

# 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	Photocurrent-driven transient symmetry breaking in the Weyl semimetal TaAs. Nature Materials, 2022, 21, 62-66.	27.5	20
2	Possible unconventional pairing in $\text{Ca}/\text{Mn}$ superconductors reveal. Physical Review B, 2022, 105, .	3.2	19
3	Theory of zero-field superconducting diode effect in twisted trilayer graphene. 2D Materials, 2022, 9, 025027.	4.4	56
4	Orderly disorder in magic-angle twisted trilayer graphene. Science, 2022, 376, 193-199.	12.6	63
5	Moiré nematic phase in twisted double bilayer graphene. Nature Physics, 2022, 18, 196-202.	16.7	51
6	Correlated Insulators, Semimetals, and Superconductivity in Twisted Trilayer Graphene. Physical Review X, 2022, 12, .	8.9	22
7	Mirror symmetry breaking in a model insulating cuprate. Nature Physics, 2021, 17, 777-781.	16.7	24
8	Electric-field-tunable electronic nematic order in twisted double-bilayer graphene. 2D Materials, 2021, 8, 034005.	4.4	23
9	Time-reversal symmetry breaking and multigap superconductivity in the noncentrosymmetric superconductor $\text{LaNi}_7$ . Physical Review B, 2021, 103, .	3.2	19
10	Phonon Hall viscosity from phonon-spinon interactions. Physical Review B, 2021, 104, .	3.2	10
11	Learning crystal field parameters using convolutional neural networks. SciPost Physics, 2021, 11, .	4.9	2
12	Conditional generative models for sampling and phase transition indication in spin systems. SciPost Physics, 2021, 11, .	4.9	11
13	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
14	Time-reversal-symmetry breaking and unconventional pairing in the noncentrosymmetric superconductor $\text{LaRh}_3$ . Physical Review B, 2020, 102, .	3.2	31
15	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
16	Phases of $\text{SU}(2)$ gauge theory with multiple adjoint Higgs fields in $2+1$ dimensions. Physical Review B, 2020, 101, .	3.2	10
17	Unsupervised Machine Learning and Band Topology. Physical Review Letters, 2020, 124, 226401.	7.8	99
18	Gauge theories for the thermal Hall effect. Physical Review B, 2020, 101, .	3.2	10

#	ARTICLE	IF	CITATIONS
19	Electron irradiation effects on superconductivity in $\text{PdTe}$ : An application of a generalized Anderson theorem. <i>Physical Review Research</i> , 2020, 2, .	3.6	25
20	Protection of parity-time symmetry in topological many-body systems: Non-Hermitian toric code and fracton models. <i>Physical Review Research</i> , 2020, 2, .	3.6	23
21	Pairing in graphene-based moiré superlattices. <i>Physical Review Research</i> , 2020, 2, .	3.6	40
22	Effect of Van Hove singularities in the onset of pseudogap states in Mott insulators. <i>Physical Review Research</i> , 2020, 2, .	3.6	6
23	Unquantized thermal Hall effect in quantum spin liquids with spinon Fermi surfaces. <i>Physical Review Research</i> , 2020, 2, .	3.6	11
24	Bilocal quantum criticality. <i>Physical Review Research</i> , 2020, 2, .	3.6	2
25	Spectroscopy of graphene with a magic twist. <i>Nature</i> , 2019, 572, 40-41.	27.8	9
26	Enhanced thermal Hall effect in the square-lattice $\text{d}_{x^2-y^2}$ state. <i>Nature Physics</i> , 2019, 15, 1290-1294.	16.7	32
27	Designing Morphotropic Phase Composition in $\text{BiFeO}_3$ . <i>Nano Letters</i> , 2019, 19, 1033-1038.	9.1	24
28	Thermal Hall effect in square-lattice spin liquids: A Schwinger boson mean-field study. <i>Physical Review B</i> , 2019, 99, .	3.2	31
29	Identifying topological order through unsupervised machine learning. <i>Nature Physics</i> , 2019, 15, 790-795.	16.7	176
30	Gauge theory for the cuprates near optimal doping. <i>Physical Review B</i> , 2019, 99, .	3.2	54
31	Fermi surface reconstruction in electron-doped cuprates without antiferromagnetic long-range order. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 3449-3453.	7.1	32
32	Topological order in the pseudogap metal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E3665-E3672.	7.1	68
33	Orbital currents in insulating and doped antiferromagnets. <i>Physical Review B</i> , 2018, 98, .	3.2	19
34	Friedel oscillations and Majorana zero modes in inhomogeneous superconductors. <i>Physical Review B</i> , 2018, 98, .	3.2	12
35	Pseudogap and Fermi-Surface Topology in the Two-Dimensional Hubbard Model. <i>Physical Review X</i> , 2018, 8, .	8.9	65
36	Hierarchy of information scrambling, thermalization, and hydrodynamic flow in graphene. <i>Physical Review B</i> , 2018, 98, .	3.2	27

#	ARTICLE	IF	CITATIONS
37	Triangular antiferromagnetism on the honeycomb lattice of twisted bilayer graphene. Physical Review B, 2018, 98, .	3.2	122
38	Nodeless superconductivity in the type-II Dirac semimetal $\text{PdTe}_2$ : London penetration depth and pairing-symmetry analysis. Physical Review B, 2018, 98, .	3.2	38
39	Selection rules for Cooper pairing in two-dimensional interfaces and sheets. Npj Quantum Materials, 2017, 2, .	5.2	31
40	Limits on dynamically generated spin-orbit coupling: Absence of instabilities in metals. Physical Review B, 2017, 95, .	3.2	17
41	Intertwining Topological Order and Broken Symmetry in a Theory of Fluctuating Spin-Density Waves. Physical Review Letters, 2017, 119, 227002.	7.8	29
42	Mechanism, time-reversal symmetry, and topology of superconductivity in noncentrosymmetric systems. Physical Review B, 2016, 93, .	3.2	26
43	Pair breaking in multiorbital superconductors: An application to oxide interfaces. Physical Review B, 2015, 92, .	3.2	24
44	Dimensional crossover and cold-atom realization of topological Mott insulators. Scientific Reports, 2015, 5, 8386.	3.3	25
45	Topological superconductivity and unconventional pairing in oxide interfaces. Nature Communications, 2015, 6, 6005.	12.8	96
46	Pair breaking due to orbital magnetism in iron-based superconductors. Physical Review B, 2015, 91, .	3.2	20
47	Anomalous quantum criticality in an itinerant ferromagnet. Nature Communications, 2015, 6, 8188.	12.8	19
48	Nonadiabatic processes in Majorana qubit systems. Physical Review B, 2013, 88, .	3.2	58
49	Damping of Plasmons of Closely Coupled Sphere Chains Due to Disordered Gaps. Journal of Physical Chemistry C, 2012, 116, 1335-1343.	3.1	5