Manuel Gadella

List of Publications by Year
in descending order

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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	Symmetry Groups, Quantum Mechanics and Generalized Hermite Functions. Mathematics, 2022, 10, 1448.	2.2	4
2	Mathematical Models for Unstable Quantum Systems and Gamow States. Entropy, 2022, 24, 804.	2.2	3
3	Supersymmetric Partners of the One-Dimensional Infinite Square Well Hamiltonian: Special Cases. Symmetry, 2022, 14, 1314.	2.2	0
4	Supersymmetric Partners of the One-Dimensional Infinite Square Well Hamiltonian. Symmetry, 2021, 13, 350.	2.2	2
5	A method to find approximate solutions of firstâ€order systems of nonlinear ordinary equations. Mathematical Methods in the Applied Sciences, 2021, 44, 10014-10031.	2.3	1
6	Hermite Functions and Fourier Series. Symmetry, 2021, 13, 853.	2.2	9
7	Heisenbergâ€“Weyl Groups and Generalized Hermite Functions. Symmetry, 2021, 13, 1060.	2.2	4
8	The SchrÃ¶dinger particle on the half-line with an attractive $$delta $$-interaction: bound states and resonances. European Physical Journal Plus, 2021, 136, 1.	2.6	2
9	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
10	Evolution of quantum observables: from non-commutativity to commutativity. Soft Computing, 2020, 24, 10265-10276.	3.6	3
11	Band spectra of periodic hybrid $$delta ext {-}delta '$$ structures. European Physical Journal Plus, 2020, 135, 1.	2.6	5
12	Redundant poles of the S-matrix for the one-dimensional Morse potential. European Physical Journal Plus, 2020, 135, 1.	2.6	4
13	Gamow vectors formalism applied to the Loschmidt echo. European Physical Journal Plus, 2020, 135, 1.	2.6	2
14	Methods in Statistical Mechanics. Lecture Notes in Physics, 2020, , .	0.7	0
15	Approximate solutions of one-dimensional systems with fractional derivative. International Journal of Modern Physics C, 2020, 31, 2050092.	1.7	1
16	An approximation to the Woodsâ€“Saxon potential based on a contact interaction. European Physical Journal Plus, 2020, 135, 1.	2.6	7
17	The Propagators for Î´ and Î´â€² Potentials With Time-Dependent Strengths. Frontiers in Physics, 2020, 8, .	2.1	3
18	Groups, Jacobi functions, and rigged Hilbert spaces. Journal of Mathematical Physics, 2020, 61, .	1.1	2

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19	Path Integrals and Applications. Lecture Notes in Physics, 2020, , 91-105.	0.7	0
20	Canonical Distributions and Thermodynamic Functions. Lecture Notes in Physics, 2020, , 133-146.	0.7	0
21	The Statistical Mechanics of Unstable Quantum States. Lecture Notes in Physics, 2020, , 147-175.	0.7	0
22	The Role of Dynamics in Statistical Mechanics. Lecture Notes in Physics, 2020, , 45-61.	0.7	0
23	Some Recent Results on Contact or Point Supported Potentials. Trends in Mathematics, 2020, , 197-219.	0.1	0
24	An Introduction to Statistical Mechanics. Lecture Notes in Physics, 2020, , 1-43.	0.7	0
25	The Lippmannâ€“Schwinger Formula and One Dimensional Models with Dirac Delta Interactions. , 2019, , 309-322.		0
26	Groups, Special Functions and Rigged Hilbert Spaces. Axioms, 2019, 8, 89.	1.9	8
27	Zernike functions, rigged Hilbert spaces, and potential applications. Journal of Mathematical Physics, 2019, 60, .	1.1	8
28	Coherent Gamow states for the hyperbolic PÃ¶schlâ€“Teller potential. Annals of Physics, 2019, 406, 222-232.	2.8	6
29	Spectral properties of the two-dimensional SchrÃ¶dinger Hamiltonian with various solvable confinements in the presence of a central point perturbation. Physica Scripta, 2019, 94, 055202.	2.5	9
30	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
31	A Logical Approach to the Quantum-to-Classical Transition. , 2019, , 360-378.		1
32	On scattering from the one-dimensional multiple Dirac delta potentials. European Journal of Physics, 2018, 39, 035403.	0.6	9
33	Spectroscopy of a one-dimensional V-shaped quantum well with a point impurity. Annals of Physics, 2018, 389, 48-62.	2.8	28
34	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
35	Hermite Functions, Lie Groups and Fourier Analysis. Entropy, 2018, 20, 816.	2.2	6
36	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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37	Spherical harmonics and rigged Hilbert spaces. Journal of Mathematical Physics, 2018, 59, 053502.	1.1	11
38	Dynamics of algebras in quantum unstable systems. International Journal of Modern Physics A, 2018, 33, 1850109.	1.5	10
39	Level crossings of eigenvalues of the SchrÃ¶dinger 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
40	SU(2), Associated Laguerre Polynomials and Rigged Hilbert Spaces. Springer Proceedings in Mathematics and Statistics, 2018, , 373-383.	0.2	3
41	One-dimensional semirelativistic Hamiltonian with multiple Dirac delta potentials. Physical Review D, 2017, 95, .	4.7	19
42	The hyperbolic step potential: Anti-bound states, SUSY partners and Wigner time delays. Annals of Physics, 2017, 379, 86-101.	2.8	9
43	A qualitative study of a nanotube model using an iterative Taylor method. International Journal of Modern Physics C, 2017, 28, 1750036.	1.7	3
44	Towards Modelling QFT in Real Metamaterials: Singular Potentials and Self-Adjoint Extensions. Journal of Physics: Conference Series, 2017, 839, 012007.	0.4	10
45	A singular one-dimensional bound state problem and its degeneracies. European Physical Journal Plus, 2017, 132, 1.	2.6	14
46	ON THE SPECTRUM OF THE ONE-DIMENSIONAL SCHRÃ–DINGER HAMILTONIAN PERTURBED BY AN ATTRACTIVE GAUSSIAN POTENTIAL. Acta Polytechnica, 2017, 57, 385.	0.6	7
47	Mathematical Foundations of Time Asymmetric Quantum Mechanics. Journal of Physics: Conference Series, 2017, 839, 012001.	0.4	0
48	LIE ALGEBRA REPRESENTATIONS AND RIGGED HILBERT SPACES: THE SO(2) CASE. Acta Polytechnica, 2017, 57, 379.	0.6	9
49	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
50	Gamow states as solutions of a modified Lippmannâ€“Schwinger equation. International Journal of Modern Physics E, 2016, 25, 1650075.	1.0	1
51	Applications of rigged Hilbert spaces in quantum mechanics and signal processing. Journal of Mathematical Physics, 2016, 57, .	1.1	23
52	Resonances and antibound states for the PÃ¶schlâ€“Teller potential: Ladder operators and SUSY partners. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 1600-1609.	2.1	29
53	Two-point one-dimensionalÎ´-${delta }^{prime }$ interactions: non-abelian addition law and decoupling limit. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 015204.	2.1	28
54	On the definition of entropy for quantum unstable states. Journal of Physics: Conference Series, 2015, 578, 012006.	0.4	0

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55	Periodic analytic approximate solutions for the Mathieu equation. Applied Mathematics and Computation, 2015, 271, 436-445.	2.2	12
56	A Discussion on the Properties of Gamow States. Foundations of Physics, 2015, 45, 177-197.	1.3	7
57	On the entropy for unstable fermionic and bosonic states. Physica A: Statistical Mechanics and Its Applications, 2014, 404, 302-314.	2.6	4
58	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
59	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
60	On the solutions of a nonlinear â€˜pseudoâ€™-oscillator equation. Physica Scripta, 2014, 89, 105205.	2.5	8
61	Spectrum generating algebra for the continuous spectrum of a free particle in Lobachevski space. Journal of Mathematical Physics, 2013, 54, .	1.1	3
62	On the Concept of Entropy for Quantum Decaying Systems. Foundations of Physics, 2013, 43, 1275-1294.	1.3	6
63	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
64	Point-form dynamics of quasistable states. Journal of Mathematical Physics, 2013, 54, .	1.1	3
65	AN APPROXIMATION TO THE ENTROPY FOR QUANTUM DECAYING STATES. International Journal of Geometric Methods in Modern Physics, 2013, 10, 1360009.	2.0	1
66	Actionâ€“angle variables, ladder operators and coherent states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2515-2521.	2.1	7
67	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
68	On the determination of approximate periodic solutions of some non-linear ODE. Applied Mathematics and Computation, 2012, 218, 6038-6044.	2.2	3
69	One dimensional systems with singular perturbations. Journal of Physics: Conference Series, 2011, 284, 012009.	0.4	2
70	Spectrum generating algebras for the free motion in S3. Journal of Mathematical Physics, 2011, 52, 063509.	1.1	11
71	Eigenfunction Expansions and Lippmannâ€“Schwinger Formulas. Reports on Mathematical Physics, 2011, 68, 251-260.	0.8	1
72	Two Charged Particles in the Plane Under a Constant Perpendicular Magnetic Field. International Journal of Theoretical Physics, 2011, 50, 2019-2028.	1.2	9

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73	One Dimensional Models with a Singular Potential ofÂtheÂType â^Î±Î´(x)+Î²Î´â€²(x). International Journal of Theoretical Physics, 2011, 50, 2144-2152.	1.2	40
74	A Study of Resonances in a One-Dimensional Model withÂSingular Hamiltonian and Mass Jumps. International Journal of Theoretical Physics, 2011, 50, 2161-2169.	1.2	12
75	The Infinite Square Well with a Singular Perturbation. International Journal of Theoretical Physics, 2011, 50, 2191-2200.	1.2	16
76	The Friedrichs model and its use in resonance phenomena. Fortschritte Der Physik, 2011, 59, 795-859.	4.4	34
77	Measurements and Confluence in Quantum Lambda Calculi With Explicit Qubits. Electronic Notes in Theoretical Computer Science, 2011, 270, 59-74.	0.9	6
78	Iterative solution of some nonlinear differential equations. Applied Mathematics and Computation, 2011, 217, 9480-9487.	2.2	3
79	SHORT RANGE POTENTIAL SCHRÃ–DINGER SCATTERING. International Journal of Modern Physics D, 2011, 20, 877-892.	2.1	1
80	Supersymmetry Transformations for Delta Potentials. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2011, , .	0.5	3
81	Time Asymmetric Quantum Mechanics. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2011, , .	0.5	6
82	An algebraic method to solve the radial SchrÃ¶dinger equation. Computers and Mathematics With Applications, 2010, 60, 2701-2711.	2.7	0
83	Eigenfunction Expansions and Transformation Theory. Acta Applicandae Mathematicae, 2010, 109, 721-742.	1.0	15
84	The quantum square well with moving boundaries: A numerical analysis. Computers and Mathematics With Applications, 2010, 59, 964-976.	2.7	17
85	10.1007/s11472-008-1030-3. , 2010, 77, 120.		0
86	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
87	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
88	On the quantization of sectorially Hamiltonian dissipative systems. Chaos, Solitons and Fractals, 2009, 42, 94-100.	5.1	0
89	A delta well with a mass jump. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 465207.	2.1	19
90	An approximation to solutions of linear ODE by cubic interpolation. Computers and Mathematics With Applications, 2008, 56, 1488-1495.	2.7	7

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91	Feynman formulas for particles with position-dependent mass. Doklady Mathematics, 2008, 77, 120-123.	0.6	15
92	Hardy class functions for potential scattering and decay. Reports on Mathematical Physics, 2008, 62, 129-143.	0.8	2
93	Classical and quantum integrability in 3D systems. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 304030.	2.1	6
94	Integrable systems in ellipsoidal coordinates. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 475203.	2.1	3
95	The 5th International Symposium on Quantum Theory and Symmetries (QTS5). Journal of Physics A: Mathematical and Theoretical, 2008, 41, 300301.	2.1	0
96	Gamow vectors: miscellaneous results. Journal of Physics: Conference Series, 2008, 128, 012038.	0.4	2
97	THE FRIEDRICHS-MODEL WITH FERMION-BOSON COUPLINGS II. International Journal of Modern Physics E, 2007, 16, 169-178.	1.0	10
98	Comment on â€˜On the inconsistency of the Bohmâ€“Gadella theory with quantum mechanicsâ€™. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 4665-4669.	2.1	2
99	Classical and quantum three-dimensional integrable systems with axial symmetry. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 10791-10806.	2.1	6
100	Dirac formulation of quantum mechanics: Recent and new results. Reports on Mathematical Physics, 2007, 59, 127-143.	0.8	8
101	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
102	Special issue on Quantum Theory and Symmetries. Journal of Physics A: Mathematical and Theoretical, 2007, 40, .	2.1	0
103	On local Hamiltonians and dissipative systems. Chaos, Solitons and Fractals, 2006, 30, 542-551.	5.1	4
104	Time-Reversal, Irreversibility and Arrow of Time in Quantum Mechanics. Foundations of Physics, 2006, 36, 407-426.	1.3	14
105	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
106	THE FRIEDRICHS-MODEL WITH FERMION-BOSON COUPLINGS. International Journal of Modern Physics E, 2006, 15, 1273-1290.	1.0	11
107	Geometrical origin of the -product in the Fedosov formalism. Journal of Geometry and Physics, 2005, 55, 316-352.	1.4	9
108	A measure-theoretical approach to the nuclear and inductive spectral theorems. Bulletin Des Sciences Mathematiques, 2005, 129, 567-590.	1.0	5

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109	Time's Arrow and Irreversibility in Timeâ€Asymmetric Quantum Mechanics. International Studies in the Philosophy of Science, 2005, 19, 223-243.	0.2	12
110	Irreversibility in quantum mechanics. Discrete Dynamics in Nature and Society, 2004, 2004, 75-83.	0.9	1
111	Physical and mathematical aspects of Gamow states. Physics Reports, 2004, 396, 41-113.	25.6	105
112	Physical and mathematical aspects of Gamow states. Physics Reports, 2004, 396, 41-113.	25.6	1
113	On the Mathematical Basis of the Dirac Formulation of Quantum Mechanics. International Journal of Theoretical Physics, 2003, 42, 2225-2254.	1.2	34
114	Gamow Vectors in Exactly Solvable Models. International Journal of Theoretical Physics, 2003, 42, 2389-2402.	1.2	8
115	Quantization on a two-dimensional phase space with a constant curvature tensor. Annals of Physics, 2003, 307, 272-307.	2.8	7
116	Unstable relativistic quantum fields: two models. Journal of Physics A, 2003, 36, 12109-12127.	1.6	8
117	TIME ASYMMETRIC QUANTUM THEORY. FOUNDATIONS AND APPLICATIONS. , 2003, , .		2
118	The Lippmann-Schwinger equations in the rigged Hilbert space. Journal of Physics A, 2002, 35, 8505-8511.	1.6	8
119	A pedestrian introduction to Gamow vectors. American Journal of Physics, 2002, 70, 626-638.	0.7	66
120	Rigged Hilbert Space Treatment of Continuous Spectrum. Fortschritte Der Physik, 2002, 50, 185.	4.4	35
121	A Unified Mathematical Formalism for the Dirac Formulation of Quantum Mechanics. Foundations of Physics, 2002, 32, 815-869.	1.3	44
122	The Gamow functional. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 282, 245-250.	2.1	14
123	Examples of Gamow vectors. Chaos, Solitons and Fractals, 2001, 12, 2707-2717.	5.1	5
124	Gamow vectors for barrier wells. Chaos, Solitons and Fractals, 2001, 12, 2719-2736.	5.1	13
125	Gamow vectors for an unstable relativistic quantum field. Chaos, Solitons and Fractals, 2001, 12, 2737-2746.	5.1	10
126	Gamov algebras. Chaos, Solitons and Fractals, 2001, 12, 2757-2775.	5.1	26

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127	Gamow dyads and expectation values. International Journal of Quantum Chemistry, 2001, 81, 307-320.	2.0	14
128	Gamow functionals on operator algebras. Journal of Physics A, 2001, 34, 10067-10083.	1.6	26
129	Gamow dyads and expectation values. International Journal of Quantum Chemistry, 2001, 81, 307-320.	2.0	0
130	On the mean value of the energy for resonant states. Nuclear Physics A, 1999, 660, 255-266.	1.5	26
131	Resonances and Time Reversal Operator in Rigged Hilbert Spaces. International Journal of Theoretical Physics, 1999, 38, 93-113.	1.2	14
132	Some Comments on the RHS Formulation of Resonance Scattering. International Journal of Theoretical Physics, 1999, 38, 131-142.	1.2	5
133	Gamow Vectors and Time Asymmetry. International Journal of Theoretical Physics, 1999, 38, 2823-2865.	1.2	13
134	General Properties of the Liouville Operator. International Journal of Theoretical Physics, 1998, 37, 1641-1654.	1.2	12
135	Relativistic Gamow vectors. Journal of Mathematical Physics, 1998, 39, 2995-3018.	1.1	43
136	Gamow vectors for degenerate scattering resonances. Journal of Mathematical Physics, 1998, 39, 2459-2475.	1.1	39
137	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
138	Derivation of Gamow Vectors for Resonances in Cut-Off Potentials. Letters in Mathematical Physics, 1997, 41, 279-290.	1.1	12
139	Vector states for single and multiple-pole resonances. International Journal of Theoretical Physics, 1997, 36, 2271-2294.	1.2	14
140	Quantum mechanical irrebersibility. Physica A: Statistical Mechanics and Its Applications, 1997, 236, 485-549.	2.6	50
141	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
142	Resonant branch cuts in a generalized Friedrichs model. International Journal of Quantum Chemistry, 1996, 58, 441-451.	2.0	6
143	Moyal Formulation of Quantum Mechanics. , 1995, 43, 229-264.		40
144	On the Moyal Formulation of Quantum Identical Particles. , 1994, 42, 261-279.		4

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145	Quantum Mechanics on Phase Space. , 1993, , 417-428.		0
146	Fermion systems and the Moyal formulation of quantum mechanics. Journal of Physics A, 1993, 26, 6043-6053.	1.6	4
147	Moyal quantization of 2+1â€dimensional Galilean systems. Journal of Mathematical Physics, 1992, 33, 3379-3386.	1.1	57
148	The Stratonovichâ€"Weyl correspondence for oneâ€dimensional kinematical groups. Journal of Mathematical Physics, 1991, 32, 1182-1192.	1.1	36
149	Quadratic Hamiltonians in phase-space quantum mechanics. Journal of Physics A, 1989, 22, 2709-2738.	1.6	26
150	Gamow vectors and decaying states. American Journal of Physics, 1989, 57, 1103-1108.	0.7	97
151	The generalized Weyl correspondence and timeâ€dependent stochastic processes. Journal of Mathematical Physics, 1987, 28, 2961-2972.	1.1	3
152	A rigged Hilbert space for the free radiation field. Journal of Mathematical Physics, 1985, 26, 725-727.	1.1	6
153	On the RHS description of resonances and virtual states. Journal of Mathematical Physics, 1984, 25, 2481-2485.	1.1	25
154	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
155	A rigged Hilbert space of Hardyâ€class functions: Applications to resonances. Journal of Mathematical Physics, 1983, 24, 1462-1469.	1.1	74
156	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
157	A generalized Weyl correspondence. II. Some general results. Journal of Mathematical Physics, 1983, 24, 534-538.	1.1	2
158	Dynamical semigroups for resonances in rigged Hilbert spaces. , 1983, , 397-398.		0
159	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
160	A generalized Weyl correspondence: Applications. Journal of Mathematical Physics, 1981, 22, 1651-1659.	1.1	10
161	A numerical method for solving ODE by rational approximation. Applied Mathematical Sciences, 0, 7, 1119-1130.	0.1	3
162	The one dimensional infinite square well with variable mass. Applied Mathematical Sciences, 0, 8, 4285-4300.	0.1	0