Pablo MartÃ-n

List of Publications by Year
in descending order

101 papers	730 citations	567281 15 h-index	580821 25 g-index
101 all docs	101 docs citations	101 times ranked	359 citing authors

#	Article	IF	Citations
1	Accurate analytic approximation to the Modified Bessel function of Second Kind <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e154" altimg="si4.svg"><mml:mrow><mml:msub><mml:mrow><mml:mi>K</mml:mi></mml:mrow><mml:mrow><mml:mn>0</mml:mn></ Results in Physics, 2022, 35, 105283.	4.1	1
2	Generalized non-ideal treatment and growth rates analysis of drift waves instabilities in a collisions-free magnetized dusty plasma. Physics of Plasmas, 2021, 28, .	1.9	3
3	Quasi-Rational Analytic Approximation for the Modified Bessel Function I1(x) with High Accuracy. Symmetry, 2021, 13, 741.	2.2	1
4	Quantum effects in bi-dust plasmas. Physica Scripta, 2020, 95, 015604.	2.5	0
5	Analytic solution for a joint Bohm sheath and pre-sheath potential profile. Physica Scripta, 2020, 95, 015602.	2.5	2
6	Accurate analytic approximations to eigenvalues anharmonic potentials x2+Î»x8. Results in Physics, 2020, 16, 102986.	4.1	2
7	Analytic approximation to Bessel function $$J_{0}(x)$$. Computational and Applied Mathematics, 2020, 39, 1.	2.2	3
8	Ground state eigenvalue of the anharmonic potential x4+Î»x6 by high accuracy analytic functions. Results in Physics, 2020, 18, 103291.	4.1	1
9	Analytic approximate eigenvalues by a new technique. Application to sextic anharmonic potentials. Results in Physics, 2018, 8, 140-145.	4.1	6
10	Precise analytic approximations for the Bessel function <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si7.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi>J</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub><mml:mo stretchy="false">(</mml:mo><mml:mi>x</mml:mi><mml:mo) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 367 Td (stretchy="false">)</mml:mo	4.1	6
11	A new method to obtain analytic approximations applied to the J ₁(x) function. Journal of Physics: Conference Series, 2018, 1043, 012002.	0.4	0
12	Analytic approximations for special functions, applied to the modified Bessel functions I2(x) and I2/3(x). Results in Physics, 2018, 11, 1028-1033.	4.1	2
13	A simple approximation for the modified Bessel function of zero order I ₀(x). Journal of Physics: Conference Series, 2018, 1043, 012003.	0.4	3
14	High accuracy approximation for the modified Bessel function of fractional order I 1/3(x). Journal of Physics: Conference Series, 2018, 1043, 012006.	0.4	0
15	Hipergeometric solutions to some nonhomogeneous equations of fractional order. Journal of Physics: Conference Series, 2017, 936, 012100.	0.4	0
16	Analytic approximation for the modified Bessel function I â^'2/3(x). Journal of Physics: Conference Series, 2017, 936, 012020.	0.4	1
17	Multi-point quasi-rational approximants for the modified Bessel functionI₁(x). Journal of Physics: Conference Series, 2016, 738, 012066.	0.4	1
18	Analytic Approximate for the Plasma Sheath Potential. Journal of Physics: Conference Series, 2016, 720, 012040.	0.4	1

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19	Theoretical prediction of gold vein location in deposits originated by a wall magma intrusion. Journal of Physics: Conference Series, 2016, 720, 012052.	0.4	0
20	Banana orbits in elliptic tokamaks with hole currents. Journal of Physics: Conference Series, 2015, 591, 012010.	0.4	0
21	Precise Approximate Solution for the Bohm Sheath Potential. Journal of Physics: Conference Series, 2015, 574, 012107.	0.4	1
22	Super-paramagnetic nanoparticles synthesis in a thermal plasma reactor assisted by magnetic bottle. Journal of Physics: Conference Series, 2015, 591, 012055.	0.4	0
23	Triangularity effects on the collisional diffusion for elliptic tokamaks. Physica Scripta, 2015, 90, 095601.	2.5	0
24	Drift instability grow rates in non-ideal inhomogeneous bi-dust plasmas. Journal of Physics: Conference Series, 2012, 370, 012034.	0.4	2
25	Bi-dust solitary waves. Journal of Physics: Conference Series, 2012, 370, 012042.	0.4	1
26	Preliminary results of eigenvalue and eigenvector treatment for kink instabilities in tokamaks. Journal of Physics: Conference Series, 2012, 370, 012061.	0.4	0
27	Damped fall of magnets inside a conducting pipe. American Journal of Physics, 2011, 79, 193-200.	0.7	30
28	Determination of nonlinear optical properties using the Voigt function: Stochastic considerations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 155-159.	2.3	3
29	Magnetically coupled magnetâ€“spring oscillators. European Journal of Physics, 2010, 31, 433-452.	0.6	22
30	OPTICAL PROPERTIES OF MOLECULAR SYSTEM COUPLED TO THE SOLVENT. International Journal of Modern Physics B, 2009, 23, 5801-5809.	2.0	4
31	POLOIDAL MAGNETIC FIELD TOPOLOGY FOR TOKAMAKS WITH CURRENT HOLES. , 2009, , .		0
32	NON-LINEAR VISCO-RESISTIVE COLLISIONAL TRANSPORT IN TOROIDAL ELLIPTICAL PLASMAS WITH TRIANGULARITY AND HOLE CURRENTS: A REVIEW. , 2009, , .		0
33	Absortive and dispersive optical properties in molecular systems. Optics Communications, 2009, 282, 1807-1814.	2.1	1
34	Magnet fall inside a conductive pipe: motion and the role of the pipe wall thickness. European Journal of Physics, 2009, 30, 855-869.	0.6	49
35	SOLVENT EFFECTS IN THE DETERMINATION OF THE NONLINEAR OPTICAL PROPERTIES. Journal of Nonlinear Optical Physics and Materials, 2008, 17, 511-520.	1.8	5
36	Non-ideal dust acoustic waves. Physica Scripta, 2008, T131, 014043.	2.5	0

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37	Extended treatment of the non-ideal effects in streaming dust-acoustic instabilities. Physica Scripta, 2008, T131, 014041.	2.5	0
38	Plasma density around a tokamak magnetic surface with nonlinear flows in the low-vorticity limit for visco-resistive collisional plasmas. Physica Scripta, 2008, T131, 014039.	2.5	0
39	Poloidal magnetic fields around a tokamak magnetic surface with nonlinear flows for elliptic plasmas with triangularity. Physica Scripta, 2008, T131, 014038.	2.5	0
40	Collisional diffusion in toroidal plasmas with elongation and triangularity. Physics of Plasmas, 2007, 14, 052502.	1.9	4
41	Eigenvalues and eigenfunctions for the ground state of polynomial potentials. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 362, 371-376.	2.1	9
42	Precise spectra for the H2 molecule by a new approximate technique. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 364, 135-139.	2.1	6
43	Fundamental mode in advanced technology optical fibres by two-point quasi-rational approximations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 358, 80-84.	2.1	1
44	Analytical approximations to the eigenvalues of the Morse potential with centrifugal terms. Computational and Theoretical Chemistry, 2006, 769, 15-18.	1.5	24
45	How plasma configurations determine poloidal magnetic field topology in tokamaks. AIP Conference Proceedings, 2006, , .	0.4	1
46	Non-ideal Effects in Streaming Bi-Dust Acoustic Instability. AIP Conference Proceedings, 2006, , .	0.4	0
47	Current density and poloidal magnetic field for toroidal elliptic plasmas with triangularity. Physics of Plasmas, 2005, 12, 082506.	1.9	3
48	Conserved functions and extended Gradâ€“Shafranov equation for low vorticity viscous plasmas with nonlinear flows. Physics of Plasmas, 2005, 12, 102505.	1.9	7
49	<title>Generalized guided-wave mode calculations in graded-index fibers</title>. , 2004, , .		0
50	Non-linear Approximation for the Grain Charge Evolution. Physica Scripta, 2004, T107, 221.	2.5	0
51	Earthâ€surface effects on the temperature distribution in the earth's crust due to magma intrusion. Geophysics, 2002, 67, 1159-1168.	2.6	2
52	<title>Simple analytic approximations to the integral of Bessel's J<formula><inf><roman>0</roman></inf></formula>: application to the transmittance of a circular aperture</title>. , 2001, , .		0
53	Simple analytical approximations to the integrals of the Bessel functionsJÎ½: application to the transmittance of a circular aperture. Journal of Physics A, 2001, 34, 4571-4582.	1.6	5
54	Analytic approximations to Kelvin functions with applications to electromagnetics. Journal of Physics A, 2001, 34, 9153-9162.	1.6	4

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55	Distribution of Matter in the Solar System. Astrophysics and Space Science, 2000, 274, 549-556.	1.4	0
56	Magnetohydrodynamic treatment of collisional transport in toroidal configurations: Application to elliptic cross sections. Physics of Plasmas, 2000, 7, 2915-2922.	1.9	9
57	Eigenvalues of the SchrÃ¶dinger equation with Coulomb potentials plus linear and harmonic radial terms. Journal of Physics A, 2000, 33, 5321-5334.	1.6	37
58	Collisional Neoclassical Transport for Elliptic Magnetic Surfaces with Triangularity and Grad?Shafranov Shift. Physica Scripta, 2000, T84, 212.	2.5	2
59	Multimode Helicon Plasma Waves Dispersion Relation Analysis Using Two-point Quasifractional Approximants. Physica Scripta, 1998, T75, 303.	2.5	0
60	Comment on â€œNonlinear Three-Dimensional Debye Screening in Plasmasâ€• Journal of the Physical Society of Japan, 1998, 67, 699-699.	1.6	0
61	Pfirsch?Schl?ter Transport for Toroidal Elliptic Magnetic Surfaces in Tokamak. Physica Scripta, 1998, T75, 300.	2.5	1
62	Space Charge Potentials In Cylindrical Geometries Including Temperature Effects. , 1998, , 369-372.		0
63	Nonlinear Electric Field Diffusion in Plasmas. , 1998, , 283-287.		0
64	Analytical Approximant of the Universal Line Shape. , 1998, , 355-358.		0
65	Improved Approximated Solutions to the Nonlinear Debye potential. , 1998, , 263-268.		0
66	New System of Coordinates for Tokamaks. Astrophysics and Space Science, 1997, 256, 411-416.	1.4	1
67	The breaking of upâ€“down symmetry of trapped particle orbits by a toroidal electric field. Physics of Plasmas, 1996, 3, 4536-4544.	1.9	5
68	Improved solutions to the nonlinear oneâ€dimensional Debye screening in plasmas with two temperatures. Physics of Plasmas, 1994, 1, 2105-2109.	1.9	3
69	Twoâ€Point Quasiâ€Fractional Approximation to the Debyeâ€Weller exp(â^'2W) Factor. Physica Status Solidi (B): Basic Research, 1993, 178, K67.	1.5	0
70	New firstâ€order perpendicular drift velocities. Physics of Fluids B, 1993, 5, 1041-1044.	1.7	0
71	Two-dimensional hydrogenlike atoms in the presence of a magnetic field: Quasifractional approximations. Physical Review B, 1992, 45, 8359-8362.	3.2	26
72	Twoâ€point quasifractional approximant in physics: Method improvement and application toJÎ½(x). Journal of Mathematical Physics, 1992, 33, 2483-2486.	1.1	11

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73	Non-Linear Unidimensional Debye Screening in Plasmas. Journal of the Physical Society of Japan, 1992, 61, 1969-1972.	1.6	11
74	Twoâ€point quasifractional approximant for F_{3/2}(X) in Fermi gases. Physica Status Solidi (B): Basic Research, 1992, 174, K5.	1.5	1
75	Two-point quasi-fractional approximations to the airy function Ai(x). Journal of Computational Physics, 1992, 99, 337-340.	3.8	0
76	Twoâ€point quasifractional approximant in physics. Truncation error. Journal of Mathematical Physics, 1991, 32, 1470-1477.	1.1	42
77	Gyroinvariant highâ€order orbit theory: General treatment. Physics of Fluids B, 1991, 3, 2939-2952.	1.7	3
78	Two-point fractional approximants for the motion of a projectile in a resisting medium. European Journal of Physics, 1991, 12, 86-89.	0.6	2
79	Gyroinvariant highâ€order orbit theory for unidirectional magnetostatic fields: New approach. Physics of Fluids B, 1990, 2, 11-21.	1.7	4
80	Spaceâ€charge effects in a velocity analyzer of variable geometry. Review of Scientific Instruments, 1990, 61, 3381-3383.	1.3	13
81	A new Langmuirâ€“Child equation including temperature effects. Physics of Fluids B, 1989, 1, 247-251.	1.7	24
82	Two-point quasi-fractional approximations to the bessel functions Jv(x) of fractional order. Journal of Computational Physics, 1989, 85, 487-492.	3.8	7
83	Higher order two-point quasi-fractional approximations to the bessel functions J0(x) and J1(x). Journal of Computational Physics, 1988, 77, 276-281.	3.8	8
84	Fractional approximation to elliptic functions. Journal of Mathematical Physics, 1987, 28, 330-333.	1.1	8
85	Transmittance of a circular aperture by an integrable fractional-like approximation to Jo(x) function. Journal of Computational Physics, 1987, 73, 481-489.	3.8	2
86	Grid effects on velocity analyzers of variable geometry. Review of Scientific Instruments, 1986, 57, 1501-1506.	1.3	18
87	Experimental verification of the grid effects in a velocity analyzer with variable geometry. Review of Scientific Instruments, 1986, 57, 1507-1511.	1.3	14
88	Fractional approximation to the vacuumâ€“vacuum amplitude of a Ï†4â€potential theory in zero dimensions. Journal of Mathematical Physics, 1986, 27, 699-702.	1.1	6
89	Ionâ€acoustic dispersion relation with direct fractional approximation for Zâ€²(s). Journal of Mathematical Physics, 1985, 26, 1186-1188.	1.1	5
90	Fractional approximations to the Bessel function J0(x). Journal of Mathematical Physics, 1985, 26, 705-707.	1.1	17

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91	Fractional approximations for the spherically symmetric Coulomb scattering wave functions. Journal of Mathematical Physics, 1984, 25, 1268-1273.	1.1	9
92	Three and four generalized Lorentzian approximations for the Voigt line shape: errata. Applied Optics, 1983, 22, 19.	2.1	15
93	Fractional approximations for linear firstâ€order differential equations with polynomial coefficientsâ€"application to E1(x). Journal of Mathematical Physics, 1982, 23, 2276-2280.	1.1	3
94	Generalized Lorentzian approximations for the Voigt line shape. Applied Optics, 1981, 20, 259.	2.1	33
95	Generalized Lorentzian approximations for the Voigt line shape: errata. Applied Optics, 1981, 20, 2601.	2.1	3
96	Three and four generalized Lorentzian approximations for the Voigt line shape. Applied Optics, 1981, 20, 3923.	2.1	81
97	A Hilbertâ€"PadÃ© method for multipole approximations. Application to the Gaussian function. Journal of Mathematical Physics, 1980, 21, 1332-1335.	1.1	5
98	A modified asymptotic PadÃ© method. Application to multipole approximation for the plasma dispersion function Z. Journal of Mathematical Physics, 1980, 21, 280-285.	1.1	57
99	New two-pole approximation for the plasma dispersion function Z. Physics of Fluids, 1979, 22, 1413.	1.4	28
100	New model to calculate the vibrational lattice frequency in dust crystals using a generalized nonlinear screening potential. , 0, , .		0
101	Non-linear central charge potential in dusty plasma. , 0, , .		0