

Jainendra Jain

List of Publications by Year in descending order

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123
papers

7,924
citations

94433

37
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56724

83
g-index

124
all docs

124
docs citations

124
times ranked

2481
citing authors

#	ARTICLE	IF	CITATIONS
1	Composite-fermion approach for the fractional quantum Hall effect. Physical Review Letters, 1989, 63, 199-202.	7.8	1,996
2	Theory of the fractional quantum Hall effect. Physical Review B, 1990, 41, 7653-7665.	3.2	485
3	Incompressible quantum Hall states. Physical Review B, 1989, 40, 8079-8082.	3.2	337
4	Detection of composite fermions by magnetic focusing. Physical Review Letters, 1994, 72, 2065-2068.	7.8	258
5	Evidence for electron-electron interaction in topological insulator thin films. Physical Review B, 2011, 83, .	3.2	244
6	Composite Fermions in the Hilbert Space of the Lowest Electronic Landau Level. International Journal of Modern Physics B, 1997, 11, 2621-2660.	2.0	194
7	Quantitative study of large composite-fermion systems. Physical Review B, 1997, 55, R4895-R4898.	3.2	178
8	Mixed-spin incompressible states in the fractional quantum Hall effect. Physical Review Letters, 1993, 71, 153-156.	7.8	138
9	Phase Diagram of the Spin Polarization of Composite Fermions and a New Effective Mass. Physical Review Letters, 1998, 80, 4237-4240.	7.8	135
10	Fractional quantum Hall effect in graphene. Physical Review B, 2006, 74, .	3.2	127
11	Band structure of the fractional quantum Hall effect. Physical Review Letters, 1992, 69, 2843-2846.	7.8	123
12	Zero-Field Dissipationless Chiral Edge Transport and the Nature of Dissipation in the Quantum Anomalous Hall State. Physical Review Letters, 2015, 115, 057206.	7.8	107
13	Cooper instability of composite fermions. Nature, 2000, 406, 863-865.	27.8	91
14	Scaling theory of the fractional quantum Hall effect. Physical Review Letters, 1990, 64, 1297-1300.	7.8	90
15	Composite Fermions in Quantum Dots. Europhysics Letters, 1995, 29, 321-326.	2.0	86
16	Possibility of p-wave pairing of composite fermions at $\nu=1/2$. Physical Review B, 1998, 58, R10167-R10170.	3.2	85
17	Theoretical search for the nested quantum Hall effect of composite fermions. Physical Review B, 2002, 66, .	3.2	82
18	Composite fermionization of bosons in rapidly rotating atomic traps. Physical Review A, 2005, 72, .	2.5	78

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19	Even denominator fractional quantum Hall states in higher Landau levels of graphene. Nature Physics, 2019, 15, 154-158.	16.7	76
20	Rotons of composite fermions: Comparison between theory and experiment. Physical Review B, 2000, 61, 13064-13072.	3.2	68
21	SU(4) composite fermions in graphene: Fractional quantum Hall states without analog in GaAs. Physical Review B, 2007, 75, .	3.2	68
22	Stripe Formation in the Fractional Quantum Hall Regime. Physical Review Letters, 2001, 87, 256803.	7.8	66
23	Nature of composite fermions and the role of particle-hole symmetry: A microscopic account. Physical Review B, 2016, 93, .	3.2	55
24	Fractional quantum Hall effect in graphene: Quantitative comparison between theory and experiment. Physical Review B, 2015, 92, .	3.2	53
25	Observation of the Quantum Anomalous Hall Insulator to Anderson Insulator Quantum Phase Transition and its Scaling Behavior. Physical Review Letters, 2016, 117, 126802.	7.8	52
26	Composite-fermion wave functions as correlators in conformal field theory. Physical Review B, 2007, 76, .	3.2	51
27	Fractional Quantum Hall Effects. , 2020, , .		49
28	Non-Abelian Parton Fractional Quantum Hall Effect in Multilayer Graphene. Nano Letters, 2017, 17, 4643-4647.	9.1	47
29	Role of Exciton Screening in the $7/3$ Fractional Quantum Hall Effect. Physical Review Letters, 2013, 110, 186801.	7.8	46
30	Luttinger Theorem for the Strongly Correlated Fermi Liquid of Composite Fermions. Physical Review Letters, 2015, 115, 186805.	7.8	46
31	Phase diagram of bilayer composite fermion states. Physical Review B, 2001, 64, .	3.2	42
32	Possible Pairing-Induced Even-Denominator Fractional Quantum Hall Effect in the Lowest Landau Level. Physical Review Letters, 2002, 88, 216804.	7.8	42
33	Microscopic Verification of Topological Electron-Vortex Binding in the Lowest Landau-Level Crystal State. Physical Review Letters, 2005, 94, 016809.	7.8	42
34	Enigmatic $\langle \mathbb{Z}_4 \rangle$ State: A Prototype for Unconventional Fractional Quantum Hall Effect. Physical Review Letters, 2014, 112, 016801.	7.8	42
35	Adiabatic continuity between Hofstadter and Chern insulator states. Physical Review B, 2012, 86, .	3.2	40
36	Fractional Statistics in the Fractional Quantum Hall Effect. Physical Review Letters, 2003, 91, 036801.	7.8	38

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37	Fermi-sea-like correlations in a partially filled Landau level. Physical Review B, 1997, 56, 12411-12416.	3.2	37
38	Quantum Monte Carlo study of composite fermions in quantum dots: The effect of Landau-level mixing. Physical Review B, 2005, 72, .	3.2	37
39	Prediction of a Non-Abelian Fractional Quantum Hall State with $\nu = \frac{1}{2}$ -Wave Pairing of Composite Fermions in Wide Quantum Wells. Physical Review Letters, 2019, 123, 016802.	7.8	37
40	Bipartite Composite Fermion States. Physical Review Letters, 2011, 107, 086806.	7.8	36
41	Competing Crystal Phases in the Lowest Landau Level. Physical Review Letters, 2013, 111, 146804.	7.8	36
42	Composite fermion theory of correlated electrons in semiconductor quantum dots in high magnetic fields. Physical Review B, 2004, 69, .	3.2	35
43	Beyond the Fermi liquid paradigm: Hidden Fermi liquids. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9131-9134.	7.1	34
44	Fractional Angular Momentum in Cold-Atom Systems. Physical Review Letters, 2014, 113, 160404.	7.8	34
45	Phase diagram of fractional quantum Hall effect of composite fermions in multicomponent systems. Physical Review B, 2015, 91, .	3.2	34
46	Coherent oscillations and giant edge magnetoresistance in singly connected topological insulators. Physical Review B, 2009, 80, .	3.2	32
47	Spontaneous polarization of composite fermions in the $\nu = \frac{1}{2}$ level of graphene. Physical Review B, 2015, 92, .	3.2	32
48	Unpaired Composite Fermion, Topological Exciton, and Zero Mode. Physical Review Letters, 2011, 107, 136802.	7.8	31
49	State counting for excited bands of the fractional quantum Hall effect: Exclusion rules for bound excitons. Physical Review B, 2013, 88, .	3.2	31
50	Spin polarization of composite fermions and particle-hole symmetry breaking. Physical Review B, 2014, 90, .	3.2	31
51	Activation gaps for the fractional quantum Hall effect: realistic treatment of transverse thickness. Journal of Physics Condensed Matter, 1999, 11, 7283-7299.	1.8	30
52	Spontaneous Magnetization of Composite Fermions. Physical Review Letters, 1999, 83, 5543-5546.	7.8	29
53	Crystallization in the Fractional Quantum Hall Regime Induced by Landau-Level Mixing. Physical Review Letters, 2018, 121, 116802.	7.8	29
54	Possible Anti-Pfaffian Pairing of Composite Fermions at $\nu = \frac{1}{2}$. Physical Review Letters, 2012, 109, 256801.	7.8	28

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55	A note contrasting two microscopic theories of the fractional quantum Hall effect. Indian Journal of Physics, 2014, 88, 915-929.	1.8	28
56	Composite Fermion Theory of Exotic Fractional Quantum Hall Effect. Annual Review of Condensed Matter Physics, 2015, 6, 39-62.	14.5	28
57	Inter-Landau-level Andreev Reflection at the Dirac Point in a Graphene Quantum Hall State Coupled to a NbSe_2 Superconductor. Physical Review Letters, 2018, 121, 086809.	7.8	27
58	Collective excitations of composite fermions across multiple $\hat{\nu}$ levels. Nature Physics, 2009, 5, 403-406.	16.7	26
59	Nature of the extended states in the fractional quantum Hall effect. Physical Review Letters, 1990, 65, 907-910.	7.8	25
60	Two-Dimensional Electron System in High Magnetic Fields: Wigner Crystal versus Composite-Fermion Liquid. Physical Review Letters, 2003, 90, 106403.	7.8	25
61	Creating and manipulating non-Abelian anyons in cold atom systems using auxiliary bosons. Physical Review B, 2015, 92, .	3.2	25
62	Landau-Level Mixing and Particle-Hole Symmetry Breaking for Spin Transitions in the Fractional Quantum Hall Effect. Physical Review Letters, 2016, 117, 116803.	7.8	25
63	Fractional Quantum Hall Effect at $\hat{\nu} = 1/2$: The Parton Paradigm for the Second Landau Level. Physical Review Letters, 2018, 121, 186601.	7.8	25
64	Fermi wave vector for the partially spin-polarized composite-fermion Fermi sea. Physical Review B, 2017, 96, .	3.2	24
65	Composite-fermion crystallites in quantum dots. Journal of Physics Condensed Matter, 2004, 16, L271-L277.	1.8	23
66	superconductivity of composite bosons and the fractional quantum Hall effect. Physical Review Research, 2020, 2, .	3.6	23
67	Fractional quantum Hall edge: Effect of nonlinear dispersion and edge roton. Physical Review B, 2010, 82, .	3.2	22
68	Composite fermions on a torus. Physical Review B, 2017, 96, .	3.2	21
69	Berry phases for composite fermions: Effective magnetic field and fractional statistics. Physical Review B, 2004, 70, .	3.2	20
70	Change in the character of quasiparticles without gap collapse in a model of fractional quantum Hall effect. Physical Review B, 2009, 80, .	3.2	20
71	Semiconductor quantum dots in high magnetic fields. European Physical Journal B, 2007, 55, 271-282.	1.5	19
72	Phase diagram for bilayer quantum Hall effect at total filling $\hat{\nu} = 1/2$. Physical Review B, 2008, 77, .	3.2	18

#	ARTICLE	IF	CITATIONS
73	Tripartite composite fermion states. Physical Review B, 2013, 87, .	3.2	18
74	Fractional topological phases in generalized Hofstadter bands with arbitrary Chern numbers. Physical Review B, 2015, 91, .	3.2	18
75	Robustness of topological surface states against strong disorder observed in $B_{i2}T_e3$ nanotubes.	3.2	18
76	Competition between composite-fermion-crystal and liquid orders at $\nu=1/2=1\cdot5$. Physical Review B, 2006, 73, .	3.2	17
77	Theoretical study of even denominator fractions in graphene: Fermi sea versus paired states of composite fermions. Physical Review B, 2007, 76, .	3.2	17
78	Composite fermion solid and liquid states in two component quantum dots. Physical Review B, 2007, 75, .	3.2	16
79	Surprising robustness of particle-hole symmetry for composite-fermion liquids. Physical Review B, 2017, 96, .	3.2	16
80	Bloch ferromagnetism of composite fermions. Nature Physics, 2021, 17, 48-52.	16.7	16
81	Half-integral spin-singlet quantum Hall effect. Physical Review B, 1993, 48, 15245-15249.	3.2	15
82	Excitonic instability and termination of fractional quantum Hall effect. Physical Review B, 1997, 55, R13417-R13420.	3.2	15
83	Search for exact local Hamiltonians for general fractional quantum Hall states. Physical Review B, 2018, 98, .	3.2	15
84	Unconventional Z_n parton states at $\nu=1/2$: Role of finite width. Physical Review B, 2021, 103, .	3.2	15
85	Non-Abelian fractional quantum Hall state at $3/7$ -filled Landau level. Physical Review Research, 2020, 2, .	3.6	15
86	Possible realization of a chiral p-wave paired state in a two-component system. Physical Review B, 2014, 90, .	3.2	14
87	Particle-hole symmetry for composite fermions: An emergent symmetry in the fractional quantum Hall effect. Physical Review B, 2017, 96, .	3.2	14
88	The enigma of the $\nu=1/2$ quantum Hall effect. Physical Review B, 2017, 95, .	3.2	14
89	Resonant Tunneling in the Fractional Quantum Hall Effect: Superperiods and Braiding Statistics. Physical Review Letters, 2006, 96, 136802.	7.8	12
90	Phase Diagram of the Two-Component Fractional Quantum Hall Effect. Physical Review Letters, 2013, 110, 246801.	7.8	12

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91	Berry phase of the composite-fermion Fermi sea: Effect of Landau-level mixing. Physical Review B, 2018, 98, .	3.2	12
92	Interplay between fractional quantum Hall liquid and crystal phases at low filling. Physical Review B, 2020, 102, .	3.2	12
93	COMPOSITE FERMIONS: PARTICLES OF THE LOWEST LANDAU LEVEL. , 1998, , 1-90.		11
94	Emergent Fermi sea in a system of interacting bosons. Physical Review A, 2015, 91, .	2.5	11
95	Thermodynamic behavior of braiding statistics for certain fractional quantum Hall quasiparticles. Physical Review B, 2010, 81, .	3.2	10
96	Fractionally charged skyrmions in fractional quantum Hall effect. Nature Communications, 2015, 6, 8981.	12.8	10
97	Composite-fermion antiparticle description of the hole excitation in a maximum-density droplet with a small number of electrons. Physical Review B, 2005, 72, .	3.2	9
98	States of interacting composite fermions at the Landau level filling $\hat{\nu} = 2 + 3/8$. Physical Review B, 2008, 77, .	3.2	9
99	Microscopic study of the fractional quantum Hall edge. Physical Review B, 2011, 84, .	3.2	9
100	Origin of the $\nu = 1/2$ fractional quantum Hall effect in wide quantum wells. Physical Review B, 2021, 103, .	3.2	9
101	Possible persistence of fractional quantum Hall effect down to ultralow fillings. Physical Review B, 2003, 68, .	3.2	8
102	Kohn-Sham Theory of the Fractional Quantum Hall Effect. Physical Review Letters, 2019, 123, 176802.	7.8	8
103	Density-Functional Theory of the Fractional Quantum Hall Effect. Physical Review Letters, 2017, 118, 196802.	7.8	7
104	Topological superconductivity in Landau levels. Physical Review B, 2019, 99, .	3.2	7
105	Theoretical phase diagram of two-component composite fermions in double-layer graphene. Physical Review B, 2020, 101, .	3.2	7
106	Composite anyons on a torus. Physical Review B, 2021, 104, .	3.2	7
107	Hall viscosity of composite fermions. Physical Review Research, 2020, 2, .	3.6	7
108	Reconstructing the Electron in a Fractionalized Quantum Fluid. Physical Review Letters, 2005, 94, 186808.	7.8	6

#	ARTICLE	IF	CITATIONS
109	Exactly Solvable Model for Strongly Interacting Electrons in a Magnetic Field. Physical Review Letters, 2021, 126, 136601.	7.8	6
110	Theoretical study of the stability of the fractional quantum Hall effect in higher Landau levels. Physical Review B, 2000, 62, R4802-R4804.	3.2	5
111	Analytical theory of strongly correlated Wigner crystals in the lowest Landau level. Physical Review B, 2015, 92, .	3.2	5
112	Exotic bilayer crystals in a strong magnetic field. Physical Review B, 2018, 97, .	3.2	5
113	Kohn-Sham density functional theory of Abelian anyons. Physical Review B, 2021, 103, .	3.2	5
114	Bardeen-Cooper-Schrieffer pairing of composite fermions. Physical Review B, 2021, 104, .	3.2	5
115	Anderson Localization in the Fractional Quantum Hall Effect. Physical Review Letters, 2022, 128, 116801.	7.8	5
116	Phase diagram of superconductivity in the integer quantum Hall regime. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	5
117	Next-level composite fermions. Nature Physics, 2019, 15, 883-884.	16.7	4
118	Thirty Years of Composite Fermions and Beyond. , 2020, , 1-78.		3
119	Revisiting excitation gaps in the fractional quantum Hall effect. Physical Review B, 2022, 105, .	3.2	3
120	Composite Fermions. , 0, , 265-305.		2
121	POSSIBLE NEW PHASES OF COMPOSITE FERMIONS. International Journal of Modern Physics B, 2002, 16, 2946-2951.	2.0	0
122	Crystalline solutions of the Kohn-Sham equations in the fractional quantum Hall regime. Physical Review B, 2021, 104, .	3.2	0
123	POSSIBLE NEW PHASES OF COMPOSITE FERMIONS. , 2002, , .		0