Manuel Gadella

List of Publications by Year
in descending order

162 papers	2,025 citations	236925 25 h-index	330143 37 g-index
171 all docs	171 docs citations	171 times ranked	467 citing authors

#	Article	IF	Citations
1	Physical and mathematical aspects of Gamow states. Physics Reports, 2004, 396, 41-113.	25.6	105
2	Gamow vectors and decaying states. American Journal of Physics, 1989, 57, 1103-1108.	0.7	97
3	Bound states and scattering coefficients of the potential. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 1310-1313.	2.1	77
4	A rigged Hilbert space of Hardy–class functions: Applications to resonances. Journal of Mathematical Physics, 1983, 24, 1462-1469.	1.1	74
5	A pedestrian introduction to Gamow vectors. American Journal of Physics, 2002, 70, 626-638.	0.7	66
6	Moyal quantization of 2+1–dimensional Galilean systems. Journal of Mathematical Physics, 1992, 33, 3379-3386.	1.1	57
7	Quantum mechanical irrebersibility. Physica A: Statistical Mechanics and Its Applications, 1997, 236, 485-549.	2.6	50
8	Self-adjoint Hamiltonians with a mass jump: General matching conditions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 362, 265-268.	2.1	47
9	A Unified Mathematical Formalism for the Dirac Formulation of Quantum Mechanics. Foundations of Physics, 2002, 32, 815-869.	1.3	44
10	Relativistic Gamow vectors. Journal of Mathematical Physics, 1998, 39, 2995-3018.	1.1	43
11	Moyal Formulation of Quantum Mechanics. , 1995, 43, 229-264.		40
12	One Dimensional Models with a Singular Potential of the Type $-\alpha\delta'(x)+\beta\delta^2(x)$. International Journal of Theoretical Physics, 2011, 50, 2144-2152.	1.2	40
13	Gamow vectors for degenerate scattering resonances. Journal of Mathematical Physics, 1998, 39, 2459-2475.	1.1	39
14	The Stratonovich–Weyl correspondence for one–dimensional kinematical groups. Journal of Mathematical Physics, 1991, 32, 1182-1192.	1.1	36
15	Rigged Hilbert Space Treatment of Continuous Spectrum. Fortschritte Der Physik, 2002, 50, 185.	4.4	35
16	On the Mathematical Basis of the Dirac Formulation of Quantum Mechanics. International Journal of Theoretical Physics, 2003, 42, 2225-2254.	1.2	34
17	The Friedrichs model and its use in resonance phenomena. Fortschritte Der Physik, 2011, 59, 795-859.	4.4	34
18	A description of virtual scattering states in the rigged Hilbert space formulation of quantum mechanics. Journal of Mathematical Physics, 1983, 24, 2142-2145.	1.1	31

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19	Gamow-Jordan vectors and non-reducible density operators from higher-order S-matrix poles. Journal of Mathematical Physics, 1997, 38, 6072-6100.	1.1	31
20	Resonances and antibound states for the Pöschl–Teller potential: Ladder operators and SUSY partners. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 1600-1609.	2.1	29
21	Two-point one-dimensional δ-${\delta}^{\prime}$ interactions: non-abelian addition law and decoupling limit. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 015204.	2.1	28
22	Spectroscopy of a one-dimensional V-shaped quantum well with a point impurity. Annals of Physics, 2018, 389, 48-62.	2.8	28
23	Quadratic Hamiltonians in phase-space quantum mechanics. Journal of Physics A, 1989, 22, 2709-2738.	1.6	26
24	On the mean value of the energy for resonant states. Nuclear Physics A, 1999, 660, 255-266.	1.5	26
25	Gamov algebras. Chaos, Solitons and Fractals, 2001, 12, 2757-2775.	5.1	26
26	Gamow functionals on operator algebras. Journal of Physics A, 2001, 34, 10067-10083.	1.6	26
27	On the RHS description of resonances and virtual states. Journal of Mathematical Physics, 1984, 25, 2481-2485.	1.1	25
28	The Problem of the Classical Limit of Quantum Mechanics and the Role of Self-Induced Decoherence. Foundations of Physics, 2006, 36, 920-952.	1.3	23
29	Applications of rigged Hilbert spaces in quantum mechanics and signal processing. Journal of Mathematical Physics, 2016, 57, .	1.1	23
30	A delta well with a mass jump. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 465207.	2.1	19
31	One-dimensional semirelativistic Hamiltonian with multiple Dirac delta potentials. Physical Review D, 2017, 95, .	4.7	19
32	The Infinite Square Well with a Point Interaction: A Discussion on the Different Parameterizations. International Journal of Theoretical Physics, 2014, 53, 1614-1627.	1.2	18
33	The quantum square well with moving boundaries: A numerical analysis. Computers and Mathematics With Applications, 2010, 59, 964-976.	2.7	17
34	The Infinite Square Well with a Singular Perturbation. International Journal of Theoretical Physics, 2011, 50, 2191-2200.	1.2	16
35	Unstable quantum oscillator with point interactions: Maverick resonances, antibound states and other surprises. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 2510-2519.	2.1	16
36	Feynman formulas for particles with position-dependent mass. Doklady Mathematics, 2008, 77, 120-123.	0.6	15

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37	A one-dimensional model of resonances with a delta barrier and mass jump. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 4022-4027.	2.1	15
38	Eigenfunction Expansions and Transformation Theory. Acta Applicandae Mathematicae, 2010, 109, 721-742.	1.0	15
39	Vector states for single and multiple-pole resonances. International Journal of Theoretical Physics, 1997, 36, 2271-2294.	1.2	14
40	Resonances and Time Reversal Operator in Rigged Hilbert Spaces. International Journal of Theoretical Physics, 1999, 38, 93-113.	1.2	14
41	The Gamow functional. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 282, 245-250.	2.1	14
42	Gamow dyads and expectation values. International Journal of Quantum Chemistry, 2001, 81, 307-320.	2.0	14
43	Time-Reversal, Irreversibility and Arrow of Time in Quantum Mechanics. Foundations of Physics, 2006, 36, 407-426.	1.3	14
44	A singular one-dimensional bound state problem and its degeneracies. European Physical Journal Plus, 2017, 132, 1.	2.6	14
45	Gamow Vectors and Time Asymmetry. International Journal of Theoretical Physics, 1999, 38, 2823-2865.	1.2	13
46	Gamow vectors for barrier wells. Chaos, Solitons and Fractals, 2001, 12, 2719-2736.	5.1	13
47	Derivation of Gamow Vectors for Resonances in Cut-Off Potentials. Letters in Mathematical Physics, 1997, 41, 279-290.	1.1	12
48	General Properties of the Liouville Operator. International Journal of Theoretical Physics, 1998, 37, 1641-1654.	1.2	12
49	Time's Arrow and Irreversibility in Time–Asymmetric Quantum Mechanics. International Studies in the Philosophy of Science, 2005, 19, 223-243.	0.2	12
50	A Study of Resonances in a One-Dimensional Model with Singular Hamiltonian and Mass Jumps. International Journal of Theoretical Physics, 2011, 50, 2161-2169.	1.2	12
51	Periodic analytic approximate solutions for the Mathieu equation. Applied Mathematics and Computation, 2015, 271, 436-445.	2.2	12
52	THE FRIEDRICHS-MODEL WITH FERMION-BOSON COUPLINGS. International Journal of Modern Physics E, 2006, 15, 1273-1290.	1.0	11
53	Spectrum generating algebras for the free motion in S3. Journal of Mathematical Physics, 2011, 52, 063509.	1.1	11
54	Spherical harmonics and rigged Hilbert spaces. Journal of Mathematical Physics, 2018, 59, 053502.	1.1	11

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55	A generalized Weyl correspondence: Applications. Journal of Mathematical Physics, 1981, 22, 1651-1659.	1.1	10
56	Gamow vectors for an unstable relativistic quantum field. Chaos, Solitons and Fractals, 2001, 12, 2737-2746.	5.1	10
57	THE FRIEDRICHS-MODEL WITH FERMION-BOSON COUPLINGS II. International Journal of Modern Physics E, 2007, 16, 169-178.	1.0	10
58	Towards Modelling QFT in Real Metamaterials: Singular Potentials and Self-Adjoint Extensions. Journal of Physics: Conference Series, 2017, 839, 012007.	0.4	10
59	Dynamics of algebras in quantum unstable systems. International Journal of Modern Physics A, 2018, 33, 1850109.	1.5	10
60	Geometrical origin of the -product in the Fedosov formalism. Journal of Geometry and Physics, 2005, 55, 316-352.	1.4	9
61	Two Charged Particles in the Plane Under a Constant Perpendicular Magnetic Field. International Journal of Theoretical Physics, 2011, 50, 2019-2028.	1.2	9
62	The hyperbolic step potential: Anti-bound states, SUSY partners and Wigner time delays. Annals of Physics, 2017, 379, 86-101.	2.8	9
63	LIE ALGEBRA REPRESENTATIONS AND RIGGED HILBERT SPACES: THE SO(2) CASE. Acta Polytechnica, 2017, 57, 379.	0.6	9
64	On scattering from the one-dimensional multiple Dirac delta potentials. European Journal of Physics, 2018, 39, 035403.	0.6	9
65	Spectral properties of the two-dimensional Schrödinger Hamiltonian with various solvable confinements in the presence of a central point perturbation. Physica Scripta, 2019, 94, 055202.	2.5	9
66	Hermite Functions and Fourier Series. Symmetry, 2021, 13, 853.	2.2	9
67	The Lippmann-Schwinger equations in the rigged Hilbert space. Journal of Physics A, 2002, 35, 8505-8511.	1.6	8
68	Gamow Vectors in Exactly Solvable Models. International Journal of Theoretical Physics, 2003, 42, 2389-2402.	1.2	8
69	Unstable relativistic quantum fields: two models. Journal of Physics A, 2003, 36, 12109-12127.	1.6	8
70	Dirac formulation of quantum mechanics: Recent and new results. Reports on Mathematical Physics, 2007, 59, 127-143.	0.8	8
71	On the solutions of a nonlinear 'pseudo'-oscillator equation. Physica Scripta, 2014, 89, 105205.	2.5	8
72	Groups, Special Functions and Rigged Hilbert Spaces. Axioms, 2019, 8, 89.	1.9	8

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73	Zernike functions, rigged Hilbert spaces, and potential applications. Journal of Mathematical Physics, 2019, 60, .	1.1	8
74	The Birman-Schwinger Operator for a Parabolic Quantum Well in a Zero-Thickness Layer in the Presence of a Two-Dimensional Attractive Gaussian Impurity. Frontiers in Physics, 2019, 7, .	2.1	8
75	Quantization on a two-dimensional phase space with a constant curvature tensor. Annals of Physics, 2003, 307, 272-307.	2.8	7
76	An approximation to solutions of linear ODE by cubic interpolation. Computers and Mathematics With Applications, 2008, 56, 1488-1495.	2.7	7
77	Action–angle variables, ladder operators and coherent states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2515-2521.	2.1	7
78	A Discussion on the Properties of Gamow States. Foundations of Physics, 2015, 45, 177-197.	1.3	7
79	ON THE SPECTRUM OF THE ONE-DIMENSIONAL SCHRÃ–DINGER HAMILTONIAN PERTURBED BY AN ATTRACTIVE GAUSSIAN POTENTIAL. Acta Polytechnica, 2017, 57, 385.	0.6	7
80	An approximation to the Woods–Saxon potential based on a contact interaction. European Physical Journal Plus, 2020, 135, 1.	2.6	7
81	Level crossings of eigenvalues of the Schrödinger Hamiltonian of the isotropic harmonic oscillator perturbed by a central point interaction in different dimensions. Nanosystems: Physics, Chemistry, Mathematics, 2018, 9, 179-186.	0.4	7
82	A rigged Hilbert space for the free radiation field. Journal of Mathematical Physics, 1985, 26, 725-727.	1.1	6
83	Resonant branch cuts in a generalized Friedrichs model. International Journal of Quantum Chemistry, 1996, 58, 441-451.	2.0	6
84	Extending the stationary quantum mechanics of being to a nonstationary quantum theory of becoming and decaying. Computers and Mathematics With Applications, 1997, 34, 427-466.	2.7	6
85	Classical and quantum three-dimensional integrable systems with axial symmetry. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 10791-10806.	2.1	6
86	Classical and quantum integrability in 3D systems. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 304030.	2.1	6
87	Measurements and Confluence in Quantum Lambda Calculi With Explicit Qubits. Electronic Notes in Theoretical Computer Science, 2011, 270, 59-74.	0.9	6
88	On the Concept of Entropy for Quantum Decaying Systems. Foundations of Physics, 2013, 43, 1275-1294.	1.3	6
89	The Definition of Entropy for Quantum Unstable Systems: A View-Point Based on the Properties of Gamow States. Entropy, 2018, 20, 231.	2.2	6
90	Hermite Functions, Lie Groups and Fourier Analysis. Entropy, 2018, 20, 816.	2.2	6

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91	Coherent Gamow states for the hyperbolic Pöschl–Teller potential. Annals of Physics, 2019, 406, 222-232.	2.8	6
92	Time Asymmetric Quantum Mechanics. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2011, , .	0.5	6
93	Construction of rigged Hilbert spaces to describe resonances and virtual states. Physica A: Statistical Mechanics and Its Applications, 1984, 124, 317-324.	2.6	5
94	Some Comments on the RHS Formulation of Resonance Scattering. International Journal of Theoretical Physics, 1999, 38, 131-142.	1.2	5
95	Examples of Gamow vectors. Chaos, Solitons and Fractals, 2001, 12, 2707-2717.	5.1	5
96	A measure-theoretical approach to the nuclear and inductive spectral theorems. Bulletin Des Sciences Mathematiques, 2005, 129, 567-590.	1.0	5
97	Band spectra of periodic hybrid $$delta ext {-}delta '$$ structures. European Physical Journal Plus, 2020, 135, 1.	2.6	5
98	Fermion systems and the Moyal formulation of quantum mechanics. Journal of Physics A, 1993, 26, 6043-6053.	1.6	4
99	On the Moyal Formulation of Quantum Identical Particles. , 1994, 42, 261-279.		4
100	On local Hamiltonians and dissipative systems. Chaos, Solitons and Fractals, 2006, 30, 542-551.	5.1	4
101	On the entropy for unstable fermionic and bosonic states. Physica A: Statistical Mechanics and Its Applications, 2014, 404, 302-314.	2.6	4
102	Some numerical estimations of energy levels on a model for a graphene ribbon in a magnetic field. Applied Mathematics and Computation, 2014, 235, 8-16.	2.2	4
103	Approximate solutions to the quantum problem of two opposite charges in a constant magnetic field. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 1817-1823.	2.1	4
104	Redundant poles of the S-matrix for the one-dimensional Morse potential. European Physical Journal Plus, 2020, 135, 1.	2.6	4
105	Heisenberg–Weyl Groups and Generalized Hermite Functions. Symmetry, 2021, 13, 1060.	2.2	4
106	Symmetry Groups, Quantum Mechanics and Generalized Hermite Functions. Mathematics, 2022, 10, 1448.	2.2	4
107	The generalized Weyl correspondence and time–dependent stochastic processes. Journal of Mathematical Physics, 1987, 28, 2961-2972.	1.1	3
108	Integrable systems in ellipsoidal coordinates. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 475203.	2.1	3

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109	Iterative solution of some nonlinear differential equations. Applied Mathematics and Computation, 2011, 217, 9480-9487.	2.2	3
110	On the determination of approximate periodic solutions of some non-linear ODE. Applied Mathematics and Computation, 2012, 218, 6038-6044.	2.2	3
111	Spectrum generating algebra for the continuous spectrum of a free particle in Lobachevski space. Journal of Mathematical Physics, 2013, 54, .	1.1	3
112	Point-form dynamics of quasistable states. Journal of Mathematical Physics, 2013, 54, .	1.1	3
113	A qualitative study of a nanotube model using an iterative Taylor method. International Journal of Modern Physics C, 2017, 28, 1750036.	1.7	3
114	Evolution of quantum observables: from non-commutativity to commutativity. Soft Computing, 2020, 24, 10265-10276.	3.6	3
115	The Propagators for δ and δ' Potentials With Time-Dependent Strengths. Frontiers in Physics, 2020, 8, .	2.1	3
116	A numerical method for solving ODE by rational approximation. Applied Mathematical Sciences, 0, 7, 1119-1130.	0.1	3
117	Supersymmetry Transformations for Delta Potentials. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2011, , .	0.5	3
118	SU(2), Associated Laguerre Polynomials and Rigged Hilbert Spaces. Springer Proceedings in Mathematics and Statistics, 2018, , 373-383.	0.2	3
119	Mathematical Models for Unstable Quantum Systems and Gamow States. Entropy, 2022, 24, 804.	2.2	3
120	A classical stochastic description of the quantum lattice gas model. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1981, 63, 510-518.	0.2	2
121	A generalized Weyl correspondence. II. Some general results. Journal of Mathematical Physics, 1983, 24, 534-538.	1.1	2
122	Comment on 'On the inconsistency of the Bohm–Gadella theory with quantum mechanics'. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 4665-4669.	2.1	2
123	Hardy class functions for potential scattering and decay. Reports on Mathematical Physics, 2008, 62, 129-143.	0.8	2
124	Gamow vectors: miscellaneous results. Journal of Physics: Conference Series, 2008, 128, 012038.	0.4	2
125	One dimensional systems with singular perturbations. Journal of Physics: Conference Series, 2011, 284, 012009.	0.4	2
126	A study of periodic potentials based on quadratic splines. International Journal of Modern Physics C, 2018, 29, 1850067.	1.7	2

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127	Gamow vectors formalism applied to the Loschmidt echo. European Physical Journal Plus, 2020, 135, 1.	2.6	2
128	Supersymmetric Partners of the One-Dimensional Infinite Square Well Hamiltonian. Symmetry, 2021, 13, 350.	2.2	2
129	The Schrödinger particle on the half-line with an attractive $$delta $$-interaction: bound states and resonances. European Physical Journal Plus, 2021, 136, 1.	2.6	2
130	The Energy of the Ground State of the Two-Dimensional Hamiltonian of a Parabolic Quantum Well in the Presence of an Attractive Gaussian Impurity. Symmetry, 2021, 13, 1561.	2.2	2
131	Groups, Jacobi functions, and rigged Hilbert spaces. Journal of Mathematical Physics, 2020, 61, .	1.1	2
132	TIME ASYMMETRIC QUANTUM THEORY. FOUNDATIONS AND APPLICATIONS. , 2003, , .		2
133	Irreversibility in quantum mechanics. Discrete Dynamics in Nature and Society, 2004, 2004, 75-83.	0.9	1
134	Eigenfunction Expansions and Lippmann–Schwinger Formulas. Reports on Mathematical Physics, 2011, 68, 251-260.	0.8	1
135	SHORT RANGE POTENTIAL SCHRÖDINGER SCATTERING. International Journal of Modern Physics D, 2011, 20, 877-892.	2.1	1
136	Analyticity of the time dependence of resonance poles: Solving the Friedrichs model with a time-dependent interaction. Physical Review C, 2012, 86, .	2.9	1
137	AN APPROXIMATION TO THE ENTROPY FOR QUANTUM DECAYING STATES. International Journal of Geometric Methods in Modern Physics, 2013, 10, 1360009.	2.0	1
138	Gamow states as solutions of a modified Lippmann–Schwinger equation. International Journal of Modern Physics E, 2016, 25, 1650075.	1.0	1
139	Approximate solutions of one-dimensional systems with fractional derivative. International Journal of Modern Physics C, 2020, 31, 2050092.	1.7	1
140	A method to find approximate solutions of first‐order systems of nonlinear ordinary equations. Mathematical Methods in the Applied Sciences, 2021, 44, 10014-10031.	2.3	1
141	Physical and mathematical aspects of Gamow states. Physics Reports, 2004, 396, 41-113.	25.6	1
142	A Logical Approach to the Quantum-to-Classical Transition. , 2019, , 360-378.		1
143	Quantum Mechanics on Phase Space. , 1993, , 417-428.		0
144	The 5th International Symposium on Quantum Theory and Symmetries (QTS5). Journal of Physics A: Mathematical and Theoretical, 2008, 41, 300301.	2.1	0

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145	On the quantization of sectorially Hamiltonian dissipative systems. Chaos, Solitons and Fractals, 2009, 42, 94-100.	5.1	0
146	An algebraic method to solve the radial Schrödinger equation. Computers and Mathematics With Applications, 2010, 60, 2701-2711.	2.7	0
147	On the definition of entropy for quantum unstable states. Journal of Physics: Conference Series, 2015, 578, 012006.	0.4	0
148	Mathematical Foundations of Time Asymmetric Quantum Mechanics. Journal of Physics: Conference Series, 2017, 839, 012001.	0.4	0
149	The Lippmann–Schwinger Formula and One Dimensional Models with Dirac Delta Interactions. , 2019, , 309-322.		0
150	Methods in Statistical Mechanics. Lecture Notes in Physics, 2020, , .	0.7	0
151	Special issue on Quantum Theory and Symmetries. Journal of Physics A: Mathematical and Theoretical, 2007, 40, .	2.1	0
152	10.1007/s11472-008-1030-3. , 2010, 77, 120.		0
153	The one dimensional infinite square well with variable mass. Applied Mathematical Sciences, 0, 8, 4285-4300.	0.1	0
154	Path Integrals and Applications. Lecture Notes in Physics, 2020, , 91-105.	0.7	0
155	Canonical Distributions and Thermodynamic Functions. Lecture Notes in Physics, 2020, , 133-146.	0.7	0
156	The Statistical Mechanics of Unstable Quantum States. Lecture Notes in Physics, 2020, , 147-175.	0.7	0
157	The Role of Dynamics in Statistical Mechanics. Lecture Notes in Physics, 2020, , 45-61.	0.7	0
158	Some Recent Results on Contact or Point Supported Potentials. Trends in Mathematics, 2020, , 197-219.	0.1	0
159	An Introduction to Statistical Mechanics. Lecture Notes in Physics, 2020, , 1-43.	0.7	0
160	Dynamical semigroups for resonances in rigged Hilbert spaces. , 1983, , 397-398.		0
161	Gamow dyads and expectation values. International Journal of Quantum Chemistry, 2001, 81, 307-320.	2.0	0
162	Supersymmetric Partners of the One-Dimensional Infinite Square Well Hamiltonian: Special Cases. Symmetry, 2022, 14, 1314.	2.2	0