

Pablo Martín

List of Publications by Year in descending order

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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 | Three and four generalized Lorentzian approximations for the Voigt line shape. <i>Applied Optics</i> , 1981, 20, 3923. | 2.1 | 81 |
| 2 | A modified asymptotic Padé method. Application to multipole approximation for the plasma dispersion function Z . <i>Journal of Mathematical Physics</i> , 1980, 21, 280-285. | 1.1 | 57 |
| 3 | Magnet fall inside a conductive pipe: motion and the role of the pipe wall thickness. <i>European Journal of Physics</i> , 2009, 30, 855-869. | 0.6 | 49 |
| 4 | Two-point quasifractional approximant in physics. Truncation error. <i>Journal of Mathematical Physics</i> , 1991, 32, 1470-1477. | 1.1 | 42 |
| 5 | Eigenvalues of the Schrödinger equation with Coulomb potentials plus linear and harmonic radial terms. <i>Journal of Physics A</i> , 2000, 33, 5321-5334. | 1.6 | 37 |
| 6 | Generalized Lorentzian approximations for the Voigt line shape. <i>Applied Optics</i> , 1981, 20, 259. | 2.1 | 33 |
| 7 | Damped fall of magnets inside a conducting pipe. <i>American Journal of Physics</i> , 2011, 79, 193-200. | 0.7 | 30 |
| 8 | New two-pole approximation for the plasma dispersion function Z . <i>Physics of Fluids</i> , 1979, 22, 1413. | 1.4 | 28 |
| 9 | Two-dimensional hydrogenlike atoms in the presence of a magnetic field: Quasifractional approximations. <i>Physical Review B</i> , 1992, 45, 8359-8362. | 3.2 | 26 |
| 10 | A new Langmuir-Child equation including temperature effects. <i>Physics of Fluids B</i> , 1989, 1, 247-251. | 1.7 | 24 |
| 11 | Analytical approximations to the eigenvalues of the Morse potential with centrifugal terms. <i>Computational and Theoretical Chemistry</i> , 2006, 769, 15-18. | 1.5 | 24 |
| 12 | Magnetically coupled magnet-spring oscillators. <i>European Journal of Physics</i> , 2010, 31, 433-452. | 0.6 | 22 |
| 13 | Grid effects on velocity analyzers of variable geometry. <i>Review of Scientific Instruments</i> , 1986, 57, 1501-1506. | 1.3 | 18 |
| 14 | Fractional approximations to the Bessel function $J_0(x)$. <i>Journal of Mathematical Physics</i> , 1985, 26, 705-707. | 1.1 | 17 |
| 15 | Three and four generalized Lorentzian approximations for the Voigt line shape: errata. <i>Applied Optics</i> , 1983, 22, 19. | 2.1 | 15 |
| 16 | Experimental verification of the grid effects in a velocity analyzer with variable geometry. <i>Review of Scientific Instruments</i> , 1986, 57, 1507-1511. | 1.3 | 14 |
| 17 | Space-charge effects in a velocity analyzer of variable geometry. <i>Review of Scientific Instruments</i> , 1990, 61, 3381-3383. | 1.3 | 13 |
| 18 | Two-point quasifractional approximant in physics: Method improvement and application to $J_{1/2}(x)$. <i>Journal of Mathematical Physics</i> , 1992, 33, 2483-2486. | 1.1 | 11 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Non-Linear Unidimensional Debye Screening in Plasmas. Journal of the Physical Society of Japan, 1992, 61, 1969-1972. | 1.6 | 11 |
| 20 | Fractional approximations for the spherically symmetric Coulomb scattering wave functions. Journal of Mathematical Physics, 1984, 25, 1268-1273. | 1.1 | 9 |
| 21 | Magnetohydrodynamic treatment of collisional transport in toroidal configurations: Application to elliptic cross sections. Physics of Plasmas, 2000, 7, 2915-2922. | 1.9 | 9 |
| 22 | 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 |
| 23 | Fractional approximation to elliptic functions. Journal of Mathematical Physics, 1987, 28, 330-333. | 1.1 | 8 |
| 24 | Higher order two-point quasi-fractional approximations to the bessel functions $J_0(x)$ and $J_1(x)$. Journal of Computational Physics, 1988, 77, 276-281. | 3.8 | 8 |
| 25 | Two-point quasi-fractional approximations to the bessel functions $J_\nu(x)$ of fractional order. Journal of Computational Physics, 1989, 85, 487-492. | 3.8 | 7 |
| 26 | Conserved functions and extended Grad-Shafranov equation for low vorticity viscous plasmas with nonlinear flows. Physics of Plasmas, 2005, 12, 102505. | 1.9 | 7 |
| 27 | Fractional approximation to the vacuum potential theory in zero dimensions. Journal of Mathematical Physics, 1986, 27, 699-702. | 1.1 | 6 |
| 28 | Precise spectra for the H ₂ molecule by a new approximate technique. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 364, 135-139. | 2.1 | 6 |
| 29 | Analytic approximate eigenvalues by a new technique. Application to sextic anharmonic potentials. Results in Physics, 2018, 8, 140-145. | 4.1 | 6 |
| 30 | A Hilbert-Padé method for multipole approximations. Application to the Gaussian function. Journal of Mathematical Physics, 1980, 21, 1332-1335. | 1.1 | 5 |
| 31 | Ion-acoustic dispersion relation with direct fractional approximation for $Z(s)$. Journal of Mathematical Physics, 1985, 26, 1186-1188. | 1.1 | 5 |
| 32 | The breaking of up-down symmetry of trapped particle orbits by a toroidal electric field. Physics of Plasmas, 1996, 3, 4536-4544. | 1.9 | 5 |
| 33 | Simple analytical approximations to the integrals of the Bessel functions $J_{1/2}$: application to the transmittance of a circular aperture. Journal of Physics A, 2001, 34, 4571-4582. | 1.6 | 5 |
| 34 | SOLVENT EFFECTS IN THE DETERMINATION OF THE NONLINEAR OPTICAL PROPERTIES. Journal of Nonlinear Optical Physics and Materials, 2008, 17, 511-520. | 1.8 | 5 |
| 35 | Precise analytic approximations for the Bessel function | | |
| 36 | Gyroinvariant high-order orbit theory for unidirectional magnetostatic fields: New approach. Physics of Fluids B, 1990, 2, 11-21. | 1.7 | 4 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | Analytic approximations to Kelvin functions with applications to electromagnetics. Journal of Physics A, 2001, 34, 9153-9162. | 1.6 | 4 |
| 38 | Collisional diffusion in toroidal plasmas with elongation and triangularity. Physics of Plasmas, 2007, 14, 052502. | 1.9 | 4 |
| 39 | OPTICAL PROPERTIES OF MOLECULAR SYSTEM COUPLED TO THE SOLVENT. International Journal of Modern Physics B, 2009, 23, 5801-5809. | 2.0 | 4 |
| 40 | Generalized Lorentzian approximations for the Voigt line shape: errata. Applied Optics, 1981, 20, 2601. | 2.1 | 3 |
| 41 | Fractional approximations for linear first-order differential equations with polynomial coefficients application to $E_1(x)$. Journal of Mathematical Physics, 1982, 23, 2276-2280. | 1.1 | 3 |
| 42 | Gyroinvariant high-order orbit theory: General treatment. Physics of Fluids B, 1991, 3, 2939-2952. | 1.7 | 3 |
| 43 | Improved solutions to the nonlinear one-dimensional Debye screening in plasmas with two temperatures. Physics of Plasmas, 1994, 1, 2105-2109. | 1.9 | 3 |
| 44 | Current density and poloidal magnetic field for toroidal elliptic plasmas with triangularity. Physics of Plasmas, 2005, 12, 082506. | 1.9 | 3 |
| 45 | 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 |
| 46 | 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 |
| 47 | Analytic approximation to Bessel function $J_0(x)$. Computational and Applied Mathematics, 2020, 39, 1. | 2.2 | 3 |
| 48 | 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 |
| 49 | Transmittance of a circular aperture by an integrable fractional-like approximation to $J_0(x)$ function. Journal of Computational Physics, 1987, 73, 481-489. | 3.8 | 2 |
| 50 | 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 |
| 51 | Earth's surface effects on the temperature distribution in the earth's crust due to magma intrusion. Geophysics, 2002, 67, 1159-1168. | 2.6 | 2 |
| 52 | Drift instability grow rates in non-ideal inhomogeneous bi-dust plasmas. Journal of Physics: Conference Series, 2012, 370, 012034. | 0.4 | 2 |
| 53 | Analytic approximations for special functions, applied to the modified Bessel functions $I_2(x)$ and $I_2/3(x)$. Results in Physics, 2018, 11, 1028-1033. | 4.1 | 2 |
| 54 | Analytic solution for a joint Bohm sheath and pre-sheath potential profile. Physica Scripta, 2020, 95, 015602. | 2.5 | 2 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 55 | Accurate analytic approximations to eigenvalues anharmonic potentials $x^2 + \hat{V}x^8$. Results in Physics, 2020, 16, 102986. | 4.1 | 2 |
| 56 | Collisional Neoclassical Transport for Elliptic Magnetic Surfaces with Triangularity and Grad-Shafranov Shift. Physica Scripta, 2000, T84, 212. | 2.5 | 2 |
| 57 | Two-point quasifractional approximant for $\langle F \rangle_{3/2}(X)$ in Fermi gases. Physica Status Solidi (B): Basic Research, 1992, 174, K5. | 1.5 | 1 |
| 58 | New System of Coordinates for Tokamaks. Astrophysics and Space Science, 1997, 256, 411-416. | 1.4 | 1 |
| 59 | Pfirsch-Schlüter Transport for Toroidal Elliptic Magnetic Surfaces in Tokamak. Physica Scripta, 1998, T75, 300. | 2.5 | 1 |
| 60 | 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 |
| 61 | How plasma configurations determine poloidal magnetic field topology in tokamaks. AIP Conference Proceedings, 2006, . . | 0.4 | 1 |
| 62 | Absorptive and dispersive optical properties in molecular systems. Optics Communications, 2009, 282, 1807-1814. | 2.1 | 1 |
| 63 | Bi-dust solitary waves. Journal of Physics: Conference Series, 2012, 370, 012042. | 0.4 | 1 |
| 64 | Precise Approximate Solution for the Bohm Sheath Potential. Journal of Physics: Conference Series, 2015, 574, 012107. | 0.4 | 1 |
| 65 | Multi-point quasi-rational approximants for the modified Bessel function $I_1(x)$. Journal of Physics: Conference Series, 2016, 738, 012066. | 0.4 | 1 |
| 66 | Analytic Approximate for the Plasma Sheath Potential. Journal of Physics: Conference Series, 2016, 720, 012040. | 0.4 | 1 |
| 67 | Analytic approximation for the modified Bessel function $I_{2/3}(x)$. Journal of Physics: Conference Series, 2017, 936, 012020. | 0.4 | 1 |
| 68 | Ground state eigenvalue of the anharmonic potential $x^4 + \hat{V}x^6$ by high accuracy analytic functions. Results in Physics, 2020, 18, 103291. | 4.1 | 1 |
| 69 | Quasi-Rational Analytic Approximation for the Modified Bessel Function $I_1(x)$ with High Accuracy. Symmetry, 2021, 13, 741. | 2.2 | 1 |
| 70 | Accurate analytic approximation to the Modified Bessel function of Second Kind $K_0(x)$. Results in Physics, 2022, 35, 105283. | 4.1 | 1 |
| 71 | Two-point quasi-fractional approximations to the airy function $Ai(x)$. Journal of Computational Physics, 1992, 99, 337-340. | 3.8 | 0 |
| 72 | Two-Point Quasi-Fractional Approximation to the Debye-Waller $\exp(-\hat{W})$ Factor. Physica Status Solidi (B): Basic Research, 1993, 178, K67. | 1.5 | 0 |

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|----|--|-----|-----------|
| 73 | New first-order perpendicular drift velocities. <i>Physics of Fluids B</i> , 1993, 5, 1041-1044. | 1.7 | 0 |
| 74 | Multimode Helicon Plasma Waves Dispersion Relation Analysis Using Two-point Quasifractional Approximants. <i>Physica Scripta</i> , 1998, T75, 303. | 2.5 | 0 |
| 75 | Comment on "Nonlinear Three-Dimensional Debye Screening in Plasmas". <i>Journal of the Physical Society of Japan</i> , 1998, 67, 699-699. | 1.6 | 0 |
| 76 | Distribution of Matter in the Solar System. <i>Astrophysics and Space Science</i> , 2000, 274, 549-556. | 1.4 | 0 |
| 77 | New model to calculate the vibrational lattice frequency in dust crystals using a generalized nonlinear screening potential. , 0, , . | | 0 |
| 78 | <title>Simple analytic approximations to the integral of Bessel's J_0 : application to the transmittance of a circular aperture</title>. , 2001, , . | | 0 |
| 79 | Non-linear central charge potential in dusty plasma. , 0, , . | | 0 |
| 80 | <title>Generalized guided-wave mode calculations in graded-index fibers</title>. , 2004, , . | | 0 |
| 81 | Non-ideal Effects in Streaming Bi-Dust Acoustic Instability. <i>AIP Conference Proceedings</i> , 2006, , . | 0.4 | 0 |
| 82 | Non-ideal dust acoustic waves. <i>Physica Scripta</i> , 2008, T131, 014043. | 2.5 | 0 |
| 83 | Extended treatment of the non-ideal effects in streaming dust-acoustic instabilities. <i>Physica Scripta</i> , 2008, T131, 014041. | 2.5 | 0 |
| 84 | Plasma density around a tokamak magnetic surface with nonlinear flows in the low-vorticity limit for visco-resistive collisional plasmas. <i>Physica Scripta</i> , 2008, T131, 014039. | 2.5 | 0 |
| 85 | Poloidal magnetic fields around a tokamak magnetic surface with nonlinear flows for elliptic plasmas with triangularity. <i>Physica Scripta</i> , 2008, T131, 014038. | 2.5 | 0 |
| 86 | POLOIDAL MAGNETIC FIELD TOPOLOGY FOR TOKAMAKS WITH CURRENT HOLES. , 2009, , . | | 0 |
| 87 | NON-LINEAR VISCO-RESISTIVE COLLISIONAL TRANSPORT IN TOROIDAL ELLIPTICAL PLASMAS WITH TRIANGULARITY AND HOLE CURRENTS: A REVIEW. , 2009, , . | | 0 |
| 88 | Preliminary results of eigenvalue and eigenvector treatment for kink instabilities in tokamaks. <i>Journal of Physics: Conference Series</i> , 2012, 370, 012061. | 0.4 | 0 |
| 89 | Banana orbits in elliptic tokamaks with hole currents. <i>Journal of Physics: Conference Series</i> , 2015, 591, 012010. | 0.4 | 0 |
| 90 | Super-paramagnetic nanoparticles synthesis in a thermal plasma reactor assisted by magnetic bottle. <i>Journal of Physics: Conference Series</i> , 2015, 591, 012055. | 0.4 | 0 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 91 | Triangularity effects on the collisional diffusion for elliptic tokamaks. <i>Physica Scripta</i> , 2015, 90, 095601. | 2.5 | 0 |
| 92 | Theoretical prediction of gold vein location in deposits originated by a wall magma intrusion. <i>Journal of Physics: Conference Series</i> , 2016, 720, 012052. | 0.4 | 0 |
| 93 | Hipergeometric solutions to some nonhomogeneous equations of fractional order. <i>Journal of Physics: Conference Series</i> , 2017, 936, 012100. | 0.4 | 0 |
| 94 | A new method to obtain analytic approximations applied to the $J_1(x)$ function. <i>Journal of Physics: Conference Series</i> , 2018, 1043, 012002. | 0.4 | 0 |
| 95 | High accuracy approximation for the modified Bessel function of fractional order $I_{1/3}(x)$. <i>Journal of Physics: Conference Series</i> , 2018, 1043, 012006. | 0.4 | 0 |
| 96 | Quantum effects in bi-dust plasmas. <i>Physica Scripta</i> , 2020, 95, 015604. | 2.5 | 0 |
| 97 | Non-linear Approximation for the Grain Charge Evolution. <i>Physica Scripta</i> , 2004, T107, 221. | 2.5 | 0 |
| 98 | Space Charge Potentials In Cylindrical Geometries Including Temperature Effects. , 1998, , 369-372. | | 0 |
| 99 | Nonlinear Electric Field Diffusion in Plasmas. , 1998, , 283-287. | | 0 |
| 100 | Analytical Approximant of the Universal Line Shape. , 1998, , 355-358. | | 0 |
| 101 | Improved Approximated Solutions to the Nonlinear Debye potential. , 1998, , 263-268. | | 0 |