

# Andreas Glatz

## List of Publications by Year in descending order

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85  
papers

1,309  
citations

394421

19  
h-index

395702

33  
g-index

86  
all docs

86  
docs citations

86  
times ranked

1335  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vortices in high-performance high-temperature superconductors. Reports on Progress in Physics, 2016, 79, 116501.	20.1	157
2	Stable large-scale solver for Ginzburg-Landau equations for superconductors. Journal of Computational Physics, 2015, 294, 639-654.	3.8	62
3	Superconducting phase transitions in ultrathin TiN films. Europhysics Letters, 2012, 97, 17012.	2.0	56
4	Toward Superconducting Critical Current by Design. Advanced Materials, 2016, 28, 4593-4600.	21.0	53
5	Emergence of self-organized multivortex states in flocks of active rollers. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9706-9711.	7.1	46
6	Fluctuation spectroscopy: From Rayleigh-Jeans waves to Abrikosov vortex clusters. Reviews of Modern Physics, 2018, 90, .	45.6	44
7	Domain Wall Depinning in Random Media by ac Fields. Physical Review Letters, 2003, 90, 047201.	7.8	43
8	Fluctuation spectroscopy of disordered two-dimensional superconductors. Physical Review B, 2011, 84, .	3.2	43
9	Models for the magnetic ac susceptibility of granular superferromagnetic $\text{CoFe}\hat{\cdot}\text{Al}_2\text{O}_3$ . Physical Review B, 2004, 70, .	3.2	41
10	Optimization of vortex pinning by nanoparticles using simulations of the time-dependent Ginzburg-Landau model. Physical Review B, 2016, 93, .	3.2	41
11	Simulation of the Vortex Dynamics in a Real Pinning Landscape of $\text{YBaCuO}$ . Physical Review Applied, 2016, 5, .	3.5	35
12	Strong-pinning regimes by spherical inclusions in anisotropic type-II superconductors. Superconductor Science and Technology, 2018, 31, 014001.	3.5	35
13	Effect of hexagonal patterned arrays and defect geometry on the critical current of superconducting films. Physical Review B, 2017, 95, .	3.2	31
14	Dirac fermions and superconductivity in the homologous structures		

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19	Interplay of Coulomb blockade and ferroelectricity in nanosized granular materials. Physical Review B, 2014, 89, .	3.2	21
20	Parallel magnetic field suppresses dissipation in superconducting nanostrips. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10274-E10280.	7.1	20
21	Targeted evolution of pinning landscapes for large superconducting critical currents. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10291-10296.	7.1	20
22	Challenges and transformative opportunities in superconductor vortex physics. Journal of Applied Physics, 2021, 130, .	2.5	18
23	Thermoelectric properties of granular metals. Physical Review B, 2009, 79, .	3.2	17
24	Flux cutting in high- $T_c$ superconductors. Physical Review B, 2015, 91, .	3.2	17
25	Thermoelectric performance of granular semiconductors. Physical Review B, 2009, 80, .	3.2	16
26	Quantum fluctuations and dynamic clustering of fluctuating Cooper pairs. Europhysics Letters, 2011, 94, 47005.	2.0	16
27	Surface impedance of superconductors with magnetic impurities. Physical Review B, 2012, 86, .	3.2	16
28	The Quest for High Critical Current in Applied High-Temperature Superconductors. Journal of Superconductivity and Novel Magnetism, 2020, 33, 127-141.	1.8	15
29	Statistics of Deep Energy States in Coulomb Glasses. Physical Review Letters, 2007, 98, 196401.	7.8	14
30	Geometrical vortex lattice pinning and melting in YBaCuO submicron bridges. Scientific Reports, 2016, 6, 38677.	3.3	14
31	Vortex cutting in superconductors. Physical Review B, 2016, 94, .	3.2	14
32	Transport properties of semiconducting nanocrystal arrays at low temperatures. Physical Review B, 2007, 75, .	3.2	13
33	<i>In silico</i> optimization of critical currents in superconductors. Physical Review E, 2017, 96, 013318.	2.1	13
34	Peak effect due to competing vortex ground states in superconductors with large inclusions. Physical Review B, 2018, 98, .	3.2	13
35	One-Dimensional Disordered Density Waves and Superfluids: The Role of Quantum Phase Slips and Thermal Fluctuations. Physical Review Letters, 2002, 88, 256401.	7.8	12
36	The Coulomb gap and low energy statistics for Coulomb glasses. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P06006.	2.3	12

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37	Edge effect pinning in mesoscopic superconducting strips with non-uniform distribution of defects. Scientific Reports, 2019, 9, 211.	3.3	12
38	Thermoelectric and Seebeck coefficients of granular metals. Physical Review B, 2009, 79, .	3.2	11
39	Large spin-orbit coupling and helical spin textures in 2D heterostructure [Pb <sub>2</sub> BiS <sub>3</sub> ]/[AuTe <sub>2</sub> ]. Scientific Reports, 2016, 6, 35313.	3.3	11
40	Single grain heating due to inelastic cotunneling. Physical Review B, 2010, 81, .	3.2	10
41	Detecting vortices in superconductors: Extracting one-dimensional topological singularities from a discretized complex scalar field. Physical Review E, 2015, 91, 023311.	2.1	10
42	Extracting, Tracking, and Visualizing Magnetic Flux Vortices in 3D Complex-Valued Superconductor Simulation Data. IEEE Transactions on Visualization and Computer Graphics, 2016, 22, 827-836.	4.4	10
43	Thermoelectric performance of weakly coupled granular materials. Europhysics Letters, 2009, 87, 57009.	2.0	9
44	Nucleation of spontaneous vortices in trapped Fermi gases undergoing a BCS-BEC crossover. Physical Review B, 2011, 84, .	3.2	9
45	Anisotropic superconductors in tilted magnetic fields. Physical Review B, 2015, 91, .	3.2	9
46	Solving Large-Scale Linear Systems of Equations by a Quantum Hybrid Algorithm. Annalen Der Physik, 2022, 534, .	2.4	8
47	Influence of thermal fluctuations on quantum phase transitions in one-dimensional disordered systems: Charge density waves and Luttinger liquids. Physical Review B, 2004, 69, .	3.2	7
48	Phase slips in superconducting weak links. Physical Review B, 2017, 95, .	3.2	7
49	In situ magnetic flux vortex visualization in time-dependent Ginzburg-Landau superconductor simulations. , 2017, , .		7
50	Heating effects in a chain of quantum dots. Physical Review B, 2010, 82, .	3.2	6
51	Synchronized Andreev transmission in SNS junction arrays. Physical Review B, 2010, 82, .	3.2	6
52	Direct Lattice Shaking of Bose Condensates: Finite Momentum Superfluids. Physical Review Letters, 2017, 118, 220401.	7.8	6
53	Self-organized superconducting textures in thin films. Physical Review B, 2011, 84, .	3.2	5
54	Electron transport properties of composite ferroelectrics. Europhysics Letters, 2013, 104, 47004.	2.0	5

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55	Collective dynamics of one-dimensional charge density waves. <i>Physical Review B</i> , 2001, 64, .	3.2	4
56	Frequency-temperature crossover in the conductivity of disordered Luttinger liquids. <i>Physical Review B</i> , 2007, 76, .	3.2	4
57	Giant magnetoresistance in nanogranular magnets. <i>Europhysics Letters</i> , 2008, 82, 47002.	2.0	4
58	Giant quantum freezing of nanojunctions mediated by the environment. <i>Physical Review B</i> , 2011, 84, .	3.2	4
59	Universality and quantization of the power-to-heat ratio in nanogranular systems. <i>Physical Review B</i> , 2013, 88, .	3.2	4
60	The physics of baking good pizza. <i>Physics Education</i> , 2018, 53, 065011.	0.5	4
61	Emergence and dynamics of unconfined self-organised vortices in active magnetic roller liquids. <i>Soft Matter</i> , 2021, 17, 10536-10544.	2.7	4
62	Interplay of charge and heat transport in a nano-junction in the out-of-equilibrium cotunneling regime. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 185301.	1.8	3
63	Generic equilibration dynamics of planar defects in trapped atomic superfluids. <i>Physical Review A</i> , 2015, 91, .	2.5	3
64	Asymmetric crossing of the attractive and repulsive magnetic potential by Abrikosov vortices. <i>Physical Review B</i> , 2020, 102, .	3.2	3
65	Superferromagnetic domain state dynamics in discontinuous CoFe/Al <sub>2</sub> O <sub>3</sub> multilayers. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, E1201-E1203.	2.3	2
66	Nonlinear transport characteristics of mesoscopic tunnel junctions far from equilibrium. <i>Physical Review B</i> , 2012, 86, .	3.2	2
67	High-resolution tunnel fluctuoscropy. <i>Europhysics Letters</i> , 2014, 107, 47004.	2.0	2
68	Tracking vortices in superconductors: Extracting singularities from a discretized complex scalar field evolving in time. <i>Physical Review E</i> , 2016, 93, 023305.	2.1	2
69	Extensions and analysis of worst-case parameter in weighted Jacobi's method for solving second order implicit PDEs. <i>Results in Applied Mathematics</i> , 2019, 1, 100003.	1.3	2
70	Analysis of the ghost and mirror fields in the Nernst signal induced by superconducting fluctuations. <i>Physical Review B</i> , 2020, 102, .	3.2	2
71	Instabilities of the normal state in current-biased narrow superconducting strips. <i>Physical Review B</i> , 2020, 101, .	3.2	2
72	Realization of the Werner's "Holevo and Landau" Streater Quantum Channels for Qutrits on Quantum Computers. <i>Journal of Russian Laser Research</i> , 2020, 41, 40-53.	0.6	2

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73	Displacement Profile of Charge Density Waves and Domain Walls at Critical Depinning. Physical Review Letters, 2004, 92, 257205.	7.8	1
74	Publisher's Note: Transport properties of semiconducting nanocrystal arrays at low temperatures [Phys. Rev. B75, 052302 (2007)]. Physical Review B, 2007, 75, .	3.2	1
75	Resonant Andreev transmission in two-dimensional array of SNS junctions. Physica C: Superconductivity and Its Applications, 2010, 470, S810-S812.	1.2	1
76	SurerretÅal.Reply:. Physical Review Letters, 2010, 105, .	7.8	1
77	Effect of fluctuations on the NMR relaxation beyond the Abrikosov vortex state. Physical Review B, 2015, 92, .	3.2	1
78	Dynamical preparation of an atomic condensate in a Hofstadter band. Physical Review A, 2022, 105, .	2.5	1
79	Magnetic circuit for Abrikosov vortices: Vortex motion in a periodic labyrinth of magnetic T and I-shaped elements under a superconducting film. Journal of Magnetism and Magnetic Materials, 2022, 557, 169476.	2.3	1
80	1/ f noise in a one-dimensional charge density wave system. Europhysics Letters, 2004, 66, 385-391.	2.0	0
81	Search for flicker noise in one-dimensional charge density wave systems. , 2004, , .		0
82	Analytical description of the quantum-mesoscopic-classical transition in systems with quasidiscrete environments. Physical Review E, 2012, 85, 061129.	2.1	0
83	Quantum phase slips and thermal fluctuations in one-dimensional disordered density waves. European Physical Journal Special Topics, 2002, 12, 123-126.	0.2	0
84	Domain walls in random media driven by AC fields. European Physical Journal Special Topics, 2002, 12, 275-275.	0.2	0
85	Thermal Fluctuations in One-Dimensional Disordered Quantum Systems. , 2006, , 91-117.		0