

William Witczak-Krempa

List of Publications by Year in descending order

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Version: 2024-02-01

47
papers

2,618
citations

304743

22
h-index

214800

47
g-index

49
all docs

49
docs citations

49
times ranked

2529
citing authors

#	ARTICLE	IF	CITATIONS
1	Correlated Quantum Phenomena in the Strong Spin-Orbit Regime. Annual Review of Condensed Matter Physics, 2014, 5, 57-82.	14.5	1,020
2	Topological and magnetic phases of interacting electrons in the pyrochlore iridates. Physical Review B, 2012, 85, .	3.2	324
3	Universality of Corner Entanglement in Conformal Field Theories. Physical Review Letters, 2015, 115, 021602.	7.8	128
4	Correlation Effects on 3D Topological Phases: From Bulk to Boundary. Physical Review Letters, 2012, 109, 066401.	7.8	111
5	The dynamics of quantum criticality revealed by quantum Monte Carlo and holography. Nature Physics, 2014, 10, 361-366.	16.7	83
6	Pyrochlore electrons under pressure, heat, and field: Shedding light on the iridates. Physical Review B, 2013, 87, .	3.2	81
7	Conformal field theories at nonzero temperature: Operator product expansions, Monte Carlo, and holography. Physical Review B, 2014, 90, .	3.2	63
8	Universal corner entanglement from twist operators. Journal of High Energy Physics, 2015, 2015, 1.	4.7	63
9	Interacting Weyl Semimetals: Characterization via the Topological Hamiltonian and its Breakdown. Physical Review Letters, 2014, 113, 136402.	7.8	57
10	Quasinormal modes of quantum criticality. Physical Review B, 2012, 86, .	3.2	47
11	Optical Conductivity of Topological Surface States with Emergent Supersymmetry. Physical Review Letters, 2016, 116, 100402.	7.8	41
12	Entanglement entropy of large- N Wilson-Fisher conformal field theory. Physical Review B, 2017, 95, .	3.2	39
13	Gauge field fluctuations in three-dimensional topological Mott insulators. Physical Review B, 2010, 82, .	3.2	37
14	Universal transport near a quantum critical Mott transition in two dimensions. Physical Review B, 2012, 86, .	3.2	37
15	Quantum critical charge response from higher derivatives in holography. Physical Review B, 2014, 89, .	3.2	32
16	Bounds on corner entanglement in quantum critical states. Physical Review B, 2016, 93, .	3.2	31
17	Gapless quantum spin chains: multiple dynamics and conformal wavefunctions. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 464002.	2.1	30
18	Entanglement signatures of emergent Dirac fermions: Kagome spin liquid and quantum criticality. Science Advances, 2018, 4, eaat5535.	10.3	30

#	ARTICLE	IF	CITATIONS
19	Dispersing quasinormal modes in (2+1)-dimensional conformal field theories. Physical Review B, 2013, 87, .	3.2	28
20	Universal corner entanglement of Dirac fermions and gapless bosons from the continuum to the lattice. Physical Review B, 2016, 94, .	3.2	25
21	Transition from a Dirac spin liquid to an antiferromagnet: Monopoles in a $3+1$ -dimensional $U(1)$ QED in Gross-Neveu theory. Physical Review B, 2019, 100, .	3.2	25
22	Quantum spin chains with multiple dynamics. Physical Review B, 2017, 96, .	3.2	23
23	Generalizing the entanglement entropy of singular regions in conformal field theories. Journal of High Energy Physics, 2019, 2019, 1.	4.7	21
24	Two-cylinder entanglement entropy under a twist. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 043104.	2.3	20
25	Quantum critical response: from conformal perturbation theory to holography. Journal of High Energy Physics, 2017, 2017, 1.	4.7	19
26	A holographic model for quantum critical responses. Journal of High Energy Physics, 2016, 2016, 1.	4.7	18
27	Constraining Quantum Critical Dynamics: $(2+1)$ -Dimensional Sing Model and Beyond. Physical Review Letters, 2015, 114, 177201.	7.8	15
28	Cornering Gapless Quantum States via Their Torus Entanglement. Physical Review Letters, 2017, 118, 077202.	7.8	14
29	Dynamical Response near Quantum Critical Points. Physical Review Letters, 2017, 118, 056601.	7.8	14
30	Dielectric and electronic properties of three-dimensional Luttinger semimetals with a quadratic band touching. Physical Review B, 2019, 100, .	3.2	14
31	Fractionalized conductivity and emergent self-duality near topological phase transitions. Nature Communications, 2021, 12, 5347.	12.8	14
32	Cornering the universal shape of fluctuations. Nature Communications, 2022, 13, 287.	12.8	14
33	Relating bulk to boundary entanglement. Physical Review B, 2019, 100, .	3.2	13
34	Addendum to: A holographic model for quantum critical responses. Journal of High Energy Physics, 2016, 2016, 1.	4.7	12
35	Superconductivity from Coulomb repulsion in three-dimensional quadratic band touching Luttinger semimetals. Physical Review Research, 2020, 2, .	3.6	11
36	Nonequilibrium quantum criticality in bilayer itinerant ferromagnets. Physical Review B, 2010, 81, .	3.2	10

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37	Geometric entanglement in integer quantum Hall states. Physical Review B, 2021, 103, .	3.2	9
38	Holographic torus entanglement and its renormalization group flow. Physical Review D, 2017, 95, .	4.7	8
39	Entanglement susceptibilities and universal geometric entanglement entropy. Physical Review B, 2019, 99, .	3.2	8
40	Monopole hierarchy in transitions out of a Dirac spin liquid. Annals of Physics, 2021, 435, 168496.	2.8	8
41	Entanglement of Skeletal Regions. Physical Review Letters, 2022, 128, .	7.8	6
42	Modeling multiorbital effects in Sr_2RuO_4 under strain and a Zeeman field. Physical Review B, 2021, 103, .	2.2	1
43	Geometric entanglement in the integer quantum Hall state at $\nu=1$ with boundaries. Physical Review B, 2020, 102, .	3.2	3
44	Universal entanglement of singular surfaces. Fortschritte Der Physik, 2016, 64, 345-348.	4.4	1
45	Impurities in three-dimensional quadratic band-touching Luttinger semimetals: Friedel and RKKY oscillations. Physical Review B, 2020, 102, .	3.2	1
46	Excitations and ergodicity of critical quantum spin chains from non-equilibrium classical dynamics. SciPost Physics Core, 2022, 5, .	2.8	1
47	Interplay of Coulomb Repulsion and Spin-Orbit Coupling in Superconducting 3D Quadratic Band Touching Luttinger Semimetals. , 2021, , 359-367.		0