Blas M B Vinagre Jara

List of Publications by Year in Descending Order

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	Cardiovascular Circulatory System and Left Carotid Model: A Fractional Approach to Disease Modeling. *Fractal and Fractional*, **2022**, 6, 64	3	1
106	. *IEEE Latin America Transactions*, **2022**, 20, 474-480	0.7	
105	Frequency Domain Modeling of an IPMC-Based Artificial Eukaryotic Flagellum Swimming Robot. *Lecture Notes in Networks and Systems*, **2022**, 58-64	0.5	
104	Modelling Cardiovascular Diseases with Fractional-Order Derivatives. *Lecture Notes in Networks and Systems*, **2022**, 52-57	0.5	
103	Modeling and Control of IPMC-Based Artificial Eukaryotic Flagellum Swimming Robot: Distributed Actuation. *Algorithms*, **2022**, 15, 181	1.8	0
102	Path Following for Purcell Swimmers: An Event-Based Control Approach. *Lecture Notes in Electrical Engineering*, **2022**, 487-497	0.2	
101	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. *European Journal of Control*, **2021**, 58, 340-356	2.5	2
100	Fractional modeling of flexural behavior of toenail plates: First step for clinical purposes. *Medical Engineering and Physics*, **2021**, 90, 23-32	2.4	1
99	Purcell Three-Link Swimmer: Assessment of Geometry and Gaits for Optimal Displacement and Efficiency. *Mathematics*, **2021**, 9, 1088	2.3	1
98	Evaluating an AEF Swimming Microrobot Using a Hardware-in-the-loop Testbed. *Advances in Intelligent Systems and Computing*, **2020**, 524-536	0.4	
97	Fractional Order PID Control with Rate-limited Anti-windup for the Pitch System of Wind Turbines **2020**,		1
96	Stable force control and contact transition of a single link flexible robot using a fractional-order controller. *ISA Transactions*, **2019**, 89, 139-157	5.5	23
95	Back to Basics: Meaning of the Parameters of Fractional Order PID Controllers. *Mathematics*, **2019**, 7, 530	2.3	27
94	Linear fractional order controllers; A survey in the frequency domain. *Annual Reviews in Control*, **2019**, 47, 51-70	10.3	53
93	Frequency Domain Based Fractional Order Modeling of IPMC Actuators for Control **2019**,		1
92	Improved Locomotion of an AEF Swimming Robot Using Fractional Order Control **2019**,		3
91	Nonlinear control methods **2019**, 1-28		

90	Can Cybernetics and Fractional Calculus Be Partners?: Searching for New Ways to Solve Complex Problems. *IEEE Systems, Man, and Cybernetics Magazine*, **2018**, 4, 23-28	1.6	9
89	Comparing Classical and Fractional Order Control Strategies of a Cardiovascular Circulatory System Simulator. *IFAC-PapersOnLine*, **2018**, 51, 48-53	0.7	2
88	Testing non reciprocal motion of a swimming flexible small robot with single actuation **2018**,		1
87	Two Strategies for Fractional Sliding Mode Control of Integer Order Systems by System Augmentation: Application to a Servomotor. *IFAC-PapersOnLine*, **2017**, 50, 8103-8108	0.7	4
86	A comparative study of planar waveforms for propulsion of a joined artificial bacterial flagella swimming robot **2017**,		4
85	There plenty of fractional at the bottom, I: Brownian motors and swimming microrobots. *Fractional Calculus and Applied Analysis*, **2016**, 19,	2.7	6
84	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.. *IFAC-PapersOnLine*, **2016**, 49, 242-247	0.7	17
83	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.. *IFAC-PapersOnLine*, **2016**, 49, 75-80	0.7	2
82	Control fraccionario: fundamentos y gu de uso. *RIAI - Revista Iberoamericana De Automatica E Informatica Industrial*, **2016**, 13, 265-280	1.5	6
81	Fractional Approach for Estimating Sap Velocity in Trees. *Fractional Calculus and Applied Analysis*, **2015**, 18, 479-494	2.7	1
80	Chaos in fractional and integer order NSG systems. *Signal Processing*, **2015**, 107, 302-311	4.4	13
79	Iterative Learning and Fractional Reset Control **2015**,		3
78	Experimental Application of Hybrid Fractional-Order Adaptive Cruise Control at Low Speed. *IEEE Transactions on Control Systems Technology*, **2014**, 22, 2329-2336	4.8	43
77	A method for the design of robust controllers ensuring the quadratic stability for switching systems. *JVC/Journal of Vibration and Control*, **2014**, 20, 1085-1098	2	9
76	Adaptive gain-order fractional control for network-based applications. *Fractional Calculus and Applied Analysis*, **2014**, 17,	2.7	19
75	A General Form for Reset Control Including Fractional Order Dynamics. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 2028-2033		14
74	Hybrid systems and control with fractional dynamics (II): Control **2014**,		2
73	Hybrid systems and control with fractional dynamics (I): Modeling and analysis **2014**,		1

72	Vibration Suppression Controller for a Flexible Beam on a Cart Using SMC. *Advances in Intelligent Systems and Computing*, **2014**, 127-139	0.4	1
71	Fractional-order reset control: Application to a servomotor. *Mechatronics*, **2013**, 23, 781-788	3	35
70	Stability of fractional order switching systems. *Computers and Mathematics With Applications*, **2013**, 66, 585-596	2.7	30
69	IIR approximations to the fractional differentiator/integrator using Chebyshev polynomials theory. *ISA Transactions*, **2013**, 52, 461-8	5.5	31
68	Fractional Network-Based Control for Vehicle Speed Adaptation via Vehicle-to-Infrastructure Communications. *IEEE Transactions on Control Systems Technology*, **2013**, 21, 780-790	4.8	13
67	Efficient control of a SmartWheel via Internet with compensation of variable delays. *Mechatronics*, **2013**, 23, 821-827	3	9
66	Fractional-Order Generalized Predictive Control: Application for Low-Speed Control of Gasoline-Propelled Cars. *Mathematical Problems in Engineering*, **2013**, 2013, 1-10	1.1	17
65	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
64	Basic properties and stability of fractional-order reset control systems **2013**,		4
63	Fractional-Order PID. *Advances in Industrial Control*, **2012**, 465-493	0.3	2
62	Boolean-based fractional order SMC for switching systems: application to a DC-DC buck converter. *Signal, Image and Video Processing*, **2012**, 6, 445-451	1.6	19
61	A survey of Fractional-Order Generalized Predictive Control **2012**,		8
60	DEALING WITH FRACTIONAL DYNAMICS OF IP NETWORK DELAYS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2012**, 22, 1250089	2	6
59	EXPERIENCES ON AN INTERNET LINK CHARACTERIZATION AND NETWORKED CONTROL OF A SMART WHEEL. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2012**, 22, 1230015	2	6
58	Effects of Introducing Fractional Dynamics in Hill's Model for Muscle Contraction*. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 1743-1748		2
57	Low speed control of an autonomous vehicle using a hybrid fractional order controller **2011**,		6
56	Low Speed Control of an Autonomous Vehicle by Using a Fractional PI Controller. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 15025-15030		7
55	Multivariable fractional order PID controller design via LMI approach. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 13960-13965		5

54	Fractional Gain Scheduled Controller for a Networked Smart Wheel: Experimental Results. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 15043-15048		3
53	Optimized fractional order conditional integrator. *Journal of Process Control*, **2011**, 21, 960-966	3.9	4
52	Improved fractional Kalman filter and its application to estimation over lossy networks. *Signal Processing*, **2011**, 91, 542-552	4.4	52
51	Arbitrary real-order cost functions for signals and systems. *Signal Processing*, **2011**, 91, 372-378	4.4	23
50	Discrete Fractional Calculus: Non-Equidistant Grids and Variable Step Length **2011**,		2
49	**2010**,		19
48	Fractional-order Systems and Controls. *Advances in Industrial Control*, **2010**,	0.3	1075
47	Infinite horizon state-feedback LQR controller for fractional systems **2010**,		10
46	Fractional-Order Generalized Predictive Control: Formulation and some properties **2010**,		15
45	Controller for urban intersections based on hybrid automaton **2010**,		1
44	SISTEMA DE ASISTENCIA A LA CONDUCCIN BASADO EN UNA RED DE COMUNICACIN DE BAJO COSTE.. *Dyna (Spain)*, **2010**, 85, 245-254	0.4	5
43	Position and Velocity Control of a Servo by Using GPC of Arbitrary Real Order **2010**, 369-376		0
42	**2009**,		1
41	GPC strategies for the lateral control of a networked AGV **2009**,		5
40	Comparing Generalized Order PID Controllers for Networked Control Systems With Random Delays and Data Dropouts **2009**,		1
39	Matrix Approach to Discretization of Ordinary and Partial Differential Equations of Arbitrary Real Order: The Matlab Toolbox **2009**,		1
38	Fully Automated Tuning and Implementation of Fractional PID Controllers **2009**,		1
37	Matrix approach to discrete fractional calculus II: Partial fractional differential equations. *Journal of Computational Physics*, **2009**, 228, 3137-3153	4.1	289

36	Comparison of controllers for a three-phase Phase Locked Loop system under distorted conditions **2009**,		7
35	**2009**,		8
34	Auto-tuning of fractional order PI□D□controllers using a PLC **2009**,		5
33	**2008**,		1
32	Microelectronic Implementations of Fractional-Order Integrodifferential Operators. *Journal of Computational and Nonlinear Dynamics*, **2008**, 3,	1.4	12
31	A Fractional Adaptation Scheme for Lateral Control of an AGV. *JVC/Journal of Vibration and Control*, **2008**, 14, 1499-1511	2	51
30	Effects of a communication network on the longitudinal and lateral control of an AGV **2008**,		4
29	Tuning and auto-tuning of fractional order controllers for industry applications. *Control Engineering Practice*, **2008**, 16, 798-812	3.9	664
28	A fractional model reference adaptive system. A method of adjusting the parameters controller. *Journal Europeen Des Systemes Automatises*, **2008**, 42, 977-998	1.8	2
27	Optimal Fractional Controllers for Rational Order Systems: A Special Case of the Wiener-Hopf Spectral Factorization Method. *IEEE Transactions on Automatic Control*, **2007**, 52, 2385-2389	5.9	46
26	Fractional-order Control of a Flexible Manipulator **2007**, 449-462		2
25	Analysis of the Van der Pol Oscillator Containing Derivatives of Fractional Order. *JVC/Journal of Vibration and Control*, **2007**, 13, 1291-1301	2	122
24	Microelectronic Implementations of Fractional Order Integro-Differential Operators **2007**, 1267		1
23	Fractional PID Controllers for Industry Application. A Brief Introduction. *JVC/Journal of Vibration and Control*, **2007**, 13, 1419-1429	2	119
22	Tip position control of a lightweight flexible manipulator using a fractional order controller. *IET Control Theory and Applications*, **2007**, 1, 1451-1460	2.5	81
21	Cooperative Maneuver Study Between Autonomous Cars: Overtaking. *Lecture Notes in Computer Science*, **2007**, 1151-1158	0.9	2
20	Tuning of Fractional PID Controllers by Using QFT **2006**,		18
19	A ROBUST TUNING METHOD FOR FRACTIONAL ORDER PI CONTROLLERS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 22-27		21

18	Fractional order control strategies for power electronic buck converters. *Signal Processing*, **2006**, 86, 2803-2819	4.4	207
17	Fractional Control of a Single-Link Flexible Manipulator **2005**, 1563		1
16	Continued Fraction Expansion Approaches to Discretizing Fractional Order Derivatives□n Expository Review. *Nonlinear Dynamics*, **2004**, 38, 155-170	5	243
15	Fractional Order Disturbance Observer for Robust Vibration Suppression. *Nonlinear Dynamics*, **2004** , 38, 355-367	5	52
14	On Fractional PI□Controllers: Some Tuning Rules for Robustness to Plant Uncertainties. *Nonlinear Dynamics*, **2004**, 38, 369-381	5	184
13	A New Discretization Method for Fractional Order Differentiators via Continued Fraction Expansion **2003**, 761		22
12	On Fractional Order Disturbance Observer **2003**, 617		8
11	Fractional controller for guidance of autonomous ground vehicles. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 87-90		1
10	Using Fractional Calculus for Lateral and Longitudinal Control of Autonomous Vehicles. *Lecture Notes in Computer Science*, **2003**, 337-348	0.9	12
9	Two direct Tustin discretization methods for fractional-order differentiator/integrator. *Journal of the Franklin Institute*, **2003**, 340, 349-362	4	264
8	A new IIR-type digital fractional order differentiator. *Signal Processing*, **2003**, 83, 2359-2365	4.4	233
7	Relaxation modulus in the fitting of polycarbonate and poly(vinyl chloride) viscoelastic polymers by a fractional Maxwell model. *Colloid and Polymer Science*, **2002**, 280, 485-489	2.4	10
6	Using Fractional Order Adjustment Rules and Fractional Order Reference Models in Model-Reference Adaptive Control. *Nonlinear Dynamics*, **2002**, 29, 269-279	5	158
5	Analogue Realizations of Fractional-Order Controllers. *Nonlinear Dynamics*, **2002**, 29, 281-296	5	374
4	On Fractional PID Controllers: A Frequency Domain Approach. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2000**, 33, 51-56		47
3	Stability of linear time invariant systems with interval fractional orders and interval coefficients		11
2	The fractional order lead compensator		18
1	Frequency domain identification of a flexible structure with piezoelectric actuators using irrational transfer function models		6