

Stefan Teufel

List of Publications by Year in descending order

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58
papers

1,285
citations

393982

19
h-index

395343

33
g-index

60
all docs

60
docs citations

60
times ranked

507
citing authors

#	ARTICLE	IF	CITATIONS
1	Adiabatic Perturbation Theory in Quantum Dynamics. Lecture Notes in Mathematics, 2003, , .	0.1	207
2	Effective Dynamics for Bloch Electrons: Peierls Substitution and Beyond. Communications in Mathematical Physics, 2003, 242, 547-578.	1.0	129
3	Space-adiabatic perturbation theory. Advances in Theoretical and Mathematical Physics, 2003, 7, 145-204.	0.4	62
4	Adiabatic Decoupling and Time-Dependent Born-Öppenheimer Theory. Communications in Mathematical Physics, 2001, 224, 113-132.	1.0	57
5	Simple Proof for Global Existence of Bohmian Trajectories. Communications in Mathematical Physics, 2005, 258, 349-365.	1.0	49
6	Propagation through conical crossings: An asymptotic semigroup. Communications on Pure and Applied Mathematics, 2005, 58, 1188-1230.	1.2	45
7	Bohmian Mechanics. , 2009, , .		41
8	A Note on the Adiabatic Theorem Without Gap Condition. Letters in Mathematical Physics, 2001, 58, 261-266.	0.5	40
9	The time-dependent Born-Oppenheimer approximation. ESAIM: Mathematical Modelling and Numerical Analysis, 2007, 41, 297-314.	0.8	39
10	Optimal Decay of Wannier functions in Chern and Quantum Hall Insulators. Communications in Mathematical Physics, 2018, 359, 61-100.	1.0	32
11	Orbital Polarization and Magnetization for Independent Particles in Disordered Media. Communications in Mathematical Physics, 2013, 319, 649-681.	1.0	31
12	Space-Adiabatic Perturbation Theory in Quantum Dynamics. Physical Review Letters, 2002, 88, 250405.	2.9	28
13	Construction and validation of a rigorous surface hopping algorithm for conical crossings. Communications in Mathematical Sciences, 2007, 5, 789-814.	0.5	25
14	Non-equilibrium Almost-Stationary States and Linear Response for Gapped Quantum Systems. Communications in Mathematical Physics, 2020, 373, 621-653.	1.0	24
15	Semiclassical Limit for the Schrödinger Equation with a Short Scale Periodic Potential. Communications in Mathematical Physics, 2001, 215, 609-629.	1.0	23
16	Scattering theory from microscopic first principles. Physica A: Statistical Mechanics and Its Applications, 2000, 279, 416-431.	1.2	21
17	Energy Transport by Acoustic Modes of Harmonic Lattices. SIAM Journal on Mathematical Analysis, 2008, 40, 1392-1418.	0.9	21
18	Wannier functions and \mathbb{Z}_2 invariants in time-reversal symmetric topological insulators. Reviews in Mathematical Physics, 2017, 29, 1730001.	0.7	21

#	ARTICLE	IF	CITATIONS
19	Particle Creation at a Point Source by Means of Interior-Boundary Conditions. <i>Mathematical Physics Analysis and Geometry</i> , 2018, 21, 1.	0.4	21
20	Adiabatic currents for interacting fermions on a lattice. <i>Reviews in Mathematical Physics</i> , 2019, 31, 1950009.	0.7	20
21	Locality and causality in hidden-variables models of quantum theory. <i>Physical Review A</i> , 1997, 56, 1217-1227.	1.0	19
22	Precise Coupling Terms in Adiabatic Quantum Evolution: The Generic Case. <i>Communications in Mathematical Physics</i> , 2005, 260, 481-509.	1.0	19
23	Semiclassical Approximations for Hamiltonians with Operator-Valued Symbols. <i>Communications in Mathematical Physics</i> , 2013, 320, 821-849.	1.0	18
24	Peierls substitution for magnetic Bloch bands. <i>Analysis and PDE</i> , 2016, 9, 773-811.	0.6	18
25	SEMICLASSICAL MOTION OF DRESSED ELECTRONS. <i>Reviews in Mathematical Physics</i> , 2002, 14, 1-28.	0.7	16
26	Geometric Currents in Piezoelectricity. <i>Archive for Rational Mechanics and Analysis</i> , 2009, 191, 387-422.	1.1	16
27	Generalised Quantum Waveguides. <i>Annales Henri Poincare</i> , 2015, 16, 2535-2568.	0.8	16
28	Effective N-Body Dynamics for the Massless Nelson Model and Adiabatic Decoupling without Spectral Gap. <i>Annales Henri Poincare</i> , 2002, 3, 939-965.	0.8	15
29	Avoiding Ultraviolet Divergence by Means of Interior Boundary Conditions. , 2016, , 293-311.		15
30	Superadiabatic transitions in quantum molecular dynamics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2009, 465, 3553-3580.	1.0	13
31	Constrained quantum systems as an adiabatic problem. <i>Physical Review A</i> , 2010, 82, .	1.0	13
32	A New Approach to Transport Coefficients in the Quantum Spin Hall Effect. <i>Annales Henri Poincare</i> , 2021, 22, 1069-1111.	0.8	13
33	Motion of Electrons in Adiabatically Perturbed Periodic Structures. , 2006, , 595-617.		12
34	Precise Coupling Terms in Adiabatic Quantum Evolution. <i>Annales Henri Poincare</i> , 2005, 6, 217-246.	0.8	11
35	Justifying Kubo's formula for gapped systems at zero temperature: A brief review and some new results. <i>Reviews in Mathematical Physics</i> , 2021, 33, 2060004.	0.7	11
36	Spontaneous Decay of Resonant Energy Levels for Molecules with Moving Nuclei. <i>Communications in Mathematical Physics</i> , 2012, 315, 699-738.	1.0	10

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37	Effective non-adiabatic Hamiltonians for the quantum nuclear motion over coupled electronic states. Journal of Chemical Physics, 2019, 151, 014113.	1.2	10
38	Hamiltonians without ultraviolet divergence for quantum field theories. Quantum Studies: Mathematics and Foundations, 2021, 8, 17-35.	0.4	10
39	Bohmian Mechanics. , 2009, , 145-171.		9
40	Effective Dynamics for Particles Coupled to a Quantized Scalar Field. Communications in Mathematical Physics, 2008, 280, 751-805.	1.0	8
41	Derivation of the 1d Gross-Pitaevskii Equation from the 3d Quantum Many-Body Dynamics of Strongly Confined Bosons. Annales Henri Poincare, 2019, 20, 1003-1049.	0.8	8
42	The adiabatic limit of Schrödinger operators on fibre bundles. Mathematische Annalen, 2017, 367, 1647-1683.	0.7	7
43	Bohmian Trajectories for Hamiltonians with Interior Boundary Conditions. Journal of Statistical Physics, 2020, 180, 34-73.	0.5	7
44	Interior-boundary conditions for many-body Dirac operators and codimension-1 boundaries. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 295202.	0.7	6
45	EFFECTIVE HAMILTONIANS FOR THIN DIRICHLET TUBES WITH VARYING CROSS-SECTION. , 2011, , .		6
46	The NLS Limit for Bosons in a Quantum Waveguide. Annales Henri Poincare, 2016, 17, 3321-3360.	0.8	5
47	Adiabatic theorem in the thermodynamic limit: Systems with a uniform gap. Journal of Mathematical Physics, 2022, 63, 011901.	0.5	5
48	Adiabatic theorem in the thermodynamic limit: Systems with a gap in the bulk. Forum of Mathematics, Sigma, 2022, 10, .	0.3	5
49	Comment on "Hidden quantum nonlocality revealed by local filters" by N. Gisin. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 224, 314-316.	0.9	4
50	Landau-Zener Formulae from Adiabatic Transition Histories. Lecture Notes in Physics, 2006, , 19-32.	0.3	4
51	Semiclassics for Particles with Spin via a Wigner-Weyl-Type Calculus. Annales Henri Poincare, 2014, 15, 1967-1991.	0.8	4
52	Local stability of ground states in locally gapped and weakly interacting quantum spin systems. Letters in Mathematical Physics, 2022, 112, 9.	0.5	4
53	Semiclassical approximations for adiabatic slow-fast systems. Europhysics Letters, 2012, 98, 50003.	0.7	3
54	Resonance phenomena in the interaction of a many-photon wave packet and a qubit. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 315301.	0.7	3

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55	Emergence of exponentially small reflected waves. <i>Asymptotic Analysis</i> , 2009, 64, 53-100.	0.2	1
56	Quantum waveguides with magnetic fields. <i>Reviews in Mathematical Physics</i> , 2019, 31, 1950025.	0.7	1
57	List of symbols and References. <i>Lecture Notes in Mathematics</i> , 2003, , 225-234.	0.1	0
58	Semiclassical dynamics of an electron moving in a slowly perturbed periodic potential. , 2006, , .		0