

Pedro Freitas

List of Publications by Year in descending order

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80
papers

1,147
citations

430874

18
h-index

454955

30
g-index

81
all docs

81
docs citations

81
times ranked

403
citing authors

#	ARTICLE	IF	CITATIONS
1	Geometrically induced discrete spectrum in curved tubes. <i>Differential Geometry and Its Applications</i> , 2005, 23, 95-105.	0.5	69
2	Stability Results for the Wave Equation with Indefinite Damping. <i>Journal of Differential Equations</i> , 1996, 132, 338-352.	2.2	60
3	Numerical Optimization of Low Eigenvalues of the Dirichlet and Neumann Laplacians. <i>Journal of Optimization Theory and Applications</i> , 2012, 154, 235-257.	1.5	59
4	The first Robin eigenvalue with negative boundary parameter. <i>Advances in Mathematics</i> , 2015, 280, 322-339.	1.1	53
5	Integrals of polylogarithmic functions, recurrence relations, and associated Euler sums. <i>Mathematics of Computation</i> , 2005, 74, 1425-1441.	2.1	49
6	A nonlocal Sturm-Liouville eigenvalue problem. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 1994, 124, 169-188.	1.2	42
7	Asymptotics of Dirichlet eigenvalues and eigenfunctions of the Laplacian on thin domains in \mathbb{R}^d . <i>Journal of Functional Analysis</i> , 2010, 258, 803-812.	1.4	39
8	Singular asymptotic expansions for Dirichlet eigenvalues and eigenfunctions of the Laplacian on thin planar domains. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2009, 26, 547-560.	1.4	37
9	On Some Eigenvalue Problems Related to the Wave Equation with Indefinite Damping. <i>Journal of Differential Equations</i> , 1996, 127, 320-335.	2.2	34
10	A lower bound to the spectral threshold in curved tubes. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2004, 460, 3457-3467.	2.1	33
11	Precise bounds and asymptotics for the first Dirichlet eigenvalue of triangles and rhombi. <i>Journal of Functional Analysis</i> , 2007, 251, 376-398.	1.4	31
12	Location of the nodal set for thin curved tubes. <i>Indiana University Mathematics Journal</i> , 2008, 57, 343-376.	0.9	31
13	Bounds and extremal domains for Robin eigenvalues with negative boundary parameter. <i>Advances in Calculus of Variations</i> , 2017, 10, 357-379.	1.2	31
14	New Bounds for the Principal Dirichlet Eigenvalue of Planar Regions. <i>Experimental Mathematics</i> , 2006, 15, 333-342.	0.7	29
15	Memory Driven Instability in a Diffusion Process. <i>SIAM Journal on Mathematical Analysis</i> , 2002, 33, 1090-1106.	1.9	26
16	On the Optimal Value of the Spectral Abscissa for a System of Linear Oscillators. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1999, 21, 195-208.	1.4	21
17	A sharp upper bound for the first Dirichlet eigenvalue and the growth of the isoperimetric constant of convex domains. <i>Proceedings of the American Mathematical Society</i> , 2008, 136, 2997-3006.	0.8	20
18	Optimizing the Rate of Decay of Solutions of the Wave Equation Using Genetic Algorithms: A Counterexample to the Constant Damping Conjecture. <i>SIAM Journal on Control and Optimization</i> , 1999, 37, 376-387.	2.1	19

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19	Bifurcation and stability of stationary solutions of nonlocal scalar reaction-diffusion equations. <i>Journal of Dynamics and Differential Equations</i> , 1994, 6, 613-629.	1.9	18
20	On the Invariant Spectrum of S^1 -Invariant Metrics on S^2 . <i>Proceedings of the London Mathematical Society</i> , 2002, 84, 213-230.	1.3	18
21	Eigenvalue asymptotics, inverse problems and a trace formula for the linear damped wave equation. <i>Journal of Differential Equations</i> , 2009, 247, 3028-3039.	2.2	18
22	Asymptotic behaviour of optimal spectral planar domains with fixed perimeter. <i>Journal of Mathematical Physics</i> , 2013, 54, 053504.	1.1	18
23	Spherical symmetrization and the first eigenvalue of geodesic disks on manifolds. <i>Calculus of Variations and Partial Differential Equations</i> , 2014, 51, 701-724.	1.7	18
24	Optimal spectral rectangles and lattice ellipses. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2013, 469, 20120492.	2.1	17
25	Upper and lower bounds for the first Dirichlet eigenvalue of a triangle. <i>Proceedings of the American Mathematical Society</i> , 2006, 134, 2083-2089.	0.8	17
26	Lyapunov Functionals and Stability for FitzHugh-Nagumo Systems. <i>Journal of Differential Equations</i> , 2001, 169, 208-227.	2.2	16
27	A numerical study of the spectral gap. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 055201.	2.1	16
28	On the Characterization of Harmonic and Subharmonic Functions via Mean-value Properties. <i>Potential Analysis</i> , 2010, 32, 189-200.	0.9	15
29	4 The Robin problem. , 2017, , 78-119.		15
30	Positivity results for a nonlocal elliptic equation. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 1998, 128, 697-715.	1.2	14
31	Delay-induced Instabilities in Gyroscopic Systems. <i>SIAM Journal on Control and Optimization</i> , 2000, 39, 196-207.	2.1	14
32	Instability results for the damped wave equation in unbounded domains. <i>Journal of Differential Equations</i> , 2005, 211, 168-186.	2.2	13
33	Waveguides with Combined Dirichlet and Robin Boundary Conditions. <i>Mathematical Physics Analysis and Geometry</i> , 2007, 9, 335-352.	1.0	13
34	Asymptotic behaviour and numerical approximation of optimal eigenvalues of the Robin Laplacian. <i>ESAIM - Control, Optimisation and Calculus of Variations</i> , 2013, 19, 438-459.	1.3	13
35	Spectra of graphene nanoribbons with armchair and zigzag boundary conditions. <i>Reviews in Mathematical Physics</i> , 2014, 26, 1450018.	1.7	13
36	Optimisation of Eigenvalues of the Dirichlet Laplacian with a Surface Area Restriction. <i>Applied Mathematics and Optimization</i> , 2016, 73, 313-328.	1.6	13

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37	Extension of Abel's Lemma with q-Series Implications. Ramanujan Journal, 2005, 10, 137-152.	0.7	12
38	Sharp estimates and saturation phenomena for a nonlocal eigenvalue problem. Advances in Mathematics, 2011, 228, 2352-2365.	1.1	12
39	On the First Twisted Dirichlet Eigenvalue. Communications in Analysis and Geometry, 2004, 12, 1083-1104.	0.4	12
40	A LI-TYPE CRITERION FOR ZERO-FREE HALF-PLANES OF RIEMANN'S ZETA FUNCTION. Journal of the London Mathematical Society, 2006, 73, 399-414.	1.0	10
41	Bounds for the first Dirichlet eigenvalue of triangles and quadrilaterals. ESAIM - Control, Optimisation and Calculus of Variations, 2010, 16, 648-676.	1.3	9
42	The damped wave equation with unbounded damping. Journal of Differential Equations, 2018, 264, 7023-7054.	2.2	9
43	From Steklov to Neumann and Beyond, via Robin: The Szegő's Way. Canadian Journal of Mathematics, 2020, 72, 1024-1043.	0.6	9
44	Unbounded planar domains whose second nodal line does not touch the boundary. Mathematical Research Letters, 2007, 14, 107-111.	0.5	9
45	From Neumann to Steklov and beyond, via Robin: The Weinberger way. American Journal of Mathematics, 2021, 143, 969-994.	1.1	8
46	Spectral sequences for quadratic pencils and the inverse spectral problem for the damped wave equation. Journal Des Mathematiques Pures Et Appliquees, 1999, 78, 965-980.	1.6	7
47	On Minimal Eigenvalues of Schrödinger Operators on Manifolds. Communications in Mathematical Physics, 2001, 217, 375-382.	2.2	7
48	On the inverse spectral problem for Euclidean triangles. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 1546-1562.	2.1	7
49	Asymptotic Behaviour of Extremal Averages of Laplacian Eigenvalues. Journal of Statistical Physics, 2017, 167, 1511-1518.	1.2	7
50	Eigenvalue problems for the wave equation with strong damping. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1997, 127, 755-771.	1.2	6
51	Eigenvalue asymptotics for the damped wave equation on metric graphs. Journal of Differential Equations, 2017, 263, 2780-2811.	2.2	6
52	Some Results on the Stability and Bifurcation of Stationary Solutions of Delay-Diffusion Equations. Journal of Mathematical Analysis and Applications, 1997, 206, 59-82.	1.0	5
53	On convex surfaces with minimal moment of inertia. Journal of Mathematical Physics, 2007, 48, 122902.	1.1	5
54	Asymptotics for the Expected Lifetime of Brownian Motion on Thin Domains in \mathbb{R}^n . Journal of Theoretical Probability, 2013, 26, 284-309.	0.8	5

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55	Sharp bounds for the modulus and phase of Hankel functions with applications to Jaeger integrals. <i>Mathematics of Computation</i> , 2017, 87, 289-308.	2.1	5
56	Hearing the weights of weighted projective planes. <i>Annals of Global Analysis and Geometry</i> , 2008, 33, 373-395.	0.6	3
57	On the effect of sharp rises in blood pressure in the Shah-Humphrey model for intracranial saccular aneurysms. <i>Biomechanics and Modeling in Mechanobiology</i> , 2009, 8, 457-471.	2.8	3
58	The spectral determinant of the isotropic quantum harmonic oscillator in arbitrary dimensions. <i>Mathematische Annalen</i> , 2018, 372, 1081-1101.	1.4	3
59	On the Behavior of Clamped Plates under Large Compression. <i>SIAM Journal on Applied Mathematics</i> , 2019, 79, 1872-1891.	1.8	3
60	A remark on Pólya's conjecture at low frequencies. <i>Archiv Der Mathematik</i> , 2019, 112, 305-311.	0.5	3
61	The determinant of one-dimensional polyharmonic operators of arbitrary order. <i>Journal of Functional Analysis</i> , 2020, 279, 108783.	1.4	3
62	On the spectrum of deformations of compact double-sided flat hypersurfaces. <i>Analysis and PDE</i> , 2013, 6, 1051-1088.	1.4	2
63	Extremal eigenvalues of the Dirichlet biharmonic operator on rectangles. <i>Proceedings of the American Mathematical Society</i> , 2020, 148, 1109-1120.	0.8	2
64	A Gelfand-Levitan trace formula for generic quantum graphs. <i>Analysis and Mathematical Physics</i> , 2021, 11, 1.	1.3	2
65	Optimal unions of scaled copies of domains and Pólya's conjecture. <i>Arkiv for Matematik</i> , 2021, 59, 11-51.	0.5	2
66	The spectrum of geodesic balls on spherically symmetric manifolds. <i>Communications in Analysis and Geometry</i> , 2017, 25, 507-544.	0.4	2
67	Eigenvalue asymptotics for almost flat compact hypersurfaces. <i>Doklady Mathematics</i> , 2012, 85, 18-22.	0.6	1
68	Summation formula inequalities for eigenvalues of Schrödinger operators. <i>Journal of Spectral Theory</i> , 2016, 6, 483-503.	0.8	1
69	Decay of solutions for a class of nonlinear Schrödinger equations in \mathbb{R}^n and the stability of shock profiles for a quasilinear Benney system. <i>Nonlinearity</i> , 2018, 31, 1110-1119.	1.4	1
70	Extremal Domains and Pólya-type Inequalities for the Robin Laplacian on Rectangles and Unions of Rectangles. <i>International Mathematics Research Notices</i> , 2019, , .	1.0	1
71	The linear damped wave equation, Hamiltonian symmetry, and the importance of being odd. <i>Discrete and Continuous Dynamical Systems</i> , 1998, 4, 635-640.	0.9	1
72	Maximal determinants of Schrödinger operators on bounded intervals. <i>Journal De L'Ecole Polytechnique - Mathematiques</i> , 0, 7, 803-829.	0.0	1

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73	The damped wave equation with singular damping. Proceedings of the American Mathematical Society, 2020, 148, 4273-4284.	0.8	1
74	A spectral Bernstein theorem. Annali Di Matematica Pura Ed Applicata, 2011, 190, 77-90.	1.0	0
75	On the role of spectral markers and stability in spine models. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 14, 19-28.	3.1	0
76	Optimal Ball Placement in Rugby Conversions. SIAM Review, 2014, 56, 673-690.	9.5	0
77	Characterization and Parameterization of the Singular Manifold of a Simple Stewart Platform. , 2011, , 255-262.		0
78	Alexandrov's isodiametric conjecture and the cut locus of a surface. Tohoku Mathematical Journal, 2015, 67, .	0.2	0
79	Bessel quotients and Robin eigenvalues. Pacific Journal of Mathematics, 2021, 315, 75-87.	0.5	0
80	A lower bound to the spectral threshold in curved quantum layers. , 2017, , 261-269.		0