

Blas M B Vinagre Jara

List of Publications by Citations

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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.

107
papers

5,051
citations

25
h-index

70
g-index

121
ext. papers

6,005
ext. citations

2.5
avg, IF

5.58
L-index

#	Paper	IF	Citations
107	Fractional-order Systems and Controls. <i>Advances in Industrial Control</i> , 2010 ,	0.3	1075
106	Tuning and auto-tuning of fractional order controllers for industry applications. <i>Control Engineering Practice</i> , 2008 , 16, 798-812	3.9	664
105	Analogue Realizations of Fractional-Order Controllers. <i>Nonlinear Dynamics</i> , 2002 , 29, 281-296	5	374
104	Matrix approach to discrete fractional calculus II: Partial fractional differential equations. <i>Journal of Computational Physics</i> , 2009 , 228, 3137-3153	4.1	289
103	Two direct Tustin discretization methods for fractional-order differentiator/integrator. <i>Journal of the Franklin Institute</i> , 2003 , 340, 349-362	4	264
102	Continued Fraction Expansion Approaches to Discretizing Fractional Order Derivatives—An Expository Review. <i>Nonlinear Dynamics</i> , 2004 , 38, 155-170	5	243
101	A new IIR-type digital fractional order differentiator. <i>Signal Processing</i> , 2003 , 83, 2359-2365	4.4	233
100	Fractional order control strategies for power electronic buck converters. <i>Signal Processing</i> , 2006 , 86, 2803-2819	4.4	207
99	On Fractional PI Controllers: Some Tuning Rules for Robustness to Plant Uncertainties. <i>Nonlinear Dynamics</i> , 2004 , 38, 369-381	5	184
98	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
97	Analysis of the Van der Pol Oscillator Containing Derivatives of Fractional Order. <i>JVC/Journal of Vibration and Control</i> , 2007 , 13, 1291-1301	2	122
96	Fractional PID Controllers for Industry Application. A Brief Introduction. <i>JVC/Journal of Vibration and Control</i> , 2007 , 13, 1419-1429	2	119
95	Tip position control of a lightweight flexible manipulator using a fractional order controller. <i>IET Control Theory and Applications</i> , 2007 , 1, 1451-1460	2.5	81
94	Linear fractional order controllers; A survey in the frequency domain. <i>Annual Reviews in Control</i> , 2019 , 47, 51-70	10.3	53
93	Improved fractional Kalman filter and its application to estimation over lossy networks. <i>Signal Processing</i> , 2011 , 91, 542-552	4.4	52
92	Fractional Order Disturbance Observer for Robust Vibration Suppression. <i>Nonlinear Dynamics</i> , 2004 , 38, 355-367	5	52
91	A Fractional Adaptation Scheme for Lateral Control of an AGV. <i>JVC/Journal of Vibration and Control</i> , 2008 , 14, 1499-1511	2	51

90	On Fractional PID Controllers: A Frequency Domain Approach. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2000 , 33, 51-56		47
89	Optimal Fractional Controllers for Rational Order Systems: A Special Case of the Wiener-Hopf Spectral Factorization Method. <i>IEEE Transactions on Automatic Control</i> , 2007 , 52, 2385-2389	5.9	46
88	Experimental Application of Hybrid Fractional-Order Adaptive Cruise Control at Low Speed. <i>IEEE Transactions on Control Systems Technology</i> , 2014 , 22, 2329-2336	4.8	43
87	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
86	Fractional-order reset control: Application to a servomotor. <i>Mechatronics</i> , 2013 , 23, 781-788	3	35
85	IIR approximations to the fractional differentiator/integrator using Chebyshev polynomials theory. <i>ISA Transactions</i> , 2013 , 52, 461-8	5.5	31
84	Stability of fractional order switching systems. <i>Computers and Mathematics With Applications</i> , 2013 , 66, 585-596	2.7	30
83	Back to Basics: Meaning of the Parameters of Fractional Order PID Controllers. <i>Mathematics</i> , 2019 , 7, 530	2.3	27
82	Stable force control and contact transition of a single link flexible robot using a fractional-order controller. <i>ISA Transactions</i> , 2019 , 89, 139-157	5.5	23
81	Arbitrary real-order cost functions for signals and systems. <i>Signal Processing</i> , 2011 , 91, 372-378	4.4	23
80	A New Discretization Method for Fractional Order Differentiators via Continued Fraction Expansion 2003 , 761		22
79	A ROBUST TUNING METHOD FOR FRACTIONAL ORDER PI CONTROLLERS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2006 , 39, 22-27		21
78	Adaptive gain-order fractional control for network-based applications. <i>Fractional Calculus and Applied Analysis</i> , 2014 , 17,	2.7	19
77	Boolean-based fractional order SMC for switching systems: application to a DC-DC buck converter. <i>Signal, Image and Video Processing</i> , 2012 , 6, 445-451	1.6	19
76	2010 ,		19
75	Tuning of Fractional PID Controllers by Using QFT 2006 ,		18
74	The fractional order lead compensator		18
73	Fractional-Order Generalized Predictive Control: Application for Low-Speed Control of Gasoline-Propelled Cars. <i>Mathematical Problems in Engineering</i> , 2013 , 2013, 1-10	1.1	17

72	Low-cost Hardware-in-the-loop Testbed of a Mobile Robot to Support Learning in Automatic Control and Robotics**This work has been supported by the Spanish Ministry of Economy and Competitiveness under the project DPI2012-37062-C02-02 and the Junta de Extremadura under the Ayuda a Grupos with reference GR15178.. <i>IFAC-PapersOnLine</i> , 2016 , 49, 242-247	0.7	17
71	Fractional-Order Generalized Predictive Control: Formulation and some properties 2010 ,		15
70	A General Form for Reset Control Including Fractional Order Dynamics. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014 , 47, 2028-2033		14
69	Chaos in fractional and integer order NSG systems. <i>Signal Processing</i> , 2015 , 107, 302-311	4.4	13
68	Fractional Network-Based Control for Vehicle Speed Adaptation via Vehicle-to-Infrastructure Communications. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 780-790	4.8	13
67	Microelectronic Implementations of Fractional-Order Integrodifferential Operators. <i>Journal of Computational and Nonlinear Dynamics</i> , 2008 , 3,	1.4	12
66	Using Fractional Calculus for Lateral and Longitudinal Control of Autonomous Vehicles. <i>Lecture Notes in Computer Science</i> , 2003 , 337-348	0.9	12
65	Stability of linear time invariant systems with interval fractional orders and interval coefficients		11
64	Infinite horizon state-feedback LQR controller for fractional systems 2010 ,		10
63	Relaxation modulus in the fitting of polycarbonate and poly(vinyl chloride) viscoelastic polymers by a fractional Maxwell model. <i>Colloid and Polymer Science</i> , 2002 , 280, 485-489	2.4	10
62	Can Cybernetics and Fractional Calculus Be Partners?: Searching for New Ways to Solve Complex Problems. <i>IEEE Systems, Man, and Cybernetics Magazine</i> , 2018 , 4, 23-28	1.6	9
61	A method for the design of robust controllers ensuring the quadratic stability for switching systems. <i>JVC/Journal of Vibration and Control</i> , 2014 , 20, 1085-1098	2	9
60	Efficient control of a SmartWheel via Internet with compensation of variable delays. <i>Mechatronics</i> , 2013 , 23, 821-827	3	9
59	A survey of Fractional-Order Generalized Predictive Control 2012 ,		8
58	2009 ,		8
57	On Fractional Order Disturbance Observer 2003 , 617		8
56	Low Speed Control of an Autonomous Vehicle by Using a Fractional PI Controller. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 15025-15030		7
55	Comparison of controllers for a three-phase Phase Locked Loop system under distorted conditions 2009 ,		7

54	Low speed control of an autonomous vehicle using a hybrid fractional order controller 2011 ,		6
53	DEALING WITH FRACTIONAL DYNAMICS OF IP NETWORK DELAYS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2012 , 22, 1250089	2	6
52	EXPERIENCES ON AN INTERNET LINK CHARACTERIZATION AND NETWORKED CONTROL OF A SMART WHEEL. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2012 , 22, 1230015	2	6
51	Frequency domain identification of a flexible structure with piezoelectric actuators using irrational transfer function models		6
50	There's plenty of fractional at the bottom, I: Brownian motors and swimming microrobots. <i>Fractional Calculus and Applied Analysis</i> , 2016 , 19,	2.7	6
49	Control fraccionario: fundamentos y guí de uso. <i>RIAI - Revista Iberoamericana De Automatica E Informatica Industrial</i> , 2016 , 13, 265-280	1.5	6
48	Multivariable fractional order PID controller design via LMI approach. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 13960-13965		5
47	GPC strategies for the lateral control of a networked AGV 2009 ,		5
46	Auto-tuning of fractional order PID controllers using a PLC 2009 ,		5
45	SISTEMA DE ASISTENCIA A LA CONDUCCIŒ BASADO EN UNA RED DE COMUNICACIŒ DE BAJO COSTE.. <i>Dyna (Spain)</i> , 2010 , 85, 245-254	0.4	5
44	Two Strategies for Fractional Sliding Mode Control of Integer Order Systems by System Augmentation: Application to a Servomotor. <i>IFAC-PapersOnLine</i> , 2017 , 50, 8103-8108	0.7	4
43	A comparative study of planar waveforms for propulsion of a joined artificial bacterial flagella swimming robot 2017 ,		4
42	Optimized fractional order conditional integrator. <i>Journal of Process Control</i> , 2011 , 21, 960-966	3.9	4
41	Effects of a communication network on the longitudinal and lateral control of an AGV 2008 ,		4
40	Basic properties and stability of fractional-order reset control systems 2013 ,		4
39	Iterative Learning and Fractional Reset Control 2015 ,		3
38	Fractional Gain Scheduled Controller for a Networked Smart Wheel: Experimental Results. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 15043-15048		3
37	Improved Locomotion of an AEF Swimming Robot Using Fractional Order Control 2019 ,		3

36	Hybrid systems and control with fractional dynamics (II): Control 2014 ,		2
35	Fractional-Order PID. <i>Advances in Industrial Control</i> , 2012 , 465-493	0.3	2
34	Discrete Fractional Calculus: Non-Equidistant Grids and Variable Step Length 2011 ,		2
33	Effects of Introducing Fractional Dynamics in Hill's Model for Muscle Contraction*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012 , 45, 1743-1748		2
32	Fractional-order Control of a Flexible Manipulator 2007 , 449-462		2
31	A fractional model reference adaptive system. A method of adjusting the parameters controller. <i>Journal European Des Systemes Automatisees</i> , 2008 , 42, 977-998	1.8	2
30	Cooperative Maneuver Study Between Autonomous Cars: Overtaking. <i>Lecture Notes in Computer Science</i> , 2007 , 1151-1158	0.9	2
29	Performance study of propulsion of N-link artificial Eukaryotic flagellum swimming microrobot within a fractional order approach: From simulations to hardware-in-the-loop experiments. <i>European Journal of Control</i> , 2021 , 58, 340-356	2.5	2
28	Physical Modeling based Simulators to Support Teaching in Automatic Control: the Rotatory Pendulum**This work has been supported by the Spanish Ministry of Economy and Competitiveness under the project DPI2012-37062-C02-02 and the Junta de Extremadura under the Ayuda a Grupos with reference GR15178.. <i>IFAC-PapersOnLine</i> , 2016 , 49, 75-80	0.7	2
27	Comparing Classical and Fractional Order Control Strategies of a Cardiovascular Circulatory System Simulator. <i>IFAC-PapersOnLine</i> , 2018 , 51, 48-53	0.7	2
26	Fractional Approach for Estimating Sap Velocity in Trees. <i>Fractional Calculus and Applied Analysis</i> , 2015 , 18, 479-494	2.7	1
25	Hybrid systems and control with fractional dynamics (I): Modeling and analysis 2014 ,		1
24	Controller for urban intersections based on hybrid automaton 2010 ,		1
23	2009 ,		1
22	Comparing Generalized Order PID Controllers for Networked Control Systems With Random Delays and Data Dropouts 2009 ,		1
21	Matrix Approach to Discretization of Ordinary and Partial Differential Equations of Arbitrary Real Order: The Matlab Toolbox 2009 ,		1
20	Fully Automated Tuning and Implementation of Fractional PID Controllers 2009 ,		1
19	2008 ,		1

18	Microelectronic Implementations of Fractional Order Integro-Differential Operators 2007 , 1267		1
17	Fractional controller for guidance of autonomous ground vehicles. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2003 , 36, 87-90		1
16	Fractional Control of a Single-Link Flexible Manipulator 2005 , 1563		1
15	Cardiovascular Circulatory System and Left Carotid Model: A Fractional Approach to Disease Modeling. <i>Fractal and Fractional</i> , 2022 , 6, 64	3	1
14	Vibration Suppression Controller for a Flexible Beam on a Cart Using SMC. <i>Advances in Intelligent Systems and Computing</i> , 2014 , 127-139	0.4	1
13	Fractional Order PID Control with Rate-limited Anti-windup for the Pitch System of Wind Turbines 2020 ,		1
12	Fractional modeling of flexural behavior of toenail plates: First step for clinical purposes. <i>Medical Engineering and Physics</i> , 2021 , 90, 23-32	2.4	1
11	Purcell's Three-Link Swimmer: Assessment of Geometry and Gaits for Optimal Displacement and Efficiency. <i>Mathematics</i> , 2021 , 9, 1088	2.3	1
10	Frequency Domain Based Fractional Order Modeling of IPMC Actuators for Control 2019 ,		1
9	Testing non reciprocal motion of a swimming flexible small robot with single actuation 2018 ,		1
8	Position and Velocity Control of a Servo by Using GPC of Arbitrary Real Order 2010 , 369-376		0
7	Modeling and Control of IPMC-Based Artificial Eukaryotic Flagellum Swimming Robot: Distributed Actuation. <i>Algorithms</i> , 2022 , 15, 181	1.8	0
6	. <i>IEEE Latin America Transactions</i> , 2022 , 20, 474-480	0.7	
5	Evaluating an AEF Swimming Microrobot Using a Hardware-in-the-loop Testbed. <i>Advances in Intelligent Systems and Computing</i> , 2020 , 524-536	0.4	
4	Nonlinear control methods 2019 , 1-28		
3	Frequency Domain Modeling of an IPMC-Based Artificial Eukaryotic Flagellum Swimming Robot. <i>Lecture Notes in Networks and Systems</i> , 2022 , 58-64	0.5	
2	Modelling Cardiovascular Diseases with Fractional-Order Derivatives. <i>Lecture Notes in Networks and Systems</i> , 2022 , 52-57	0.5	
1	Path Following for Purcell's Swimmers: An Event-Based Control Approach. <i>Lecture Notes in Electrical Engineering</i> , 2022 , 487-497	0.2	

