

Mathias S Scheurer

List of Publications by Year in descending order

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Version: 2024-02-01

49
papers

1,718
citations

257450

24
h-index

276875

41
g-index

51
all docs

51
docs citations

51
times ranked

1882
citing authors

#	ARTICLE	IF	CITATIONS
1	Identifying topological order through unsupervised machine learning. Nature Physics, 2019, 15, 790-795.	16.7	176
2	Triangular antiferromagnetism on the honeycomb lattice of twisted bilayer graphene. Physical Review B, 2018, 98, .	3.2	122
3	Unsupervised Machine Learning and Band Topology. Physical Review Letters, 2020, 124, 226401.	7.8	99
4	Topological superconductivity and unconventional pairing in oxide interfaces. Nature Communications, 2015, 6, 6005.	12.8	96
5	Topological order in the pseudogap metal. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3665-E3672.	7.1	68
6	Superconductivity, correlated insulators, and Wess-Zumino-Witten terms in twisted bilayer graphene. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29543-29554.	7.1	66
7	Pseudogap and Fermi-Surface Topology in the Two-Dimensional Hubbard Model. Physical Review X, 2018, 8, .	8.9	65
8	Orderly disorder in magic-angle twisted trilayer graphene. Science, 2022, 376, 193-199.	12.6	63
9	Nonadiabatic processes in Majorana qubit systems. Physical Review B, 2013, 88, .	3.2	58
10	Theory of zero-field superconducting diode effect in twisted trilayer graphene. 2D Materials, 2022, 9, 025027.	4.4	56
11	Gauge theory for the cuprates near optimal doping. Physical Review B, 2019, 99, .	3.2	54
12	Moiré nematic phase in twisted double bilayer graphene. Nature Physics, 2022, 18, 196-202.	16.7	51
13	Pairing in graphene-based moiré superlattices. Physical Review Research, 2020, 2, .	3.6	40
14	Nodeless superconductivity in the type-II Dirac semimetal PdTe_2 : London penetration depth and pairing-symmetry analysis. Physical Review B, 2018, 98, .	3.2	38
15	Enhanced thermal Hall effect in the square-lattice Néel state. Nature Physics, 2019, 15, 1290-1294.	16.7	32
16	Fermi surface reconstruction in electron-doped cuprates without antiferromagnetic long-range order. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3449-3453.	7.1	32
17	Selection rules for Cooper pairing in two-dimensional interfaces and sheets. Npj Quantum Materials, 2017, 2, .	5.2	31
18	Thermal Hall effect in square-lattice spin liquids: A Schwinger boson mean-field study. Physical Review B, 2019, 99, .	3.2	31

#	ARTICLE	IF	CITATIONS
19	Time-reversal symmetry breaking and unconventional pairing in the noncentrosymmetric superconductor $\text{La}_{7-3}\text{Rh}_3$. Physical Review B, 2020, 102, .	3.2	31
20	Intertwining Topological Order and Broken Symmetry in a Theory of Fluctuating Spin-Density Waves. Physical Review Letters, 2017, 119, 227002.	7.8	29
21	Microscopic pairing mechanism, order parameter, and disorder sensitivity in moiré superlattices: Applications to twisted double-bilayer graphene. Physical Review B, 2020, 102, .	3.2	29
22	Hierarchy of information scrambling, thermalization, and hydrodynamic flow in graphene. Physical Review B, 2018, 98, .	3.2	27
23	Mechanism, time-reversal symmetry, and topology of superconductivity in noncentrosymmetric systems. Physical Review B, 2016, 93, .	3.2	26
24	Dimensional crossover and cold-atom realization of topological Mott insulators. Scientific Reports, 2015, 5, 8386.	3.3	25
25	Electron irradiation effects on superconductivity in PdTe_2 : An application of a generalized Anderson theorem. Physical Review Research, 2020, 2, .	3.6	25
26	Pair breaking in multiorbital superconductors: An application to oxide interfaces. Physical Review B, 2015, 92, .	3.2	24
27	Designing Morphotropic Phase Composition in BiFeO_3 . Nano Letters, 2019, 19, 1033-1038.	9.1	24
28	Mirror symmetry breaking in a model insulating cuprate. Nature Physics, 2021, 17, 777-781.	16.7	24
29	Electric-field-tunable electronic nematic order in twisted double-bilayer graphene. 2D Materials, 2021, 8, 034005.	4.4	23
30	Protection of parity-time symmetry in topological many-body systems: Non-Hermitian toric code and fracton models. Physical Review Research, 2020, 2, .	3.6	23
31	Correlated Insulators, Semimetals, and Superconductivity in Twisted Trilayer Graphene. Physical Review X, 2022, 12, .	8.9	22
32	Pair breaking due to orbital magnetism in iron-based superconductors. Physical Review B, 2015, 91, .	3.2	20
33	Photocurrent-driven transient symmetry breaking in the Weyl semimetal TaAs. Nature Materials, 2022, 21, 62-66.	27.5	20
34	Anomalous quantum criticality in an itinerant ferromagnet. Nature Communications, 2015, 6, 8188.	12.8	19
35	Orbital currents in insulating and doped antiferromagnets. Physical Review B, 2018, 98, .	3.2	19
36	Time-reversal symmetry breaking and multigap superconductivity in the noncentrosymmetric superconductor $\text{La}_{7-3}\text{Ni}_3$. Physical Review B, 2021, 103, .	3.2	19

#	ARTICLE	IF	CITATIONS
37	Limits on dynamically generated spin-orbit coupling: Absence of l instabilities in metals. Physical Review B, 2017, 95, .	3.2	17
38	Friedel oscillations and Majorana zero modes in inhomogeneous superconductors. Physical Review B, 2018, 98, .	3.2	12
39	Conditional generative models for sampling and phase transition indication in spin systems. SciPost Physics, 2021, 11, .	4.9	11
40	Unquantized thermal Hall effect in quantum spin liquids with spinon Fermi surfaces. Physical Review Research, 2020, 2, .	3.6	11
41	Phases of $SU(2)$ gauge theory with multiple adjoint Higgs fields in $2+1$ dimensions. Physical Review B, 2020, 101, .	3.2	10
42	Gauge theories for the thermal Hall effect. Physical Review B, 2020, 101, .	3.2	10
43	Phonon Hall viscosity from phonon-spinon interactions. Physical Review B, 2021, 104, .	3.2	10
44	Spectroscopy of graphene with a magic twist. Nature, 2019, 572, 40-41.	27.8	9
45	Effect of Van Hove singularities in the onset of pseudogap states in Mott insulators. Physical Review Research, 2020, 2, .	3.6	6
46	Possible unconventional pairing in $Ca_{1-x}F_x$ superconductors reveal. Physical Review B, 2022, 105, .	3.2	6
47	Damping of Plasmons of Closely Coupled Sphere Chains Due to Disordered Gaps. Journal of Physical Chemistry C, 2012, 116, 1335-1343.	3.1	5
48	Learning crystal field parameters using convolutional neural networks. SciPost Physics, 2021, 11, .	4.9	2
49	Bilocal quantum criticality. Physical Review Research, 2020, 2, .	3.6	2