Pedro M Lima

List of Publications by Year
in descending order

56 papers	1,024 citations	430754 18 h-index	454834 30 g-index
59 all docs	59 docs citations	59 times ranked	493 citing authors

#	Article	IF	Citations
1	Sequential method for fast neural population activity reconstruction in the cortex from incomplete noisy measurements. Computers in Biology and Medicine, 2022, 141, 105103.	3.9	5
2	Numerical solution of the stochastic neural field equation with applications to working memory. Physica A: Statistical Mechanics and Its Applications, 2022, 596, 127166.	1.2	3
3	Numerical simulations of one- and two-dimensional stochastic neural field equations with delay. Journal of Computational Neuroscience, 2022, 50, 299-311.	0.6	2
4	Numerical solution of the neural field equation in the presence of random disturbance. Journal of Computational and Applied Mathematics, 2021, 387, 112563.	1.1	7
5	Analysis of the Euler and trapezoidal discretization methods for the numerical solution of nonlinear functional Volterra integral equations of Urysohn type. Journal of Computational and Applied Mathematics, 2021, 398, 113628.	1.1	13
6	Numerical Solution of Variable-Order Fractional Differential Equations Using Bernoulli Polynomials. Fractal and Fractional, 2021, 5, 219.	1.6	5
7	Legendre wavelet collocation method combined with the Gaussâ€“Jacobi quadrature for solving fractional delay-type integro-differential equations. Applied Numerical Mathematics, 2020, 149, 99-112.	1.2	21
8	A Novel Lagrange Operational Matrix and Tau-Collocation Method for Solving Variable-Order Fractional Differential Equations. Iranian Journal of Science and Technology, Transaction A: Science, 2020, 44, 127-135.	0.7	14
9	An improved composite collocation method for distributed-order fractional differential equations based on fractional Chelyshkov wavelets. Applied Numerical Mathematics, 2019, 145, 1-27.	1.2	34
10	A numerical approach for solving fractional optimal control problems using modified hat functions. Communications in Nonlinear Science and Numerical Simulation, 2019, 78, 104849.	1.7	41
11	Numerical solution of nonlinear fractional integro-differential equations with weakly singular kernels via a modification of hat functions. Applied Mathematics and Computation, 2018, 327, 79-92.	1.4	26
12	Numerical solution of integro-differential equations arising from singular boundary value problems. Applied Mathematics and Computation, 2018, 336, 1-15.	1.4	2
13	An effective numerical method for solving fractional pantograph differential equations using modification of hat functions. Applied Numerical Mathematics, 2018, 131, 174-189.	1.2	39
14	Smoothing transformation and spline collocation for weakly singular Volterra integro-differential equations. Applied Numerical Mathematics, 2017, 114, 63-76.	1.2	20
15	Numerical investigation of noise induced changes to the solution behaviour of the discrete FitzHughâ€“Nagumo equation. Applied Mathematics and Computation, 2017, 293, 448-460.	1.4	2
16	A novel computational approach to singular free boundary problems in ordinary differential equations. Applied Numerical Mathematics, 2017, 114, 97-107.	1.2	1
17	Numerical Solution of the Neural Field Equation in the Two-Dimensional Case. SIAM Journal of Scientific Computing, 2015, 37, B962-B979.	1.3	19
18	Root finding by high order iterative methods based on quadratures. Applied Mathematics and Computation, 2015, 264, 466-482.	1.4	0

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19	Analysis and numerical approximation of singular boundary value problems with thep-Laplacian in fluid mechanics. Journal of Computational and Applied Mathematics, 2014, 262, 87-104.	1.1	11
20	Existence and uniqueness of solutions to weakly singular integral-algebraic and integro-differential equations. Open Mathematics, 2014, 12, 308-321.	0.5	2
21	Computational methods for a mathematical model of propagation of nerve impulses in myelinated axons. Applied Numerical Mathematics, 2014, 85, 38-53.	1.2	9
22	Density profile equation with p-Laplacian: Analysis and numerical simulation. Applied Mathematics and Computation, 2013, 225, 550-561.	1.4	5
23	Analysis and numerical methods for fractional differential equations with delay. Journal of Computational and Applied Mathematics, 2013, 252, 159-168.	1.1	115
24	Numerical solution of a class of two-dimensional nonlinear Volterra integral equations using Legendre polynomials. Journal of Computational and Applied Mathematics, 2013, 242, 53-69.	1.1	99
25	Efficient computational methods for singular free boundary problems using smoothing variable substitutions. Journal of Computational and Applied Mathematics, 2012, 236, 2981-2989.	1.1	3
26	Numerical solution of nonlinear two-dimensional integral equations using rationalized Haar functions. Communications in Nonlinear Science and Numerical Simulation, 2011, 16, 1164-1175.	1.7	63
27	Two-dimensional integralâ€“algebraic systems: Analysis and computational methods. Journal of Computational and Applied Mathematics, 2011, 236, 132-140.	1.1	27
28	The numerical solution of forwardâ€“backward differential equations: Decomposition and related issues. Journal of Computational and Applied Mathematics, 2010, 234, 2745-2756.	1.1	13
29	Numerical modeling of oxygen diffusion in cells with Michaelis-Menten uptake kinetics. Journal of Mathematical Chemistry, 2010, 48, 145-158.	0.7	20
30	Finite difference solution of a singular boundary value problem for the p-Laplace operator. Numerical Algorithms, 2010, 55, 337-348.	1.1	3
31	Finite element solution of a linear mixed-type functional differential equation. Numerical Algorithms, 2010, 55, 301-320.	1.1	18
32	Analytical and numerical investigation of mixed-type functional differential equations. Journal of Computational and Applied Mathematics, 2010, 234, 2826-2837.	1.1	20
33	Numerical solution of a class of singular free boundary problems involving the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si78.gif" display="inline" overflow="scroll"><mml:mi>m</mml:mi></mml:math>-Laplace operator. Journal of Computational and Applied Mathematics, 2010, 234, 2838-2847.	1.1	5
34	Symposium on Numerical Approximation and Extrapolation Methods for Ordinary Differential and Volterra Integral Equations. , 2010, , .		0
35	Numerical Approximation of a Nonlinear Boundary Value Problem for a Mixed Type Functional Differential Equation Arising in Nerve Conduction. , 2009, , .		0
36	New approach to the numerical solution of forward-backward equations. Frontiers of Mathematics in China, 2009, 4, 155-168.	0.4	21

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37	Analytical-numerical investigation of a singular boundary value problem for a generalized Emdenâ€“Fowler equation. Journal of Computational and Applied Mathematics, 2009, 229, 480-487.	1.1	8
38	Superconvergence of collocation methods for a class of weakly singular Volterra integral equations. Journal of Computational and Applied Mathematics, 2008, 218, 307-316.	1.1	49
39	Bubbles and droplets in nonlinear physics models: Analysis and numerical simulation of singular nonlinear boundary value problem. Computational Mathematics and Mathematical Physics, 2008, 48, 2018-2058.	0.2	13
40	Numerical Modelling of a Functional Differential Equation with Deviating Arguments Using a Collocation Method. , 2008, , .		5
41	Planar Dielectric Layered Media: Guided Localized Electromagnetic Structures and Optical Switches. AIP Conference Proceedings, 2007, , .	0.3	0
42	Numerical modelling of qualitative behaviour of solutions to convolution integral equations. Journal of Computational and Applied Mathematics, 2007, 205, 849-858.	1.1	1
43	Efficient Numerical Solution of the Density Profile Equation in Hydrodynamics. Journal of Scientific Computing, 2007, 32, 411-424.	1.1	50
44	Analyticalâ€“numerical investigation of bubble-type solutions of nonlinear singular problems. Journal of Computational and Applied Mathematics, 2006, 189, 260-273.	1.1	35
45	Numerical methods for a Volterra integral equation with non-smooth solutions. Journal of Computational and Applied Mathematics, 2006, 189, 412-423.	1.1	19
46	Numerical solution of a singular boundary value problem for a generalized Emdenâ€“Fowler equation. Applied Numerical Mathematics, 2003, 45, 389-409.	1.2	7
47	Numerical solution of a nonuniquely solvable Volterra integral equation using extrapolation methods. Journal of Computational and Applied Mathematics, 2002, 140, 537-557.	1.1	33
48	Numerical solution of a singular boundary-value problem in non-Newtonian fluid mechanics. Computer Physics Communications, 2000, 126, 114-120.	3.0	7
49	Iterative methods for a singular boundary-value problem. Journal of Computational and Applied Mathematics, 1999, 111, 173-186.	1.1	6
50	Asymptotic expansions and numerical approximation of nonlinear degenerate boundary-value problems. Applied Numerical Mathematics, 1999, 30, 93-111.	1.2	14
51	An extrapolation method for a Volterra integral equation with weakly singular kernel. Applied Numerical Mathematics, 1997, 24, 131-148.	1.2	38
52	Numerical methods and asymptotic error expansions for the Emden-Fowler equations. Journal of Computational and Applied Mathematics, 1996, 70, 245-266.	1.1	21
53	Convergence acceleration for boundary value problems with singularities using the E-algorithm. Journal of Computational and Applied Mathematics, 1995, 61, 139-164.	1.1	4
54	Richardson extrapolation in boundary value problems for differential equations with nonregular right-hand side. Journal of Computational and Applied Mathematics, 1994, 50, 385-400.	1.1	3

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55	A program for deriving recoupling coefficients formulae. Computer Physics Communications, 1991, 66, 89-98.	3.0	10
56	A new program for calculating matrix elements in atomic structure. Computer Physics Communications, 1991, 66, 99-114.	3.0	1