Bitan Roy

List of Publications by Year in Descending Order

71 papers	2,017 citations	27 h-index	42 g-index
80 ext. papers	2,603 ext. citations	3.9 avg, IF	6.13 L-index

#	Paper	IF	Citations
71	Metals, fractional metals, and superconductivity in rhombohedral trilayer graphene. *Physical Review B*, **2022**, 105,	3.3	2
70	Hierarchy of higher-order Floquet topological phases in three dimensions. *Physical Review B*, **2021**, 103,	3.3	6
69	Topolectric circuits: Theory and construction. *Physical Review Research*, **2021**, 3,	3.9	8
68	Interacting spin-32 fermions in a Luttinger semimetal: Competing phases and their selection in the global phase diagram. *Physical Review B*, **2021**, 103,	3.3	3
67	Extended Hubbard model in undoped and doped monolayer and bilayer graphene: Selection rules and organizing principle among competing orders. *Physical Review B*, **2021**, 103,	3.3	7
66	Emergent chiral symmetry in a three-dimensional interacting Dirac liquid. *Journal of High Energy Physics*, **2021**, 2021, 1	5.4	3
65	Dislocation as a bulk probe of higher-order topological insulators. *Physical Review Research*, **2021**, 3,	3.9	4
64	Anomalous and normal dislocation modes in Floquet topological insulators. *Communications Physics* , **2021**, 4,	5.4	3
63	Higher-order topological superconductors in P-, T-odd quadrupolar Dirac materials. *Physical Review B*, **2020**, 101,	3.3	9
62	Strain-engineered higher-order topological phases for spin-32 Luttinger fermions. *Physical Review B* , **2020**, 101,	3.3	10
61	Relativistic non-Fermi liquid from interacting birefringent fermions: A robust superuniversality. *Physical Review Research*, **2020**, 2,	3.9	2
60	Higher-order topological insulators in amorphous solids. *Physical Review Research*, **2020**, 2,	3.9	42
59	Non-Abelian anomalies in multi-Weyl semimetals. *Physical Review Research*, **2020**, 2,	3.9	14
58	Dirty higher-order Dirac semimetal: Quantum criticality and bulk-boundary correspondence. *Physical Review Research*, **2020**, 2,	3.9	11
57	Shear viscosity as a probe of nodal topology. *Physical Review B*, **2020**, 101,	3.3	3
56	Fermionic multicriticality near Kekul valence-bond ordering on a honeycomb lattice. *Physical Review B*, **2019**, 99,	3.3	10
55	Unconventional superconductivity in nearly flat bands in twisted bilayer graphene. *Physical Review B*, **2019**, 99,	3.3	100

54	Out of equilibrium higher-order topological insulator: Floquet engineering and quench dynamics. *Physical Review Research*, **2019**, 1,	3.9	24
53	Antiunitary symmetry protected higher-order topological phases. *Physical Review Research*, **2019**, 1,	3.9	19
52	Topological superconductivity of spin-3/2 carriers in a three-dimensional doped Luttinger semimetal. *Physical Review B*, **2019**, 99,	3.3	39
51	Unifying Interacting Nodal Semimetals: A New Route to Strong Coupling. *Physical Review Letters*, **2019**, 123, 207601	7.4	10
50	Generalized triple-component fermions: Lattice model, Fermi arcs, and anomalous transport. *Physical Review B*, **2019**, 100,	3.3	7
49	Higher-order topological phases: A general principle of construction. *Physical Review B*, **2019**, 99,	3.3	97
48	Quantum Multicriticality near the Dirac-Semimetal to Band-Insulator Critical Point in Two Dimensions: A Controlled Ascent from One Dimension. *Physical Review X*, **2018**, 8,	9.1	26
47	Magnetotransport in multi-Weyl semimetals: a kinetic theory approach. *Journal of High Energy Physics*, **2018**, 2018, 1	5.4	21
46	Global Phase Diagram of a Dirty Weyl Liquid and Emergent Superuniversality. *Physical Review X*, **2018**, 8,	9.1	31
45	Collisionless Transport Close to a Fermionic Quantum Critical Point in Dirac Materials. *Physical Review Letters*, **2018**, 121, 137601	7.4	6
44	From Birefringent Electrons to a Marginal or Non-Fermi Liquid of Relativistic Spin-1/2 Fermions: An Emergent Superuniversality. *Physical Review Letters*, **2018**, 121, 157602	7.4	17
43	Itinerant quantum multicriticality of two-dimensional Dirac fermions. *Physical Review B*, **2018**, 97,	3.3	10
42	Competing orders and topology in the global phase diagram of pyrochlore iridates. *Physical Review B*, **2017**, 95,	3.3	37
41	Dissolution of topological Fermi arcs in a dirty Weyl semimetal. *Physical Review B*, **2017**, 96,	3.3	34
40	Optical conductivity of an interacting Weyl liquid in the collisionless regime. *Physical Review B*, **2017**, 96,	3.3	8
39	Interacting nodal-line semimetal: Proximity effect and spontaneous symmetry breaking. *Physical Review B*, **2017**, 96,	3.3	45
38	Global Phase Diagram of a Three-Dimensional Dirty Topological Superconductor. *Physical Review Letters*, **2017**, 118, 227002	7.4	12
37	Interacting Weyl fermions: Phases, phase transitions, and global phase diagram. *Physical Review B*, **2017**, 95,	3.3	72

36	Weyl fermions with arbitrary monopoles in magnetic fields: Landau levels, longitudinal magnetotransport, and density-wave ordering. *Physical Review B*, **2016**, 94,	3.3	28
35	Half vortex and fractional electrical charge in two dimensions. *Physical Review B*, **2016**, 93,	3.3	1
34	Continuous and discontinuous topological quantum phase transitions. *Physical Review B*, **2016**, 94,	3.3	31
33	Dirty Weyl semimetals: Stability, phase transition, and quantum criticality. *Physical Review B*, **2016**, 93,	3.3	76
32	Emergent Lorentz symmetry near fermionic quantum critical points in two and three dimensions. *Journal of High Energy Physics*, **2016**, 2016, 1-19	5.4	38
31	Universal optical conductivity of a disordered Weyl semimetal. *Scientific Reports*, **2016**, 6, 32446	4.9	51
30	Ferromagnetism and glassiness on the surface of topological insulators. *Physical Review B*, **2016**, 94,	3.3	5
29	Quantum phases of interacting electrons in three-dimensional dirty Dirac semimetals. *Physical Review B*, **2016**, 94,	3.3	36
28	Emergent Lorentz symmetry near fermionic quantum critical points in two and three dimensions **2016**, 2016, 1		1
27	Magnetic catalysis and axionic charge density wave in Weyl semimetals. *Physical Review B*, **2015**, 92,	3.3	60
26	Spontaneous symmetry breaking and quantum Hall valley ordering on the surface of topological hexaborides. *Physical Review B*, **2015**, 92,	3.3	4
25	Excitonic and nematic instabilities on the surface of topological Kondo insulators. *Physical Review B* , **2015**, 92,	3.3	14
24	Theory of integer quantum Hall effect in insulating bilayer graphene. *Physical Review B*, **2014**, 89,	3.3	14
23	Competing charge-density wave, magnetic, and topological ground states at and near Dirac points in graphene in axial magnetic fields. *Physical Review B*, **2014**, 90,	3.3	6
22	Zero Modes and Global Antiferromagnetism in Strained Graphene. *Physical Review X*, **2014**, 4,	9.1	18
21	Z2 index for gapless fermionic modes in the vortex core of three-dimensional paired Dirac fermions. *Physical Review B*, **2014**, 89,	3.3	10
20	Diffusive quantum criticality in three-dimensional disordered Dirac semimetals. *Physical Review B*, **2014**, 90,	3.3	65
19	Strain-induced time-reversal odd superconductivity in graphene. *Physical Review B*, **2014**, 90,	3.3	39

18	Axionic superconductivity in three-dimensional doped narrow-gap semiconductors. *Physical Review B*, **2014**, 90,	3.3	34
17	Surface theory of a family of topological Kondo insulators. *Physical Review B*, **2014**, 90,	3.3	44
16	Migdal's theorem and electron-phonon vertex corrections in Dirac materials. *Physical Review B*, **2014**, 89,	3.3	22
15	Chiral symmetry breaking and the quantum Hall effect in monolayer graphene. *Physical Review B*, **2014**, 90,	3.3	38
14	Topological insulators in strained graphene at weak interaction. *Physical Review B*, **2013**, 88,	3.3	25
13	Classification of massive and gapless phases in bilayer graphene. *Physical Review B*, **2013**, 88,	3.3	18
12	Bilayer graphene with parallel magnetic field and twisting: Phases and phase transitions in a highly tunable Dirac system. *Physical Review B*, **2013**, 88,	3.3	18
11	Quantum superconducting criticality in graphene and topological insulators. *Physical Review B*, **2013**, 87,	3.3	61
10	Theory of unconventional quantum Hall effect in strained graphene. *Physical Review B*, **2013**, 87,	3.3	36
9	Magnetic-field induced inequivalent vortex zero modes in strained graphene. *Physical Review B*, **2012**, 85,	3.3	15
8	Conserved charges of order-parameter textures in Dirac systems. *Physical Review B*, **2012**, 86,	3.3	6
7	Asymmetric spatial structure of zero modes for birefringent Dirac fermions. *Physical Review B*, **2012**, 85,	3.3	15
6	Multicritical behavior of Z2⊕O(2) Gross-Neveu-Yukawa theory in graphene. *Physical Review B*, **2011**, 84,	3.3	33
5	Odd integer quantum Hall effect in graphene. *Physical Review B*, **2011**, 84,	3.3	22
4	Inhomogeneous magnetic catalysis on graphene□ honeycomb lattice. *Physical Review B*, **2011**, 83,	3.3	22
3	Unconventional superconductivity on honeycomb lattice: Theory of Kekule order parameter. *Physical Review B*, **2010**, 82,	3.3	102
2	Theory of interacting electrons on the honeycomb lattice. *Physical Review B*, **2009**, 79,	3.3	201
1	Quantum critical scaling in magnetic field near the Dirac point in graphene. *Physical Review B*, **2008**, 77,	3.3	27