

Hermann Schulz-Baldes

List of Publications by Year in descending order

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59
papers

1,015
citations

516710

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477307

29
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59
all docs

59
docs citations

59
times ranked

456
citing authors

#	ARTICLE	IF	CITATIONS
1	Bulk and Boundary Invariants for Complex Topological Insulators. Letters in Mathematical Physics, 2016, , .	0.6	198
2	Simultaneous quantization of edge and bulk Hall conductivity. Journal of Physics A, 2000, 33, L27-L32.	1.6	77
3	Topological Invariants of Edge States for Periodic Two-Dimensional Models. Mathematical Physics Analysis and Geometry, 2013, 16, 137-170.	1.0	67
4	Semicircle law and freeness for random matrices with symmetries or correlations. Mathematical Research Letters, 2005, 12, 531-542.	0.5	43
5	Index Pairings in Presence of Symmetries with Applications to Topological Insulators. Communications in Mathematical Physics, 2016, 343, 477-513.	2.2	42
6	Non-commutative odd Chern numbers and topological phases of disordered chiral systems. Journal of Functional Analysis, 2016, 271, 1150-1176.	1.4	33
7	Orbital Polarization and Magnetization for Independent Particles in Disordered Media. Communications in Mathematical Physics, 2013, 319, 649-681.	2.2	31
8	The spectral localizer for even index pairings. Journal of Noncommutative Geometry, 2020, 14, 1-23.	0.5	27
9	Anomalous Drude Model. Physical Review Letters, 1997, 78, 2176-2179.	7.8	24
10	Intermittent Lower Bound on Quantum Diffusion. Letters in Mathematical Physics, 1999, 49, 317-324.	1.1	23
11	SCATTERING THEORY FOR LATTICE OPERATORS IN DIMENSION $d \neq 3$. Reviews in Mathematical Physics, 2012, 24, 1250020.	1.7	23
12	Topological edge states for disordered bosonic systems. Journal of Mathematical Physics, 2018, 59, .	1.1	23
13	Topological Boundary Invariants for Floquet Systems and Quantum Walks. Mathematical Physics Analysis and Geometry, 2017, 20, 1.	1.0	21
14	Topological Insulators from the Perspective of Non-commutative Geometry and Index Theory. Deutsche Mathematiker Vereinigung Jahresbericht, 2016, 118, 247-273.	1.1	20
15	Spectral Flows Associated to Flux Tubes. Annales Henri Poincare, 2016, 17, 1-35.	1.7	20
16	Upper Bounds On Wavepacket Spreading For Random Jacobi Matrices. Communications in Mathematical Physics, 2007, 273, 601-618.	2.2	18
17	Generalized Connesâ€™ Chern characters in KK -theory with an application to weak invariants of topological insulators. Reviews in Mathematical Physics, 2016, 28, 1650024.	1.7	16
18	Random Dirac Operators with Time Reversal Symmetry. Communications in Mathematical Physics, 2010, 295, 209-242.	2.2	15

#	ARTICLE	IF	CITATIONS
19	Persistence of Spin Edge Currents in Disordered Quantum Spin Hall Systems. Communications in Mathematical Physics, 2013, 324, 589-600.	2.2	14
20	Spectral Flows of Dilations of Fredholm Operators. Canadian Mathematical Bulletin, 2015, 58, 51-68.	0.5	14
21	Sturm intersection theory for periodic Jacobi matrices and linear Hamiltonian systems. Linear Algebra and Its Applications, 2012, 436, 498-515.	0.9	13
22	Signature and Spectral Flow of J-Unitary \mathbb{S}^1 -Fredholm Operators. Integral Equations and Operator Theory, 2014, 78, 323-374.	0.8	13
23	Perturbative Test of Single Parameter Scaling for 1D Random Media. Annales Henri Poincare, 2004, 5, 1159-1180.	1.7	12
24	Random Lie group actions on compact manifolds: A perturbative analysis. Annals of Probability, 2010, 38, .	1.8	11
25	RSB decoupling property of MAP estimators. , 2016, , .		11
26	Statistical Mechanics of MAP Estimation: General Replica Ansatz. IEEE Transactions on Information Theory, 2019, 65, 7896-7934.	2.4	11
27	Spectral flow for skew-adjoint Fredholm operators. Journal of Spectral Theory, 2018, 9, 137-170.	0.8	11
28	Invariants of disordered semimetals via the spectral localizer. Europhysics Letters, 2021, 136, 27001.	2.0	11
29	Scaling Diagram for the Localization Length at a Band Edge. Annales Henri Poincare, 2007, 8, 1595-1621.	1.7	10
30	The non-commutative topology of two-dimensional dirty superconductors. Journal of Geometry and Physics, 2018, 124, 100-123.	1.4	10
31	Quantization of interface currents. Journal of Mathematical Physics, 2014, 55, 121901.	1.1	9
32	Skew localizer and $\langle \mathbb{Z} \rangle$ for real index pairings. Advances in Mathematics, 2021, 392, 108038.	1.1	9
33	The Random Phase Property and the Lyapunov Spectrum for Disordered Multi-channel Systems. Journal of Statistical Physics, 2010, 140, 122-153.	1.2	8
34	Transport in the random Kronig-Penney model. Journal of Mathematical Physics, 2012, 53, .	1.1	8
35	Lyapunov Spectra for All Ten Symmetry Classes of Quasi-one-dimensional Disordered Systems of Non-interacting Fermions. Journal of Statistical Physics, 2013, 152, 275-304.	1.2	8
36	The spectral localizer for semifinite spectral triples. Proceedings of the American Mathematical Society, 2021, 149, 121-134.	0.8	8

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37	Phase-Averaged Transport for Quasi-Periodic Hamiltonians. Communications in Mathematical Physics, 2002, 227, 515-539.	2.2	7
38	Scattering zippers and their spectral theory. Journal of Spectral Theory, 2013, 3, 47-82.	0.8	7
39	Chern numbers as half-signature of the spectral localizer. Journal of Mathematical Physics, 2019, 60, .	1.1	7
40	On η -indices for ground states of fermionic chains. Reviews in Mathematical Physics, 2020, 32, 2050028.	1.7	7
41	Approximate symmetries and conservation laws in topological insulators and associated \mathbb{Z} -invariants. Annals of Physics, 2020, 419, 168238.	2.8	7
42	Geometry of Weyl theory for Jacobi matrices with matrix entries. Journal D'Analyse Mathématique, 2010, 110, 129-165.	0.8	6
43	Replica symmetry breaking in compressive sensing. , 2017, , .		6
44	Spectral Flow of Monopole Insertion in Topological Insulators. Communications in Mathematical Physics, 2019, 370, 895-923.	2.2	6
45	Spectral Flow Argument Localizing an Odd Index Pairing. Canadian Mathematical Bulletin, 2019, 62, 373-381.	0.5	6
46	Lyapunov Exponents at Anomalies of $SL(2, \mathbb{R})$ -actions. , 2007, , 159-172.		6
47	The Density of Surface States as the Total Time Delay. Letters in Mathematical Physics, 2016, 106, 485-507.	1.1	5
48	Signatures for \mathbb{A} -hermitians and \mathbb{A} -unitaries on Krein spaces with Real structures. Mathematische Nachrichten, 2017, 290, 1840-1858.	0.8	5
49	Parity as \mathbb{Z}_2 -valued spectral flow. Bulletin of the London Mathematical Society, 2019, 51, 836-852.	0.8	5
50	Krein signatures of transfer operators for half-space topological insulators. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 405201.	2.1	4
51	Gaussian fluctuations of products of random matrices distributed close to the identity. Journal of Difference Equations and Applications, 2015, 21, 467-485.	1.1	3
52	Analyticity properties of the scattering matrix for matrix Schrödinger operators on the discrete line. Journal of Mathematical Analysis and Applications, 2021, 497, 124856.	1.0	3
53	Positive Lyapunov exponents and localization bounds for strongly mixing potentials. Advances in Theoretical and Mathematical Physics, 2008, 12, 1377-1399.	0.6	3
54	Application of Semifinite Index Theory to Weak Topological Phases. MATRIX Book Series, 2018, , 203-227.	0.2	2

#	ARTICLE	IF	CITATIONS
55	Oscillation Theory for the Density of States of High Dimensional Random Operators. International Mathematics Research Notices, 2019, 2019, 4579-4602.	1.0	2
56	Pseudo-gaps for random hopping models. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 185201.	2.1	2
57	Dimensional Reduction and Scattering Formulation for Even Topological Invariants. Communications in Mathematical Physics, 2021, 381, 119-142.	2.2	2
58	Spectral averaging techniques for Jacobi matrices with matrix entries. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 185204.	2.1	1
59	Random Möbius dynamics on the unit disc and perturbation theory for Lyapunov exponents. Discrete and Continuous Dynamical Systems - Series B, 2022, 27, 945.	0.9	1