

# Heinz Siedentop

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7862023/publications.pdf>

Version: 2024-02-01

47  
papers

766  
citations

567281

15  
h-index

526287

27  
g-index

47  
all docs

47  
docs citations

47  
times ranked

227  
citing authors

#	ARTICLE	IF	CITATIONS
1	Equivalence of Sobolev Norms Involving Generalized Hardy Operators. International Mathematics Research Notices, 2021, 2021, 2284-2303.	1.0	16
2	The Strong Scott Conjecture: the Density of Heavy Atoms Close to the Nucleus. , 2020, , 257-272.		0
3	On the excess charge of a relativistic statistical model of molecules with an inhomogeneity correction. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 395201.	2.1	2
4	The Atomic Density on the Thomas-Fermi Length Scale for the Chandrasekhar Hamiltonian. Reports on Mathematical Physics, 2019, 83, 387-391.	0.8	4
5	The maximal negative ion of the time-dependent Thomas-Fermi and the Vlasov atom. Journal of Mathematical Physics, 2018, 59, 051902.	1.1	3
6	Blow-up of solutions to the Patlak-Keller-Segel equation in dimension $n \geq 2$ . Applied Mathematics Letters, 2017, 74, 102-107.	2.7	2
7	The Ground State Energy of Heavy Atoms: The Leading Correction. Communications in Mathematical Physics, 2015, 339, 589-617.	2.2	8
8	Dipoles in graphene have infinitely many bound states. Journal of Mathematical Physics, 2014, 55, .	1.1	10
9	On the Maximal Excess Charge of the Chandrasekhar-Coulomb Hamiltonian in Two Dimension. Letters in Mathematical Physics, 2013, 103, 843-849.	1.1	4
10	Positivity of $ p a q b+ q b p a$ . Journal of Functional Analysis, 2013, 264, 2817-2824.	1.4	0
11	Stability of impurities with Coulomb potential in graphene with homogeneous magnetic field. Journal of Mathematical Physics, 2012, 53, .	1.1	11
12	Signatures of Wigner molecule formation in interacting Dirac fermion quantum dots. Physical Review B, 2011, 83, .	3.2	15
13	Multiparticle equations for interacting Dirac fermions in magnetically confined graphene quantum dots. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 215202.	2.1	14
14	The Ground State Energy of Heavy Atoms: Relativistic Lowering of the Leading Energy Correction. Communications in Mathematical Physics, 2008, 278, 549-566.	2.2	21
15	Stability of atoms and molecules in an ultrarelativistic Thomas-Fermi-Weizsäcker model. Journal of Mathematical Physics, 2008, 49, 012302.	1.1	12
16	Relativistic exchange-correlation energy in density-matrix-functional theory. Physical Review A, 2007, 76, .	2.5	44
17	The spectrum of relativistic atoms according to Bethe and Salpeter and beyond. Journal of Computational and Applied Mathematics, 2007, 208, 155-163.	2.0	2
18	Solutions of the Dirac-Fock Equations and the Energy of the Electron-Positron Field. Archive for Rational Mechanics and Analysis, 2007, 184, 1-22.	2.4	9

#	ARTICLE	IF	CITATIONS
19	The Douglas-Kroll-He <sup>+</sup> Method: Convergence and Block-Diagonalization of Dirac Operators. <i>Annales Henri Poincare</i> , 2006, 7, 45-58.	1.7	18
20	The ground-state energy of heavy atoms according to Brown and Ravenhall: absence of relativistic effects in leading order. <i>Journal of Physics A</i> , 2006, 39, 10405-10414.	1.6	7
21	Remarks on the Mittleman max <sup>+</sup> min variational method for the electron-positron field. <i>Journal of Physics A</i> , 2006, 39, 85-98.	1.6	6
22	An analytic Douglas <sup>+</sup> Kroll <sup>+</sup> He <sup>+</sup> method. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2005, 341, 473-478.	2.1	16
23	On the Hartree-Fock Equations of the Electron-Positron Field. <i>Communications in Mathematical Physics</i> , 2005, 255, 131-159.	2.2	21
24	The optimal size of the exchange hole and reduction to one-particle Hamiltonians. <i>Theoretical Chemistry Accounts</i> , 2004, 111, 49-53.	1.4	5
25	Non-Perturbative Mass and Charge Renormalization in Relativistic No-Photon Quantum Electrodynamics. <i>Communications in Mathematical Physics</i> , 2003, 243, 241-260.	2.2	15
26	Dissociation of Homonuclear Relativistic Molecular Ions. <i>Annales Henri Poincare</i> , 2001, 2, 27-40.	1.7	4
27	Asymptotic behavior of the one-particle density matrix of atoms at distances $Z^{-1}$ from the nucleus. <i>Mathematische Zeitschrift</i> , 2001, 236, 787-796.	0.9	4
28	Renormalization of the Regularized Relativistic Electron-Positron Field. <i>Communications in Mathematical Physics</i> , 2000, 213, 673-683.	2.2	19
29	The Sharp Bound on the Stability of the Relativistic Electron-Positron Field in Hartree-Fock Approximation. <i>Communications in Mathematical Physics</i> , 2000, 211, 629-642.	2.2	8
30	A Minimax Principle for the Eigenvalues in Spectral Gaps. <i>Journal of the London Mathematical Society</i> , 1999, 60, 490-500.	1.0	57
31	On the Stability of the Relativistic Electron-Positron Field. <i>Communications in Mathematical Physics</i> , 1999, 201, 445-460.	2.2	49
32	Stability of Relativistic Matter with Magnetic Fields. <i>Physical Review Letters</i> , 1997, 79, 1785-1788.	7.8	21
33	Stability and instability of relativistic electrons in classical electromagnetic fields. <i>Journal of Statistical Physics</i> , 1997, 89, 37-59.	1.2	47
34	Counting eigenvalues using coherent states with an application to Dirac and Schrödinger operators in the semi-classical limit. <i>Arkiv for Matematik</i> , 1996, 34, 265-283.	0.5	11
35	The spectrum of relativistic one-electron atoms according to Bethe and Salpeter. <i>Communications in Mathematical Physics</i> , 1996, 178, 733-746.	2.2	68
36	A Generalization of the Kustaanheimo-Stiefel Transform for Two-Centre Systems. <i>Bulletin of the London Mathematical Society</i> , 1996, 28, 33-42.	0.8	4

#	ARTICLE	IF	CITATIONS
37	Regularization of atomic Schrödinger operators with magnetic field. <i>Mathematische Zeitschrift</i> , 1995, 218, 427-437.	0.9	4
38	An upper bound on the ionic ground state density at the nucleus. <i>Reports on Mathematical Physics</i> , 1995, 36, 91-98.	0.8	2
39	Asymptotically correct lower bound for the sum of negative eigenvalues of Schrödinger operators through a decomposition of unity given by Macke. <i>Asymptotic Analysis</i> , 1994, 8, 65-72.	0.5	2
40	On the number of bound states of a bosonic N-particle Coulomb system. <i>Mathematische Zeitschrift</i> , 1993, 214, 441-459.	0.9	12
41	Universality of the Fermi-Hellmann model. <i>Journal of Mathematical Analysis and Applications</i> , 1991, 157, 385-394.	1.0	1
42	Convexity and concavity of eigenvalue sums. <i>Journal of Statistical Physics</i> , 1991, 63, 811-816.	1.2	7
43	A new phase space localization technique with application to the sum of negative eigenvalues of Schrödinger operators. <i>Annales Scientifiques De L'Ecole Normale Superieure</i> , 1991, 24, 215-225.	0.8	27
44	On the leading correction of the Thomas-Fermi model: Lower bound. <i>Inventiones Mathematicae</i> , 1989, 97, 159-193.	2.5	57
45	On the leading energy correction for the statistical model of the atom: Interacting case. <i>Communications in Mathematical Physics</i> , 1987, 112, 471-490.	2.2	78
46	Upper bound on the ground state energy of atoms that proves Scott's conjecture. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987, 120, 341-342.	2.1	18
47	Proof of the strong Scott conjecture for heavy atoms: the Furry picture. <i>Annales Henri Lebesgue</i> , 0, 5, 611-642.	0.0	1