theoretical Physics*, **2014**, 61, 221-225	2.4	25
57	Analogue Fractional-Order Generalized Memristive Devices **2009**,		21
56	State space description of national economies: The V4 countries. *Computational Statistics and Data Analysis*, **2007**, 52, 1223-1233	1.6	20
55	Fractional-Order Chaotic Systems. *Nonlinear Physical Science*, **2011**, 103-184	0.1	18
54	Fractional Pais Uhlenbeck Oscillator. *International Journal of Theoretical Physics*, **2012**, 51, 1253-1258	1.1	17
53	Fitting of experimental data using Mittag-Leffler function **2012**,		16
52	Fractional-order memristive systems **2009**,		15
51	Fractional Calculus as a Simple Tool for Modeling and Analysis of Long Memory Process in Industry. *Mathematics*, **2019**, 7, 511	2.3	13
50	A Fractional Variational Approach to the Fractional Basset-Type Equation. *Reports on Mathematical Physics*, **2013**, 72, 57-64	0.8	13
49	Fractional-order circuit elements with memory **2012**,		12

48	Fractional Calculus. *Nonlinear Physical Science*, **2011**, 7-42	0.1	12
47	An Effective Numerical Method and Its Utilization to Solution of Fractional Models Used in Bioengineering Applications. *Advances in Difference Equations*, **2011**, 2011, 1-14	3.6	12
46	Fractional - order chaotic systems **2009**,		12
45	Numerical solution of the fractional Euler-Lagrange equations of a thin elastica model. *Nonlinear Dynamics*, **2015**, 81, 97-102	5	11
44	Advances in fractional calculus: Control and signal processing applications **2015**,		8
43	CHAOS IN FRACTIONAL-ORDER POPULATION MODEL. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2012**, 22, 1250072	2	8
42	Toolboxes and programs for fractional-order system identification, modeling, simulation, and control **2016**,		8
41	Novel polarization index evaluation formula and fractional-order dynamics in electric motor insulation resistance. *Fractional Calculus and Applied Analysis*, **2018**, 21, 613-627	2.7	7
40	Volume 6 Applications in Control **2019**,		7
39	Reduced Active Components Count Electronically Adjustable Fractional-Order Controllers: Two Design Examples. *Electronics (Switzerland)*, **2020**, 9, 63	2.6	6
38	Comparison of the electronic realization of the fractional-order system and its model **2012**,		6
37	Modeling of heat transfer process by using discrete fractional-order neural networks **2011**,		6
36	Modeling Heat Transfer in Heterogeneous Media Using Fractional Calculus **2011**,		6
35	Comments on "Coexistence of hidden chaotic attractors in a novel no-equilibrium system" (Nonlinear Dyn, doi:10.1007/s11071-016-3170-x). *Nonlinear Dynamics*, **2017**, 90, 749-754	5	5
34	Data fitting using solutions of differential equations: Fractional-order model versus integer-order model **2012**,		5
33	Stability test procedure for a certain class of the fractional-order systems **2011**,		5
32	Stability of Fractional-Order Systems. *Nonlinear Physical Science*, **2011**, 55-101	0.1	5
31	Least Squares or Least Circles?. *Chance*, **2010**, 23, 38-42	1	5

30	Fractional-order nonlinear controllers: Design and implementation notes **2016**,		5
29	Application of PID retuning method for laboratory feedback control system incorporating FO dynamics **2013**,		4
28	Control of Fractional-Order Chaotic Systems. *Nonlinear Physical Science*, **2011**, 185-199	0.1	4
27	A note on fractional-order non-linear controller: possible neural network approach to design **2016**,		3
26	An adaptive fractional-order controller **2013**,		3
25	On the mathematical properties of generalized fractional-order two-port networks using hybrid parameters **2013**,		3
24	Design of a MATLAB-based teaching tool in introductory fractional-order systems and controls **2017**,		3
23	An effective algorithm for implementation of non-linear fractional-order controller on PLC **2016**,		3
22	Simple Design of Fractional-Order DC Motor Controller **2019**,		2
21	Anomalous diffusion modeling using ultracapacitors in domino ladder circuit. *Microelectronics Journal*, **2019**, 84, 136-141	1.8	2
20	Practical aspects for implementation of fractional-order controllers **2014**,		2
19	Discussion on: Simple Fractional Order Model Structures and their Applications in Control System Design *European Journal of Control*, **2010**, 16, 697-698	2.5	2
18	Identification of model parameters and control of heater on laboratory object PCT40 **2011**,		2
17	Discrete Fractional Calculus: Non-Equidistant Grids and Variable Step Length **2011**,		2
16	Comments on Chaotic oscillator based on memcapacitor and meminductor (Nonlinear Dyn, DOI: 10.1007/s11071-019-04781-5). *Nonlinear Dynamics*, **2020**, 102, 2945-2950	5	2
15	**2016**,		2
14	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	2.7	2
13	The fractional-order Lorenz-type systems: A review.. *Fractional Calculus and Applied Analysis*, **2022**, 1-16	2.7	2

12	A note on time series data analysis using a fractional calculus technique **2014**,		1
11	Frequency response based identification of fractional order dynamical systems **2011**,		1
10	Least Squares or Least Circles?. *Chance*, **2010**, 23, 38-42	1	1
9	Testing non reciprocal motion of a swimming flexible small robot with single actuation **2018**,		1
8	An introduction to class of fractional-order extremal control: First results **2018**,		1
7	Novel Fractional-Order Model Predictive Control: State-Space Approach. *IEEE Access*, **2021**, 9, 92769-92775	3.5	1
6	Fractional Calculus and its Applications355-396		1
5	Cross-Platform GPU-Based Implementation of Lattice Boltzmann Method Solver Using ArrayFire Library. *Mathematics*, **2021**, 9, 1793	2.3	0
4	Oscillators Based on Fractional-Order Memory Elements. *Fractal and Fractional*, **2022**, 6, 283	3	0
3	Fractional-order control: New control techniques **2022**, 71-106		
2	Comments and Corrections to Design and Implementation of Novel Fractional-Order Controllers for Stabilized Platforms *IEEE Access*, **2020**, 8, 132413-132414	3.5	
1	Modified versions of the fractional-order PID controller **2019**, 57-72		