

# Alberto Ibort

## List of Publications by Year in descending order

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110  
papers

1,768  
citations

361413

20  
h-index

330143

37  
g-index

119  
all docs

119  
docs citations

119  
times ranked

534  
citing authors

#	ARTICLE	IF	CITATIONS
1	An introduction to the tomographic picture of quantum mechanics. <i>Physica Scripta</i> , 2009, 79, 065013.	2.5	234
2	On the multisymplectic formalism for first order field theories. <i>Differential Geometry and Its Applications</i> , 1991, 1, 345-374.	0.5	139
3	On the geometry of multisymplectic manifolds. <i>Journal of the Australian Mathematical Society Series A Pure Mathematics and Statistics</i> , 1999, 66, 303-330.	0.3	111
4	GLOBAL THEORY OF QUANTUM BOUNDARY CONDITIONS AND TOPOLOGY CHANGE. <i>International Journal of Modern Physics A</i> , 2005, 20, 1001-1025.	1.5	90
5	Bihamiltonian structures and Stäckel separability. <i>Journal of Geometry and Physics</i> , 2000, 33, 210-228.	1.4	87
6	Reduction of degenerate Lagrangian systems. <i>Journal of Geometry and Physics</i> , 1986, 3, 353-400.	1.4	49
7	The Feynman problem and the inverse problem for Poisson dynamics. <i>Physics Reports</i> , 1995, 263, 153-212.	25.6	46
8	Quantum Tomography twenty years later. <i>Physica Scripta</i> , 2015, 90, 074031.	2.5	44
9	Geometry from Dynamics, Classical and Quantum. , 2015, , .		44
10	Variational principles on principal fiber bundles. <i>Journal of Geometry and Physics</i> , 1987, 4, 183-205.	1.4	30
11	A generalization of Chetaev's principle for a class of higher order nonholonomic constraints. <i>Journal of Mathematical Physics</i> , 2004, 45, 2785-2801.	1.1	29
12	A gentle introduction to Schwinger's formulation of quantum mechanics: The groupoid picture. <i>Modern Physics Letters A</i> , 2018, 33, 1850122.	1.2	29
13	Dynamical aspects in the quantizer-dequantizer formalism. <i>Annals of Physics</i> , 2017, 385, 769-781.	2.8	27
14	Schwinger's picture of quantum mechanics I: Groupoids. <i>International Journal of Geometric Methods in Modern Physics</i> , 2019, 16, 1950119.	2.0	27
15	On the geometry of Lie algebras and Poisson tensors. <i>Journal of Physics A</i> , 1994, 27, 7425-7449.	1.6	25
16	Self-adjoint extensions of the Laplace-Beltrami operator and unitaries at the boundary. <i>Journal of Functional Analysis</i> , 2015, 268, 634-670.	1.4	23
17	Schwinger's picture of quantum mechanics II: Algebras and observables. <i>International Journal of Geometric Methods in Modern Physics</i> , 2019, 16, 1950136.	2.0	23
18	Schwinger's picture of quantum mechanics III: The statistical interpretation. <i>International Journal of Geometric Methods in Modern Physics</i> , 2019, 16, 1950165.	2.0	23

#	ARTICLE	IF	CITATIONS
19	Mechanical systems subjected to impulsive constraints. <i>Journal of Physics A</i> , 1997, 30, 5835-5854.	1.6	22
20	On the tomographic picture of quantum mechanics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 2614-2617.	2.1	22
21	Explicit solutions of supersymmetric KP hierarchies: Supersolitons and solitinos. <i>Journal of Mathematical Physics</i> , 1996, 37, 6157-6172.	1.1	21
22	Geometric formulation of Carnot's theorem. <i>Journal of Physics A</i> , 2001, 34, 1691-1712.	1.6	20
23	A pedagogical presentation of a $\mathcal{C}^*$ -algebraic approach to quantum tomography. <i>Physica Scripta</i> , 2011, 84, 065006.	2.5	19
24	On Self-Adjoint Extensions and Symmetries in Quantum Mechanics. <i>Annales Henri Poincare</i> , 2015, 16, 2367-2397.	1.7	19
25	Dynamical Vector Fields on the Manifold of Quantum States. <i>Open Systems and Information Dynamics</i> , 2017, 24, 1740003.	1.2	18
26	Inequivalence of quantum field theories on noncommutative spacetimes: Moyal versus Wick-Voros planes. <i>Physical Review D</i> , 2010, 81, .	4.7	17
27	A representation theorem for orthogonally additive polynomials on Riesz spaces. <i>Revista Matematica Complutense</i> , 2012, 25, 21-30.	1.2	17
28	Reduction of Lie $\mathfrak{e}$ -Jordan Banach algebras and quantum states. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 015201.	2.1	17
29	The topology and geometry of self-adjoint and elliptic boundary conditions for Dirac and Laplace operators. <i>International Journal of Geometric Methods in Modern Physics</i> , 2015, 12, 1561007.	2.0	17
30	Schwinger's picture of quantum mechanics. <i>International Journal of Geometric Methods in Modern Physics</i> , 2020, 17, 2050054.	2.0	17
31	Geometric formulation of mechanical systems subjected to time-dependent one-sided constraints. <i>Journal of Physics A</i> , 1998, 31, 2655-2674.	1.6	16
32	Origin and infinity manifolds for mechanical systems with homogeneous potentials. <i>Acta Applicandae Mathematicae</i> , 1988, 11, 259-284.	1.0	15
33	Geometrical foundations of Lagrangian supermechanics and supersymmetry. <i>Reports on Mathematical Physics</i> , 1993, 32, 385-409.	0.8	15
34	Numerical Solutions of the Spectral Problem for Arbitrary Self-Adjoint Extensions of the One-Dimensional Schrödinger Equation. <i>SIAM Journal on Numerical Analysis</i> , 2013, 51, 1254-1279.	2.3	15
35	Schwinger's picture of quantum mechanics IV: Composition and independence. <i>International Journal of Geometric Methods in Modern Physics</i> , 2020, 17, 2050058.	2.0	15
36	On the Construction of Contact Submanifolds with Prescribed Topology. <i>Journal of Differential Geometry</i> , 2000, 56, .	1.1	15

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37	Time scaling as an infinitesimal canonical transformation. <i>Celestial Mechanics</i> , 1987, 42, 201-213.	0.1	14
38	Reduction of Jacobi manifolds. <i>Journal of Physics A</i> , 1997, 30, 2783-2798.	1.6	14
39	Groupoids and the tomographic picture of quantum mechanics. <i>Physica Scripta</i> , 2013, 88, 055003.	2.5	13
40	A generalized Wigner function on the space of irreducible representations of the Weyl-Heisenberg group and its transformation properties. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 155302.	2.1	11
41	Covariant quantum fields on noncommutative spacetimes. <i>Journal of High Energy Physics</i> , 2011, 2011, 1.	4.7	11
42	On the space of light rays of a spacetime and a reconstruction theorem by Low. <i>Classical and Quantum Gravity</i> , 2014, 31, 075020.	4.0	11
43	On the theory of self-adjoint extensions of symmetric operators and its applications to quantum physics. <i>International Journal of Geometric Methods in Modern Physics</i> , 2015, 12, 1560005.	2.0	10
44	Manifolds of classical probability distributions and quantum density operators in infinite dimensions. <i>Information Geometry</i> , 2019, 2, 231-271.	1.2	10
45	On the Structure of Finite Groupoids and Their Representations. <i>Symmetry</i> , 2019, 11, 414.	2.2	10
46	Covariant Hamiltonian field theories on manifolds with boundary: Yang-Mills theories. <i>Journal of Geometric Mechanics</i> , 2017, 9, 47-82.	0.8	10
47	Introduction to Poisson supermanifolds. <i>Differential Geometry and Its Applications</i> , 1991, 1, 133-152.	0.5	9
48	ALTERNATIVE LINEAR STRUCTURES FOR CLASSICAL AND QUANTUM SYSTEMS. <i>International Journal of Modern Physics A</i> , 2007, 22, 3039-3064.	1.5	9
49	Remarks on the star product of functions on finite and compact groups. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 373, 401-408.	2.1	9
50	Boundary dynamics driven entanglement. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 385301.	2.1	9
51	Boundary dynamics and topology change in quantum mechanics. <i>International Journal of Geometric Methods in Modern Physics</i> , 2015, 12, 1560011.	2.0	9
52	Approximately holomorphic geometry and estimated transversality on 2-calibrated manifolds. <i>Comptes Rendus Mathematique</i> , 2004, 338, 709-712.	0.3	8
53	The quantum-to-classical transition: contraction of associative products. <i>Physica Scripta</i> , 2016, 91, 045201.	2.5	8
54	Stratified manifold of quantum states, actions of the complex special linear group. <i>Annals of Physics</i> , 2019, 400, 221-245.	2.8	8

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55	Covariant Jacobi brackets for test particles. <i>Modern Physics Letters A</i> , 2017, 32, 1750122.	1.2	8
56	Invariant forms and automorphisms of locally homogeneous multisymplectic manifolds. <i>Journal of Geometric Mechanics</i> , 2012, 4, 397-419.	0.8	7
57	Realization of associative products in terms of Moyal and tomographic symbols. <i>Physica Scripta</i> , 2013, 87, 038107.	2.5	7
58	A conformal boundary for space-times based on light-like geodesics: The 3-dimensional case. <i>Journal of Mathematical Physics</i> , 2017, 58, 022503.	1.1	7
59	A quantum route to the classical Lagrangian formalism. <i>Modern Physics Letters A</i> , 0, , 2150091.	1.2	7
60	Feynman's propagator in Schwinger's picture of Quantum Mechanics. <i>Modern Physics Letters A</i> , 2021, 36, 2150187.	1.2	7
61	On the tomographic description of classical fields. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012, 376, 1417-1425.	2.1	6
62	On the Representation of Orthogonally Additive Polynomials in $\mathbb{R}^n$ . <i>Publications of the Research Institute for Mathematical Sciences</i> , 2009, 45, 519-524.	0.8	5
63	Null phase curves and manifolds in geometric phase theory. <i>Journal of Mathematical Physics</i> , 2013, 54, 062106.	1.1	5
64	Causality and skies: is non-refocussing necessary?. <i>Classical and Quantum Gravity</i> , 2015, 32, 105002.	4.0	5
65	Admissible boundary conditions for Hamiltonian field theories. <i>International Journal of Geometric Methods in Modern Physics</i> , 2017, 14, 1740006.	2.0	5
66	Covariant brackets for particles and fields. <i>Modern Physics Letters A</i> , 2017, 32, 1750100.	1.2	5
67	A geometrical setting for Lax equations associated to dynamical systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1985, 107, 356-358.	2.1	4
68	A note on the existence of graded extensions of Poisson brackets. <i>Journal of Geometry and Physics</i> , 1993, 12, 29-34.	1.4	4
69	Lefschetz pencil structures for 2-calibrated manifolds. <i>Comptes Rendus Mathematique</i> , 2004, 339, 215-218.	0.3	4
70	Quantum control and representation theory. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 205301.	2.1	4
71	Geometrical structures for classical and quantum probability spaces. <i>International Journal of Quantum Information</i> , 2017, 15, 1740007.	1.1	4
72	Evolution of Classical and Quantum States in the Groupoid Picture of Quantum Mechanics. <i>Entropy</i> , 2020, 22, 1292.	2.2	4

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73	Schwinger's picture of quantum mechanics: 2-groupoids and symmetries. <i>Journal of Geometric Mechanics</i> , 2021, 13, 333.	0.8	4
74	Symmetries and Covariant Poisson Brackets on Presymplectic Manifolds. <i>Symmetry</i> , 2022, 14, 70.	2.2	4
75	Causality in Schwinger's Picture of Quantum Mechanics. <i>Entropy</i> , 2022, 24, 75.	2.2	4
76	Arnold's conjecture and symplectic reduction. <i>Journal of Geometry and Physics</i> , 1996, 18, 25-37.	1.4	3
77	A numerical algorithm for singular optimal LQ control systems. <i>Numerical Algorithms</i> , 2009, 51, 477-500.	1.9	3
78	Modeling Sampling in Tensor Products of Unitary Invariant Subspaces. <i>Journal of Function Spaces</i> , 2016, 2016, 1-14.	0.9	3
79	Groupoids and Coherent States. <i>Open Systems and Information Dynamics</i> , 2019, 26, 1950017.	1.2	3
80	Covariant Variational Evolution and Jacobi brackets: Fields. <i>Modern Physics Letters A</i> , 2020, 35, 2050206.	1.2	3
81	Covariant variational evolution and Jacobi brackets: Particles. <i>Modern Physics Letters A</i> , 2020, 35, 2020001.	1.2	3
82	Covariant reduction of classical Hamiltonian Field Theories: From D'Alembert to Klein-Gordon and Schrödinger. <i>Modern Physics Letters A</i> , 2020, 35, 2050214.	1.2	3
83	Representation of non-semibounded quadratic forms and orthogonal additivity. <i>Journal of Mathematical Analysis and Applications</i> , 2021, 495, 124783.	1.0	3
84	Quantum tomography and the quantum Radon transform. <i>Inverse Problems and Imaging</i> , 2021, 15, 893.	1.1	3
85	Covariant Hamiltonian first-order field theories with constraints, on manifolds with boundary: the case of Hamiltonian dynamics. <i>Banach Center Publications</i> , 0, 110, 87-104.	0.1	3
86	Periodic orbits of Hamiltonian systems and symplectic reduction. <i>Journal of Physics A</i> , 1996, 29, 675-687.	1.6	2
87	Three lectures on global boundary conditions and the theory of self-adjoint extensions of the covariant Laplace-Beltrami and Dirac operators on Riemannian manifolds with boundary. , 2012, , .		2
88	Optimal control of two coupled spinning particles in the Euler-Lagrange picture. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 015206.	2.1	2
89	L-extensions and L-boundary of conformal spacetimes. <i>General Relativity and Gravitation</i> , 2018, 50, 1.	2.0	2
90	Nilpotent integrability, reduction of dynamical systems and a third-order Calogero-Moser system. <i>Annali Di Matematica Pura Ed Applicata</i> , 2019, 198, 1513-1540.	1.0	2

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91	Descriptions of Relativistic Dynamics with World Line Condition. Quantum Reports, 2019, 1, 181-192.	1.3	2
92	On the Notion of Composite System. Lecture Notes in Computer Science, 2019, , 647-654.	1.3	2
93	Geometrical reduction and Parisi-Sourlas supersymmetry. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 332, 83-87.	4.1	1
94	Geometrical description of algebraic structures: Applications to Quantum Mechanics. , 2009, , .		1
95	OPTIMAL CONTROL REALIZATIONS OF LAGRANGIAN SYSTEMS WITH SYMMETRY. International Journal of Geometric Methods in Modern Physics, 2011, 08, 1627-1651.	2.0	1
96	The geometry of integrable and superintegrable systems. Theoretical and Mathematical Physics(Russian Federation), 2012, 172, 1109-1117.	0.9	1
97	Convex bodies of states and maps. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 425301.	2.1	1
98	On the multilinear Hausdorff problem of moments. Revista Matematica Complutense, 2014, 27, 213-224.	1.2	1
99	A new algorithm for computing branching rules and Clebsch-Gordan coefficients of unitary representations of compact groups. Journal of Mathematical Physics, 2017, 58, 101702.	1.1	1
100	Remembering George Sudarshan. Quantum Reports, 2019, 1, 271-276.	1.3	1
101	Lagrangian description of Heisenberg and Landau-von Neumann equations of motion. Modern Physics Letters A, 2020, 35, 2050161.	1.2	1
102	Towards a Quantum Sampling Theory: The Case of Finite Groups. Springer Proceedings in Physics, 2019, , 203-223.	0.2	1
103	The sky invariant: A new conformal invariant for Schwarzschild spacetime. International Journal of Geometric Methods in Modern Physics, 2022, 19, .	2.0	1
104	Quantum tomography and Schwinger's picture of quantum mechanics*. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 274008.	2.1	1
105	The space of light rays: Causality and boundary. General Relativity and Gravitation, 2022, 54, .	2.0	1
106	Quantum geons and noncommutative spacetimes. General Relativity and Gravitation, 2011, 43, 3531-3567.	2.0	0
107	FOLDING AND UNFOLDING QUANTUM STATES. International Journal of Geometric Methods in Modern Physics, 2012, 09, 1260028.	2.0	0
108	The Geometry of Hermitean Spaces: Quantum Evolution. , 2015, , 407-487.		0

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109	Solving quantum optimal control problems using Clebsch variables and Lin constraints. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 035302.	2.1	0
110	Knit Product of Finite Groups and Sampling. Mediterranean Journal of Mathematics, 2019, 16, 1.	0.8	0