

PUBLICATIONS OF EDUARDO FRADKIN

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1. Eduardo Fradkin and Tomas P. Eggarter, *Ising model with several phase transitions*, Physical Review A **14**, 495 (1976), doi:<http://dx.doi.org/10.1103/PhysRevA.14.495>.
2. Eduardo Fradkin and Leonard Susskind, *Order and disorder in gauge systems and magnets*, Physical Review D **17**, 2637 (1978), doi:<http://dx.doi.org/10.1103/PhysRevD.17.2637>.
3. Eduardo Fradkin, Bernardo A. Huberman and Stephen H. Shenker, *Gauge symmetries in random magnetic systems*, Physical Review B **18**, 4789 (1978), doi:<http://dx.doi.org/10.1103/PhysRevB.18.4789>.
4. Eduardo Fradkin and Stephen H. Shenker, *Phase diagrams of lattice gauge theories with Higgs fields*, Physical Review D **19**, 3682 (1979), <https://doi.org/10.1103/PhysRevD.19.3682>.
5. Eduardo Fradkin and Stuart Raby, *Real space renormalization group scheme for spin and gauge systems*, Physical Review D **20**, 2566 (1979), <https://doi.org/10.1103/PhysRevD.20.2566>.
6. Eduardo Fradkin, *Phase transitions in spin and gauge systems*, Ph. D. Thesis, Stanford University (1979) (unpublished).
7. Eduardo Fradkin, Mark Srednicki and Leonard Susskind, *Fermion representations for the \mathbb{Z}_2 lattice gauge theory in 2+1 dimensions*, Physical Review D **21**, 2885 (1980), <https://doi.org/10.1103/PhysRevD.21.2885>.
8. Eduardo Fradkin and Leo P. Kadanoff, *Disorder variables and parafermions in two dimensional statistical mechanics*, Nuclear Physics **170** [FS 1], 1, (1980), [https://doi.org/10.1016/0550-3213\(80\)90472-1](https://doi.org/10.1016/0550-3213(80)90472-1).
9. Gabor Forgacs and Eduardo Fradkin, *Anisotropy and marginality in the two dimensional fully frustrated Ising model*, Physical Review B **23**, 3442 (1981), <https://doi.org/10.1103/PhysRevB.23.3442>.
10. Eduardo Fradkin, Oscar Hernandez, Bernardo Huberman and Rahul Pandit, *Commensurate, incommensurate and chaotic states in a statistical mechanical system*, Nuclear Physics **215** [FS], 137, (1983), [https://doi.org/10.1016/0550-3213\(83\)90211-0](https://doi.org/10.1016/0550-3213(83)90211-0).

11. Eduardo Fradkin and Jorge E. Hirsch, *Effect of quantum fluctuations on the Peierls Instability: A Monte-Carlo study*, Physical Review Letters **49**, 402 (1982), <https://doi.org/10.1103/PhysRevLett.49.402>.
12. Eduardo Fradkin and Jorge E. Hirsch, *Phase diagram of one-dimensional electron-phonon systems. I: The SSH model*, Physical Review B **27**, 1680 (1983), <https://doi.org/10.1103/PhysRevB.27.1680>.
13. Jorge E. Hirsch and Eduardo Fradkin, *Phase diagram of one-dimensional electron-phonon systems. II: The molecular crystal model*, Physical Review B **27**, 4302 (1983), <https://doi.org/10.1103/PhysRevB.27.4302>.
14. Michael Ma and Eduardo Fradkin, *Localization and interactions in a disordered electron gas*, Physical Review B **28**, 2990 (1983), <https://doi.org/10.1103/PhysRevB.28.2990>.
15. Eduardo Fradkin, *Roughening transition in quantum interfaces*, Physical Review B **28** [RC], 5338 (1983), <https://doi.org/10.1103/PhysRevB.28.5338>.
16. Eduardo Fradkin, *Localization and interactions in a disordered electron gas*, in *Methods in Field Theory, École d'Été de Physique Théorique* (Les Houches, 1982), ed. J. B. Zuber and R. Stora, North-Holland, Amsterdam (1984).
17. Eduardo Fradkin, *The N-color Ashkin-Teller Model in two dimensions: Solution in the large-N limit*, Physical Review Letters **53**, 1967 (1984), <https://doi.org/10.1103/PhysRevLett.53.1967>.
18. Matthew P. A. Fisher and Eduardo Fradkin, *Localization in a magnetic field: Tight binding model with one-half of a flux quantum per plaquette*, Nuclear Physics **241** [FS 13], 457, (1985), [https://doi.org/10.1016/0550-3213\(85\)90272-X](https://doi.org/10.1016/0550-3213(85)90272-X).
19. Eduardo Fradkin, *Critical behavior of disordered degenerate semiconductors, I: Models, symmetries and formalism*, Physical Review B **33**, 3257 (1986), <https://doi.org/10.1103/PhysRevB.33.3257>.
20. Eduardo Fradkin, *Critical behavior of disordered degenerate semiconductors, II: Spectrum and transport properties in mean-field-theory*, Physical Review B **33**, 3263 (1986), <https://doi.org/10.1103/PhysRevB.33.3263>.
21. Michael Ma and Eduardo Fradkin, *Superconductivity and localization in the presence of strong spin-orbit scattering*, Physical Review Letters **56**, 1416 (1986), <https://doi.org/10.1103/PhysRevLett.56.1416>.
22. Eduardo Fradkin, Elbio Dagotto and Adriana Moreo, *A comment on the Nielsen-Ninomiya Theorem*, Physics Letters B **172**, 383 (1986), [doi:https://doi.org/10.1016/0370-2693\(86\)90274-1](https://doi.org/10.1016/0370-2693(86)90274-1).

23. Eduardo Fradkin, Paul Goldbart and Oliver Martin, *Gauge invariant spin glasses*, Physical Review B **34**, 301 (1986), <https://doi.org/10.1103/PhysRevB.34.301>.
24. David Withoff and Eduardo Fradkin, *Magnetization of the Coqblin-Schrieffer model in the large- N limit at near-zero field*, Physical Review B **34** [RC], 8172 (1986), <https://doi.org/10.1103/PhysRevB.34.8172>.
25. Avinash Singh and Eduardo Fradkin, *Localization and correlation effects in itinerant ferromagnets*, Physical Review B **35**, 6894 (1987), <https://doi.org/10.1103/PhysRevB.35.6894>.
26. Eduardo Fradkin, Elbio Dagotto and Daniel Boyanovsky, *Physical realization of the Parity Anomaly in Condensed Matter Physics*, Physical Review Letters **57**, 2967 (1986); Erratum, Physical Review Letters **58**, 961 (1987), <https://doi.org/10.1103/PhysRevLett.57.2967>.
27. Daniel Boyanovsky, Elbio Dagotto and Eduardo Fradkin, *Anomalous currents, induced charge and bound states on a domain wall of a semiconductor*, Nuclear Physics **285** [FS 9], 340, (1987), [https://doi.org/10.1016/0550-3213\(87\)90343-9](https://doi.org/10.1016/0550-3213(87)90343-9).
28. Eduardo Fradkin, *Anomalies in Condensed Matter Physics in Proceedings of Latin American School of Physics ELAF'87* (La Plata, Argentina, July 1987), C. Garcia Canal, Editor, World Publishing Company, Singapore, 1988.
29. Eduardo Fradkin, *The Parity Anomaly in Condensed Matter Physics in Proceedings of Conference on Non-Perturbative Methods in Field Theory*, Laguna Beach, Jan. 1987, H. Hamber, Editor, Nuclear Physics B (**Proc. Suppl.**) **1A**, 175 (1987), [https://doi.org/10.1016/0920-5632\(87\)90108-3](https://doi.org/10.1016/0920-5632(87)90108-3).
30. Eduardo Fradkin and Mahito Kohmoto, *Quantized Hall effect and localization of electrons in lattices*, Physical Review B **35**, 6017 (1987), <https://doi.org/10.1103/PhysRevB.35.6017>.
31. Franco Nori, Qian Niu, Eduardo Fradkin and Shau-Jing Chang, *Superconducting normal phase boundary of quasicrystalline arrays in a magnetic field*, Physical Review B **36**, 8338 (1987), <https://doi.org/10.1103/PhysRevB.36.8338>.
32. Eduardo Fradkin, Carlos M. Naón and Fidel A. Schaposnik, *Constrained Fermi systems and Virasoro Algebras*, Physics Letters B **200**, 95 (1987), [https://doi.org/10.1016/0370-2693\(88\)91116-1](https://doi.org/10.1016/0370-2693(88)91116-1).
33. Eduardo Fradkin, Carlos M. Naón and Fidel A. Schaposnik, *Complete Bosonization of two-dimensional QCD in the path-integral framework*, Physical Review D **36**, 3809 (1987), <https://doi.org/10.1103/PhysRevD.36.3809>.

34. Elbio Dagotto, Eduardo Fradkin and Adriana Moreo, *SU(2) gauge invariance and order parameters in strongly coupled electronic systems*, Physical Review B **38** [RC], 2926 (1988), <https://doi.org/10.1103/PhysRevB.38.2926>.
35. Eduardo Fradkin and Michael Stone, *Topological terms in one- and two-dimensional quantum Heisenberg antiferromagnets*, Physical Review B **38** [RC], 7215 (1988), <https://doi.org/10.1103/PhysRevB.38.7215>.
36. Eduardo Fradkin, Cecilia von Reichenbach and Fidel A. Schaposnik, *Bosonization of the Kondo model*, Nuclear Physics **316** [FS], 710, (1989), [https://doi.org/10.1016/0550-3213\(89\)90065-5](https://doi.org/10.1016/0550-3213(89)90065-5).
37. Leticia Cugliandolo, Eduardo Fradkin and Fidel A. Schaposnik, *Zero modes on the lattice: the vortex-fermion system*, Physics Letters B **224**, 407 (1989), [https://doi.org/10.1016/0370-2693\(89\)91468-8](https://doi.org/10.1016/0370-2693(89)91468-8).
38. David Withoff and Eduardo Fradkin, *Phase transitions in Gapless Fermi Systems with Magnetic Impurities*, Physical Review Letters **64**, 1835 (1990), <https://doi.org/10.1103/PhysRevLett.64.1835>
39. Joel Cannon and Eduardo Fradkin, *The Phase Diagram of the Extended Hubbard Model in One Spatial Dimension*, Physical Review B **41**, 9435 (1990), <https://doi.org/10.1103/PhysRevB.41.9435>.
40. Eduardo Fradkin, *Jordan-Wigner Transformation for Quantum Spins Systems in Two Dimensions and Fractional Statistics*, Physical Review Letters **63**, 322 (1989), <https://doi.org/10.1103/PhysRevLett.63.322>.
41. Eduardo Fradkin, *The Spectrum of Short Range Resonating Valence Bond Theories*, in *Field Theories in Condensed Matter Physics, a Workshop, Proceedings of the Johns Hopkins Workshop on Field Theories in Condensed Matter Physics*, Z. Tesanovic Editor (Addison Wesley, Redwood City (1990)).
42. Eduardo Fradkin and Steven Kivelson, *Short Range Resonating Valence Bond Theories and Superconductivity*, Modern Physics Letters B **4**, 225 (1990), [doi:10.1142/S0217984990000295](https://doi.org/10.1142/S0217984990000295).
43. Christopher Mudry and Eduardo Fradkin, *Ground States of Infinite Range Spin One-Half Quantum Heisenberg Antiferromagnets*, Physical Review B **40**, 11177 (1989), <https://doi.org/10.1103/PhysRevB.40.11177>
44. Eduardo Fradkin, Cecilia von Reichenbach and Fidel Schaposnik, *Conformal Properties of Kondo Models*, Nuclear Physics B **340**, 692 (1990), [https://doi.org/10.1016/0550-3213\(90\)90464-O](https://doi.org/10.1016/0550-3213(90)90464-O).
45. Eduardo Fradkin, *Superfluidity of the Lattice Anyon Gas and Topological Invariance*, Physical Review B **42**, 570 (1990), <https://doi.org/10.1103/PhysRevB.42.570>.

46. Eduardo Fradkin, *Superfluidity of the Lattice Anyon Gas*, in *Proceedings of the Anniversary Adriatico Research Conference and Workshop "Strongly Correlated Electron Systems"*, ICTP, Trieste, Italy 19 June-21 July 1989), G. Baskaran *et al* Editors, World Scientific Publishers, Singapore 1990. Also published in *International Journal of Modern Physics B* **3**, 1965 (1989), <https://doi.org/10.1142/S0217979289001275>.
47. Xiao Gang Wen, Elbio Dagotto and Eduardo Fradkin, *Anyons on a Torus*, *Physical Review B* **42**, 6110 (1990), <https://doi.org/10.1103/PhysRevB.42.6110>.
48. Joel Cannon, Richard Scalettar and Eduardo Fradkin, *Ground State Phase Diagram of the One-Dimensional Extended Hubbard Model*, *Physical Review B* **44**, 5995 (1991), <https://doi.org/10.1103/PhysRevB.44.5995>.
49. Eduardo Fradkin, *Anyons For Beginners*, in *J. J. Giambiagi Festschrift* H. Falomir *et.al.* Editors, World Scientific Publishers, Singapore 1991.
50. Eduardo Fradkin and Fidel A. Schaposnik, *Chern-Simons Gauge Theories, Confinement and the Chiral Spin Liquid*, *Physical Review Letters* **66**, 276 (1991), <https://doi.org/10.1103/PhysRevLett.66.276>.
51. Alexander Balatsky and Eduardo Fradkin, *The Singlet Quantum Hall Effect and Chern-Simons Gauge Theories*, *Physical Review B* **3**, 10622 (1990), <https://doi.org/10.1103/PhysRevB.43.10622>.
52. Ana López and Eduardo Fradkin, *The Fractional Quantum Hall Effect and Chern-Simons Gauge Theories*, *Physical Review B* **44**, 5246 (1991), <https://doi.org/10.1103/PhysRevB.44.5246>.
53. Eduardo Fradkin, Enrique Moreno and Fidel Schaposnik, *Equivalence of the Path Integral Theory of Spinning Particles and the Topological Non Linear Sigma Model in $D = 2$ Dimensions*, *Physical Review D* **45**, 595 (1992), doi:<https://doi.org/10.1103/PhysRevD.45.595>.
54. Eduardo Fradkin, *Field Theory of the Fractional Quantum Hall Effect*, in *Proceedings of the First Conference "Physics at High Magnetic Fields"*, E. Manousakis Editor, Tallahassee, Florida (May 14-18, 1991), Addison Wesley, Redwood City (1991).
55. Eduardo Fradkin, *Field Theories of Condensed Matter Systems*, Addison Wesley, Redwood City (1991).
56. Eduardo Fradkin, *Wave Functionals for Field Theories from Path Integrals*, *Nuclear Physics B* **389**, 587 (1993), [https://doi.org/10.1016/0550-3213\(93\)90354-R](https://doi.org/10.1016/0550-3213(93)90354-R).
57. Ana López and Eduardo Fradkin, *Universal Properties of the Wave Functions of Fractional Quantum Hall Effect Systems*, *Physical Review Letters* **69**, 2126 (1992), doi:<https://doi.org/10.1103/PhysRevLett.69.2126>.

58. Eduardo Fradkin, Enrique Moreno and Fidel Schaposnik, *Ground State Wave Functions for 1+1-dimensional Fermion Field Theories*, Nuclear Physics B **392**, 667 (1993), doi:10.1016/0550-3213(93)90521-P; arXiv:hep-th/9207003.
59. Ana López and Eduardo Fradkin, *Response Functions and Spectrum of Collective Excitations of Fractional Quantum Hall Effect Systems*, Physical Review B **47**, 7080 (1993), doi: <https://doi.org/10.1103/PhysRevB.47.7080>; arXiv:cond-mat/9210019.
60. Ana López and Eduardo Fradkin, *Universality in the Fractional Quantum Hall Effect*, in *Proceedings of the Workshop on "Common Trends in Condensed Matter and High Energy Physics"*, L. Alvarez Gaume et. al. editors, Chia, Sardinia, Italy (September 1992), Nuclear Physics B **Supplement:33C**, 67 (1993), [https://doi.org/10.1016/0920-5632\(93\)90372-D](https://doi.org/10.1016/0920-5632(93)90372-D).
61. Antonio H. Castro Neto and Eduardo Fradkin, *The Thermodynamics of Quantum Systems and Generalizations of Zamolodchikov's C-theorem*, Nuclear Physics B **400**, 525 (1993), doi:10.1016/0550-3213(93)90414-K; arXiv:cond-mat/9301009.
62. Eduardo Fradkin and Ana López, *Universality in the Fractional Quantum Hall Effect*, in *Low-Dimensional Quantum Field Theory For Condensed Matter Physicists, Proceedings of the Summer School on "Field Theories for Low Dimensional Condensed Matter Systems"*, S. Lundquist, G. Morandi and Yu Lu editors, Trieste, Italy (September 1992), World Scientific, Singapore (1995).
63. Antonio H. Castro Neto and Eduardo Fradkin, *Bosonization of the Low Energy Excitations of Fermi Liquids*, Physical Review Letters **72**, 1393 (1994), doi:<https://doi.org/10.1103/PhysRevLett.72.1393>; arXiv:cond-mat/9304014.
64. Antonio H. Castro Neto and Eduardo Fradkin, *Bosonization of Fermi Liquids*, Physical Review B **49**, 10877 (1994), doi:<https://doi.org/10.1103/PhysRevB.49.10877>; arXiv:cond-mat/9307005.
65. Ana López, Alberto Rojo and Eduardo Fradkin, *Chern-Simons Field theory for the two-dimensional quantum Heisenberg antiferromagnet*, Physical Review B **49**, 15139 (1994), doi:<https://doi.org/10.1103/PhysRevB.49.15139>; hep-th/9401156.
66. Antonio H. Castro Neto and Eduardo Fradkin, *Exact Solution of the Landau Fixed Point via Bosonization*, Physical Review B **51**, 4084 (1995), doi:<https://doi.org/10.1103/PhysRevB.51.4084>; arXiv:cond-mat/9310046.
67. Christopher Mudry and Eduardo Fradkin, *Separation of Spin and Charge Quantum Numbers in Strongly Correlated Systems*, Physical Review B **49**, 5200 (1994), doi:<https://doi.org/10.1103/PhysRevB.49.5200>; arXiv:cond-mat/9309021.

68. Christopher Mudry and Eduardo Fradkin, *The Mechanism of Separation of Spin and Charge in One-Dimensional Quantum Antiferromagnets*, Physical Review B **50**, 11409 (1994), doi:<https://doi.org/10.1103/PhysRevB.50.11409>; arXiv:cond-mat/9405064.
69. H. Q. Lin, Eduardo R. Gagliano, David K. Campbell, Eduardo H. Fradkin and Jim E. Gubernatis, in *The Hubbard Model*, edited by D. Baeriswyl *et. al.*, (Plenum, New York, 1995), p. 315.
70. Carlos Cassanello and Eduardo Fradkin, *Bilayers of Chiral Spin States*, Physical Review B **53**, 8708 (1996), doi:<https://doi.org/10.1103/PhysRevB.53.8708>; arXiv:cond-mat/9502044.
71. Ana López and Eduardo Fradkin, *Fermionic Chern-Simons theory for the Fractional Quantum Hall Effect in Bilayers*, Physical Review B **51**, 4347 (1995), doi:<https://doi.org/10.1103/PhysRevB.51.4347>; arXiv:cond-mat/9406113.
72. Eduardo Fradkin and Fidel A. Schaposnik, *The Fermion-Boson Mapping in Three Dimensional Quantum Field Theory*, Physics Letters B **338**, 253 (1994), [https://doi.org/10.1016/0370-2693\(94\)91374-9](https://doi.org/10.1016/0370-2693(94)91374-9); arXiv:arXiv:hep-th/9407182.
73. Ninoslav Bràlic, Eduardo Fradkin, Virginia Manias and Fidel A. Schaposnik, *Bosonization of Three Dimensional Non-Abelian Fermion Field Theories*, Nuclear Physics B **446**, 144 (1995), [https://doi.org/10.1016/0550-3213\(95\)00225-H](https://doi.org/10.1016/0550-3213(95)00225-H); arXiv:hep-th/9502066.
74. Manuel Fuentes, Ana López, Eduardo Fradkin and Enrique Moreno, *Bosonization rules in $\frac{1}{2} + 1$ dimensions*, Nuclear Physics B **450**, 603 (1995), [https://doi.org/10.1016/0550-3213\(95\)00224-G](https://doi.org/10.1016/0550-3213(95)00224-G); arXiv:cond-mat/9502076.
75. Manuel Fuentes, Ana López and Eduardo Fradkin, *Interacting electrons on a half line coupled to impurities*, Nuclear Physics B **501**, 745 (1997), [https://doi.org/10.1016/S0550-3213\(97\)00387-8](https://doi.org/10.1016/S0550-3213(97)00387-8); arXiv:cond-mat/9704012.
76. Manuel Fuentes, Ana López and Eduardo Fradkin, *Exact effective action for fermions in one dimension with backscattering at a boundary*, Physical Review B **53**, 16568 (1996), doi:<https://doi.org/10.1103/PhysRevB.53.16568>; arXiv:cond-mat/9506057.
77. Eduardo Fradkin and Steven Kivelson, *Modular Invariance, Self-Duality and The Phase Transition Between Quantum Hall Plateaus*, Nuclear Physics B **474**, 543 (1996), [https://doi.org/10.1016/0550-3213\(96\)00310-0](https://doi.org/10.1016/0550-3213(96)00310-0); arXiv:cond-mat/9603156.
78. Daniel Cabra, Eduardo Fradkin, Gerardo L. Rossini and Fidel A. Schaposnik, *Gauge Invariance and Finite Temperature Effective Actions of Chern-Simons Gauge Theories with Fermions*, Physics Letters B **383**, 434 (1996), [https://doi.org/10.1016/0370-2693\(96\)00613-2](https://doi.org/10.1016/0370-2693(96)00613-2); arXiv:hep-th/9507136.

79. Ana López and Eduardo Fradkin, *Fermionic Chern-Simons Field Theory for the Fractional Hall Effect*, in *Composite Fermions: A unified view of the Quantum Hall Regime*, edited by Olle Heinonen. World Scientific (Singapore, 1998).
80. Carlos R. Cassanello and Eduardo Fradkin, *Kondo Effect in Flux Phases*, Physical Review B **53**, 15079 (1996), doi:<https://doi.org/10.1103/PhysRevB.53.15079>; arXiv:cond-mat/9512064.
81. Claudio de C. Chamon and Eduardo Fradkin, *Distinct universal conductances in tunneling to quantum Hall states: The role of contacts*, Physical Review B **56**, 2012 (1997), doi:<https://doi.org/10.1103/PhysRevB.56.2012>; arXiv:cond-mat/9612185.
82. Nancy P. Sandler, Claudio de C. Chamon and Eduardo Fradkin, *Andreev reflection in the fractional quantum Hall effect*, Physical Review B **57**, 12324 (1998), doi:<https://doi.org/10.1103/PhysRevB.57.12324>; arXiv:cond-mat/9704012.
83. Horacio E. Castillo, Claudio de C. Chamon, Eduardo Fradkin, Paul M. Goldbart and Christopher Mudry, *Exact calculation of multifractal exponents of the critical wave function of Dirac fermions in a random magnetic field*, Physical Review B **56**, 10668 (1997), doi:<https://doi.org/10.1103/PhysRevB.56.10668>.
84. Carlos R. Cassanello and Eduardo Fradkin, *Overscreening of magnetic impurities in $d_{x^2-y^2}$ -wave superconductors*, Physical Review B **56**, 11246 (1997), doi:<https://doi.org/10.1103/PhysRevB.56.11246>; arXiv:cond-mat/9704011.
85. Eduardo Fradkin, *Superconductivity's cousin*, Nature (London) **387**, 18 (1997) .
86. Steven A. Kivelson, Eduardo Fradkin and Victor J. Emery, *Electronic Liquid Crystal Phases of a Doped Mott Insulator*, Nature (London) **393**, 550 (1998); arXiv: cond-mat/9707327.
87. Eduardo Fradkin, Chetan Nayak, Alexei Tsvelik and Frank Wilczek, *A Chern-Simons Effective Field Theory for the Pfaffian Quantum Hall State*, Nuclear Physics B **516**, 704 (1998), [https://doi.org/10.1016/S0550-3213\(98\)00111-4](https://doi.org/10.1016/S0550-3213(98)00111-4).
88. Nancy P. Sandler, Claudio de C. Chamon and Eduardo Fradkin, *Noise measurements and fractional charge in fractional quantum Hall liquids*, Physical Review B **59**, 12521 (1999), doi:<https://doi.org/10.1103/PhysRevB.59.12521>.
89. Eduardo Fradkin and Steven Kivelson, *Liquid Crystal Phases of Quantum Hall Systems*, Physical Review B **59**, 8065 (1999), doi:<https://doi.org/10.1103/PhysRevB.59.8065>.

90. Ana López and Eduardo Fradkin, *Universal structure of the edge states of the fractional quantum Hall states*, Physical Review B **59**, 15323 (1999), doi: <http://dx.doi.org/10.1103/PhysRevB.59.15323>.
91. Eduardo Fradkin, Chetan Nayak, and Kareljan Schoutens *Landau-Ginzburg Theories for Non-Abelian Quantum Hall States*, Nuclear Physics B **546**, 711 (1999), [https://doi.org/10.1016/S0550-3213\(99\)00039-5](https://doi.org/10.1016/S0550-3213(99)00039-5).
92. Cesar D. Fosco, Eduardo Fradkin and Ana López, *Dynamical Domain Wall Defects in 2 + 1 Dimensions*, Physics Letters B **451**, 31 (1999).
93. Daniel C. Cabra, Eduardo Fradkin, Gerardo L. Rossini and Fidel A. Schaposnik, *Non-Abelian fractional quantum Hall states and chiral coset conformal field theories*, International Journal of Modern Physics A **30**, 4857 (2000), <https://doi.org/10.1142/S0217751X00002354>; arXiv:cond-mat/9905192.
94. Eduardo Fradkin, *Exploring the fractional quantum Hall effect with electron tunneling*, in *Quantum Physics at the Mesoscopic Scale*, Proceedings of the XXXIVth Rencontres de Moriond, Edited by C. Glattli, M. Sanquer and J. Tr anh V an, Les Arcs, Haute Savoie, France , January 1999, EDP Sciences (Les Ulis, France, 2000).
95. Eduardo Fradkin, Steven A. Kivelson, Efstratios Manousakis and Kwangsik Nho, *Nematic phase of the two-dimensional electron gas in a magnetic field*, Physical Review Letters **84**, 1982 (2000), doi: <http://dx.doi.org/10.1103/PhysRevLett.84.1982>; arXiv:cond-mat/9906064.
96. Victor J. Emery, Eduardo Fradkin, Steven A. Kivelson and Tom C. Lubensky, *Quantum Theory of the Smectic Metal State in Stripe Phases*, Physical Review Letters **85**, 2160 (2000), doi: <http://dx.doi.org/10.1103/PhysRevLett.85.2160>; arXiv:cond-mat/0001077.
97. Ana L opez and Eduardo Fradkin, *Effective field theory for the bulk and edge states of quantum Hall states in unpolarized single layer and bilayer systems*, Physical Review B **63**, 085306 (2001), doi: <http://dx.doi.org/10.1103/PhysRevB.63.085306>; arXiv:cond-mat/0008219.
98. Ana L opez and Eduardo Fradkin, *Erratum: Effective field theory for the bulk and edge states of quantum Hall states in unpolarized single layer and bilayer systems*, Physical Review B **64**, 049903 (2001), doi: <http://dx.doi.org/10.1103/PhysRevB.64.049903>.
99. Wensheng Vincent Liu and Eduardo Fradkin, *Antiferromagnetic spin ladders effectively coupled by one-dimensional electron liquids*, Physical Review Letters **86**, 1865 (2001), doi: <http://dx.doi.org/10.1103/PhysRevLett.86.1865>; arXiv:cond-mat/0008394.
100. Nancy P. Sandler and Eduardo Fradkin, *Fractional quantum Hall junctions and two-channel Kondo models*, Physical Review B **63**, 23530 (2001), doi: <http://dx.doi.org/10.1103/PhysRevB.63.23530>; arXiv:cond-mat/0009285.

101. Mats Granath, Vadim Oganesyan, Steven A. Kivelson, Eduardo Fradkin and Victor J. Emery, *Nodal quasi-particles and coexisting orders in striped superconductors*, Physical Review Letters **87**, 167011 (2001), doi: <http://dx.doi.org/10.1103/PhysRevLett.87.167011>; arXiv:cond-mat/0010350.
102. Eduardo Fradkin, Marina Huerta and Guillermo R. Zemba, *Effective Chern-Simons Theories of Pfaffian and Parafermionic Quantum Hall States, and Orbifold Conformal Field Theories*, Nuclear Physics **601** [FS], 3, (591)2001, [https://doi.org/10.1016/S0550-3213\(01\)00077-3](https://doi.org/10.1016/S0550-3213(01)00077-3); arXiv:cond-mat/0011143.
103. Vadim Oganesyan, Steven A. Kivelson, and Eduardo Fradkin, *Quantum Theory of a Nematic Fermi Fluid*, Physical Review B **64**, 195109 (2001), doi: <http://dx.doi.org/10.1103/PhysRevB.64.195109>; arXiv:cond-mat/0102093.
104. R. Moessner, S. L. Sondhi and Eduardo Fradkin, *Short-ranged RVB physics, quantum dimer models and Ising gauge theories*, Physical Review B **65**, 024504 (2001), doi: <http://dx.doi.org/10.1103/PhysRevB.65.024504>; arXiv:cond-mat/0103396.
105. Daniel G. Barci, Eduardo Fradkin, Steven A. Kivelson and Vadim Oganesyan, *Theory of the Quantum Smectic Hall Phase I: Low-energy properties of the quantum Hall smectic fixed point*, Physical Review B **65**, 245319 (2002), doi: <http://dx.doi.org/10.1103/PhysRevB.65.245319>; arXiv:cond-mat/0105448.
106. Daniel G. Barci and Eduardo Fradkin, *Theory of the Quantum Smectic Hall Phase II: Microscopic theory*, Physical Review B **65**, 245320 (2002), doi: <http://dx.doi.org/10.1103/PhysRevB.65.245320>; arXiv:cond-mat/0106171.
107. Steven A. Kivelson, Dung-Hai Lee, Eduardo Fradkin and Vadim Oganesyan, *Competing Order in the Mixed State of High Temperature Superconductors*, Physical Review B **66**, 144516/1-8 (2002), doi: <http://dx.doi.org/10.1103/PhysRevB.66.144516>; arXiv:cond-mat/0205228.
108. Eun-Ah Kim and Eduardo Fradkin, *Inter edge tunneling in quantum Hall line junctions*, Physical Review B **67**, 045317 (2003), doi: <http://dx.doi.org/10.1103/PhysRevB.67.045317>; arXiv:cond-mat/0205629.
109. Congjun Wu, W. Vincent Liu and Eduardo Fradkin, *Competing Orders in Coupled Luttinger Liquids*, Physical Review B **68**, 115104 (2003), doi: <http://dx.doi.org/10.1103/PhysRevB.68.115104>; arXiv:cond-mat/0206248.
110. Eduardo Fradkin, Vishnu Jejjala and Robert G. Leigh, *Non-commutative Chern-Simons for the Quantum Hall system and Duality*, Nuclear Physics B **642**, 483-500 (2002), doi: [http://dx.doi.org/10.1016/S0550-3213\(02\)00616-8](http://dx.doi.org/10.1016/S0550-3213(02)00616-8); arXiv:cond-mat/0205653.

111. Steven A. Kivelson, Ian P. Bindloss, Eduardo Fradkin, Vadim Oganesyan, John Tranquada, Aharon Kapitulnik and Craig Howald, *How to detect fluctuating stripes in high temperature superconductors*, Reviews of Modern Physics **75**, 1201 (2003), doi:10.1103/RevModPhys.75.1201; arXiv:cond-mat/0210683.
112. Steven A. Kivelson, Eduardo Fradkin, and Theodore H. Geballe, *Quasi-1D dynamics and the Nematic phase of the 2D Emery model*, Physical Review B **69**, 144505 (2004), doi: <http://dx.doi.org/10.1103/PhysRevB.69.144505>; arXiv:cond-mat/0302163.
113. Eun-Ah Kim and Eduardo Fradkin, *Double point contact in Quantum Hall Line Junctions*, Physical Review Letters **91**, 156801 (2003), doi: <http://dx.doi.org/10.1103/PhysRevLett.91.156801>; arXiv:cond-mat/0305693.
114. Enrico Arrigoni, Eduardo Fradkin and Steven A. Kivelson, *Mechanism of High Temperature Superconductivity in a striped Hubbard Model*, Physical Review B **69**, 214519 (2004), doi: <http://dx.doi.org/10.1103/PhysRevB.69.214519>; arXiv:cond-mat/0309572.
115. Ana López and Eduardo Fradkin, *Fermion Chern Simons Theory of Hierarchical Fractional Quantum Hall States*, Physical Review B **69**, 155322 (2004), doi: <http://dx.doi.org/10.1103/PhysRevB.69.155322>; arXiv:cond-mat/0310128.
116. Eduardo Fradkin, David Huse, Roderich Moessner, Vadim Oganesyan, and Shivaji L. Sondhi, *Bipartite Rokhsar-Kivelson points and Cantor deconfinement*, Physical Review B **69**, 224415 (2004), doi: <http://dx.doi.org/10.1103/PhysRevB.69.224415>; arXiv:cond-mat/0311353.
117. Eddy Ardonne, Paul Fendley and Eduardo Fradkin, *Topological Order and Conformal Quantum Critical Points*, Annals of Physics **310**, 493 (2004), doi:<http://dx.doi.org/10.1016/j.aop.2004.01.004>; arXiv:cond-mat/0311466.
118. I. Yang, W. Kang, K.W. Baldwin, L.N. Pfeiffer, K.W. West, E.A. Kim and E. Fradkin, *Quantum Hall line junction with impurities as a multislit Luttinger liquid interferometer*, Physical Review B **71**, 113312 (2005), doi: <http://dx.doi.org/10.1103/PhysRevB.71.113312>; arXiv:cond-mat/0407641.
119. Eun-Ah Kim, Smitha Vishveshwara, and Eduardo Fradkin, *Cooper pair tunneling in singlet quantum Hall states/superconductor junctions*, Physical Review Letters **93**, 266803 (2004), doi: <http://dx.doi.org/10.1103/PhysRevLett.93.266803>; arXiv:cond-mat/0405156.
120. Michael J. Lawler and Eduardo Fradkin, *Quantum Hall Smectics, Sliding Symmetry and the Renormalization Group*, Physical Review B **70**, 165310 (2004), doi: <http://dx.doi.org/10.1103/PhysRevB.70.165310>; arXiv:cond-mat/0405237.

121. Enrico Arrigoni, Eduardo Fradkin and Steven Kivelson, *Competition Between Charge-Density Waves and Superconductivity in Striped Systems*, Proceedings of the SCES'04, International Conference on Strongly Correlated Electron Systems, Universität Karlsruhe (Germany) July 26-30, 2004, *Physica B* **359**, 623 (2005); arXiv:cond-mat/0409693.
122. Zohar Nussinov and Eduardo Fradkin, *Discrete Sliding Symmetries, Dualities, and Self-dualities of Quantum Orbital Compass Models and $p + ip$ Superconducting Arrays*, *Physical Review B* **71**, 195120 (2005), doi: <http://dx.doi.org/10.1103/PhysRevB.71.195120>; arXiv:cond-mat/0410720.
123. Stuart E. Brown, Eduardo Fradkin and Steven A. Kivelson, *Surface pinning of fluctuating charge order: an “extraordinary” surface phase transition*, *Physical Review B* **71**, 224512 (2005), doi: <http://dx.doi.org/10.1103/PhysRevB.71.224512>; arXiv:cond-mat/0501654.
124. Paul Fendley and Eduardo Fradkin, *Realizing non-Abelian statistics in time reversal invariant systems*, *Physical Review B* **72**, 024412 (2005), doi: <http://dx.doi.org/10.1103/PhysRevB.72.024412>; arXiv:cond-mat/cond-mat/0502071.
125. Eun-Ah Kim, Michael J. Lawler, Smitha Vishveshwara, and Eduardo Fradkin, *Signatures of fractional statistics in noise experiments in quantum Hall fluids*, *Physical Review Letters* **95**, 176402 (2005), doi: <http://dx.doi.org/10.1103/PhysRevLett.95.176402>; arXiv:cond-mat/0507428. (Physical Review Focus)
126. Steven A. Kivelson and Eduardo Fradkin, *How optimal inhomogeneity produces high temperature superconductivity*; chapter 15 of *Treatise of High Temperature Superconductivity*, J. Robert Schrieffer and J. Brooks, editors, Springer-Verlag (2007); arXiv:cond-mat/0507459.
127. Michael J. Lawler, Daniel G. Barci, Victoria Fernández, Eduardo Fradkin, and Luis Oxman, *Non-perturbative behavior of the quantum phase transition to a nematic Fermi fluid*, *Physical Review B* **73**, 085101 (2006), doi: <http://dx.doi.org/10.1103/PhysRevB.73.085101>; arXiv:cond-mat/0508747.
128. Erica W. Carlson, Karin Dahmen, Eduardo Fradkin, and Steven Kivelson, *Hysteresis and Noise from Electronic Nematicity in High Temperature Superconductors*, *Physical Review Letters* **96**, 097003 (2006), doi: <http://dx.doi.org/10.1103/PhysRevLett.96.097003>; arXiv:cond-mat/0510259.
129. Antonio H. Castro Neto, Pierre Pujol and Eduardo Fradkin, *Ice: a strongly correlated proton system*, *Physical Review B* **74**, 024302 (2006), doi: <http://dx.doi.org/10.1103/PhysRevB.74.024302>; arXiv:cond-mat/0511092.
130. John Robertson, Stevan A. Kivelson, Eduardo Fradkin, Alan Fang, and Aharon Kapitulnik, *Distinguishing Patterns of Charge Order; Stripes or Checkerboards*, *Physical Review B* **74**, 134507 (2006), doi: <http://dx.doi.org/10.1103/PhysRevB.74.134507>; arXiv:cond-mat/0602675.

131. Zohar Nussinov, Cristian Batista and Eduardo Fradkin, *Intermediate Symmetries In Electronic Systems: Dimensional Reduction, Order Out Of Disorder, Dualities, And Fractionalization*, to appear in Proceedings of the 13th International Conference on Recent Progress in Many Body Theories, Buenos Aires (Argentina), December 2005, S. Hernández and H. Cataldo editors (World Scientific, 2006); published in International Journal of Modern Physics B **20**, 5239-5249 (2006); arXiv:cond-mat/0602569.
132. Eun-Ah Kim, Michael J. Lawler, Smitha Vishveshwara, and Eduardo Fradkin, *Measuring fractional charge and statistics in fractional quantum Hall fluids through noise experiments*, Physical Review B **74**, 155324 (2006), doi: <http://dx.doi.org/10.1103/PhysRevB.74.155324>; arXiv:cond-mat/0604325.
133. Michael J. Lawler and Eduardo Fradkin, *Local Quantum Criticality in the Nematic Quantum Phase Transition of a Fermi Fluid*, Physical Review B **75**, 033304 (2007), doi: <http://dx.doi.org/10.1103/PhysRevB.75.033304>; arXiv:cond-mat/0605203.
134. Eduardo Fradkin and Joel E. Moore, *Entanglement entropy of 2D conformal quantum critical points: hearing the shape of a quantum drum*, Physical Review Letters **97**, 050404 (2006), doi: <http://dx.doi.org/10.1103/PhysRevLett.97.050404>; arXiv:cond-mat/0605683.
135. Stefanos Papanikolaou, Erik Luijten and Eduardo Fradkin, *Quantum criticality, lines of fixed points, and phase separation in doped two-dimensional quantum dimer models*, Physical Review B **76**, 134514 (2007), doi: <http://dx.doi.org/10.1103/PhysRevB.76.134514>; arXiv:cond-mat/0607316.
136. Claudio Chamon, Eduardo Fradkin and Ana López, *Fractional statistics and duality: strong coupling behavior of edge states of quantum Hall liquids in the Jain sequence*, Physical Review Letters **98**, 176801 (2007), doi: <http://dx.doi.org/10.1103/PhysRevLett.98.176801>; arXiv: cond-mat/0608520
137. Congjun Wu, Kai Sun, Eduardo Fradkin and Shoucheng Zhang, *Fermi liquid instabilities in the spin channel*, Physical Review B **75**, 115103 (2007), doi: <http://dx.doi.org/10.1103/PhysRevB.75.115103>; arXiv: cond-mat/0610326.
138. Stefanos Papanikolaou, Kumar S. Raman, and Eduardo Fradkin, *Devil's staircases, quantum dimer models and stripe formation in strong coupling models of quantum frustration*, Physical Review B **75**, 094406 (2007), doi: <http://dx.doi.org/10.1103/PhysRevB.75.094406>; arXiv: cond-mat/0611390.
139. Eduardo Fradkin, Steven A. Kivelson and Vadim Oganesyan, *Discovery of a Nematic Electron Fluid in a Transition Metal Oxide*, "Perspectives in Science" invited article, Science **315**, 196 (2007).
140. Erez Berg, Eduardo Fradkin, Eun-Ah Kim, Steven Kivelson, Vadim Oganesyan, John M. Tranquada, and Shoucheng Zhang, *Dynamical layer decoupling*

- in a stripe-ordered high T_c superconductor, *Physical Review Letters* **99**, 127003 (2007), doi: <http://dx.doi.org/10.1103/PhysRevLett.99.127003>; arXiv: 0704.1240.
141. Eun-Ah Kim, Michael J. Lawler, Paul Oreto, Subir Sachdev, Eduardo Fradkin and Steven A. Kivelson, *Theory of the nodal nematic quantum phase transition in superconductors*, *Physical Review B* **77**, 184514 (2008), doi: <http://dx.doi.org/10.1103/PhysRevB.77.184514>; arXiv: 0705.4099.
 142. Kumar S. Raman, Eduardo Fradkin, Roderich Moessner, Stefanos Papanikolaou, and Shivaji L. Sondhi, *Quantum dimer models and exotic orders*, in “Quantum Magnetism” (Proceedings of the Nato Advanced Science Institute on Quantum Magnetism), Les Houches France, 6-23 June (2006), B. Barbara, Y. Imry, G. Sawatzky, and P. C. E. Stamp editors, pp. 139-150, (Springer Netherlands, 2008); arXiv:0809.3050.
 143. Stefanos Papanikolaou, Kumar S. Raman and Eduardo Fradkin, *Topological phases and topological entropy of two-dimensional systems with finite correlation length*, *Physical Review B* **76**, 224421 (2007), doi: <http://dx.doi.org/10.1103/PhysRevB.76.224421>; arXiv:0709.0729.
 144. H. Barath, M. Kim, J.F. Karpus, S.L. Cooper, P. Abbamonte, E. Fradkin, E. Morosan, and R.J. Cava, *Quantum and classical mode softening near the charge-density-wave/superconductor transition of Cu_xTiSe_2 : Raman spectroscopic studies*, *Physical Review Letters* **100**, 106402 (2008), doi: <http://dx.doi.org/10.1103/PhysRevLett.100.106402>; arXiv:0712.2013 [cond-mat.sup-con] (2007).
 145. M. Kim, H. Barath, S.L. Cooper, P. Abbamonte, E. Fradkin, M. Rübhausen, C. L. Zhang, and S-W. Cheong, *Raman Scattering Studies of Temperature- and Field-Induced Melting of Charge Order in $(La,Pr,Ca)MnO_3$* , *Physical Review B* **77**, 134411 (2008), doi: <http://dx.doi.org/10.1103/PhysRevB.77.134411>; arXiv:0801.3737.
 146. Stefanos Papanikolaou, Rafael Monteiro Fernandes, Eduardo Fradkin, Philip W. Phillips, Joerg Schmalian, and Ratsko Sknepnek, *Universality of liquid-gas Mott transitions at finite temperatures*, *Physical Review Letters* **100**, 026408/1-4 (2008), doi: <http://dx.doi.org/10.1103/PhysRevLett.100.026408>; arXiv:0710.1627 [cond-mat.sup-con] (2007).
 147. Shying Dong, Eduardo Fradkin, Robert G. Leigh, and Sean Nowling, *Topological Entanglement Entropy in Chern-Simons Theories and Quantum Hall Fluids*, *Journal of High Energy Physics* **2008** (05), 016 (2008) (JHEP05(2008)016), doi:<https://doi.org/10.1088/1126-6708/2008/05/016>; arXiv:0802.3231 (2008).
 148. Dirk Schuricht, Fabian Essler, Akbar Jaefari, and Eduardo Fradkin, *Local density of states of 1D Mott insulators and CDW states with a boundary*,

- Physical Review Letters **101**, 086403 (2008),
doi: <http://dx.doi.org/10.1103/PhysRevLett.101.086403>; arXiv:0802.1544.
149. Kai Sun, Benjamín Muñoz Fregoso, Michael J. Lawler, and Eduardo Fradkin, *Fluctuating Stripes in Strongly Correlated electron Systems and the Nematic-Smectic quantum phase transition*, Physical Review B **78**, 085124 (2008), doi: <http://dx.doi.org/10.1103/PhysRevB.78.085124>; Erratum: Physical Review B **80**, 039901 (2009), doi: <http://dx.doi.org/10.1103/PhysRevB.80.039901>; arXiv:0805.3526.
 150. Eduardo Fradkin, *Quantum physics: Debut of the quarter electron*, News & Views invited article, Nature (London) **452**, 822-823 (2008).
 151. H. Barath, M. Kim, S. L. Cooper, P. Abbamonte, E. Fradkin, I. Mahns, M. Rübhausen, N. Aliouane, and D. N. Argyriou, *Domain fluctuations near the field-induced incommensurate-commensurate phase transition of TbMnO₃*, Physical Review B **78**, 134407 (2008), doi: <http://dx.doi.org/10.1103/PhysRevB.78.134407>; arxiv:0810.xxxx. (recommended as Editor's suggestion)
 152. Kai Sun and Eduardo Fradkin, *Time reversal symmetry breaking and spontaneous anomalous Hall effect in Fermi fluids*, Physical Review B **78**, 245122 (2008), doi: <http://dx.doi.org/10.1103/PhysRevB.78.245122>; arXiv:0809.4731.
 153. Erez Berg, Eduardo Fradkin, and Steven A. Kivelson, *Theory of the striped superconductor*, Physical Review B **79**, 064515 (2009), doi: <http://dx.doi.org/10.1103/PhysRevB.79.064515>; arXiv:0810.1564. (recommended as Editor's suggestion).
 154. Benjamin Hsu, Michael Mulligan, Eduardo Fradkin and Eun-Ah Kim, *Universal behavior of the entanglement entropy in 2D conformal quantum critical points*, Physical Review B **79**, 115421 (2009), doi: <http://dx.doi.org/10.1103/PhysRevB.79.115421>; arXiv:0812.0203.
 155. Erez Berg, Eduardo Fradkin, Steven A. Kivelson, and John M. Tranquada, *Striped Superconducting Order: How the cuprates intertwine spin, charge and superconducting orders*, New Journal of Physics **11**, 115004 (2009), doi:10.1088/1367-2630/11/11/115004; arXiv:0901.4826.
 156. Benjamín M. Fregoso, Kai Sun, Eduardo Fradkin, and Benjamin L. Lev, *Biaxial nematic phases in ultracold dipolar Fermi gases*, New Journal of Physics **11**, 103003 (2009); doi: 10.1088/1367-2630/11/10/103003 ; arXiv:0902.0739.
 157. Erez Berg, Eduardo Fradkin, and Steven A. Kivelson, *Charge 4e superconductivity from pair density wave order in certain high temperature superconductors*, Nature Physics **5**, 830 (2009), doi:<https://doi.org/10.1038/nphys1389>; arXiv:0904.1230.

158. Kai Sun, Hong Yao, Eduardo Fradkin, and Steven A. Kivelson, *Topological Insulators and Nematic Phases from Spontaneous Symmetry Breaking in 2D Fermi Systems with a Quadratic Band Crossing*, Physical Review Letters **103**, 046811 (2009), doi:10.1103/PhysRevLett.103.046811; arXiv:0905.0907.
159. Eduardo Fradkin, *Scaling of Entanglement Entropy at 2D quantum Lifshitz fixed points and topological fluids*, Journal of Physics A: Mathematical and Theoretical **42**, 504011 (2009), (special issue on Entanglement Entropy, P. Calabrese, J. Cardy and B. Doyon, editors); doi: 10.1088/1751-8113/42/50/504011; arXiv:0906.1569v1.
160. Benjamín M. Fregoso and Eduardo Fradkin, *Ferro-Nematic ground state of the dilute dipolar Fermi gas*, Physical Review Letters **103**, 205301 (2009), doi:10.1103/PhysRevLett.103.205301; arXiv:0907.1345.
161. Benjamin Hsu, Eytan Grosfeld, and Eduardo Fradkin, *Quantum noise and entanglement generated by a local quantum quench*, Physical Review B **80**, 235412 (2009) (Editor's suggestion), doi:10.1103/PhysRevB.80.235412; arXiv:0908.2622.
162. David S. Caplan, Vladimir Orlyanchik, Michael B. Weissman, Dale J. Van Harlingen, Eduardo Fradkin, M. Hinton, and Tom R. Lemberger, *Anomalous Noise in the Pseudogap Regime of $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$* , Physical Review Letters **104**, 177001 (2010), doi:10.1103/PhysRevLett.104.177001; arXiv:1004.5554.
163. Eduardo Fradkin, Steven A. Kivelson, Michael J. Lawler, James P. Eisenstein, and Andrew Mackenzie, *Nematic Fermi Fluids in Condensed Matter Physics*, Annu. Rev. Condens. Matter Phys. **1**, 153 (2010), doi:10.1146/annurev-conmatphys-070909-103925; arXiv:0910.4166.
164. Minjung Kim, Xiaoqian Chen, Young Il Joe, Eduardo Fradkin, Peter Abbamonte, and S. Lance Cooper, *Mapping the magneto-structural quantum phases of Mn_3O_4* , Physical Review Letters **104**, 136402 (2010), doi:10.1103/PhysRevLett.104.136402; arXiv:0912.2052.
165. Eduardo Fradkin and Steven A. Kivelson, *Electron Nematics Proliferate*, "Perspectives" invited article, Science **327**, 155 (2010).
166. Minjung Kim, Harini Barath, Xiaoqian Chen, Young-Il Joe, Eduardo Fradkin, Peter Abbamonte, S. Lance Cooper, *Magnetic Field and Pressure Controlled Phases in Complex Materials*, Advanced Materials **22**, 1148 (2010); doi: <https://doi.org/10.1002/adma.200904246>.
167. Benjamín M. Fregoso and Eduardo Fradkin, *Unconventional magnetism in imbalanced Fermi systems with magnetic dipolar interactions*, Physical Review B **81**, 214443 (2010), doi:10.1103/PhysRevB.81.214443; arXiv:1001.4167.

168. Steven A. Kivelson and Eduardo Fradkin, *Fluctuation diamagnetism in high temperature superconductors*, “Viewpoint” invited article, *Physics* **3**, 15 (2010), doi: 10.1103/Physics.3.15; arXiv:1003.5594.
169. James P. Reed, Bruno Uchoa, Young Il Joe, Yu Gan, Diego Casa, Eduardo Fradkin, and Peter Abbamonte, *The effective fine structure constant of freestanding graphene measured in graphite*, *Science* **330**, 805-808 (2010), doi:10.1126/science.1190920; arXiv:1011.1590.
170. Eduardo Fradkin, *Electronic Liquid Crystal Phases in Strongly Correlated Systems*, in Proceedings of the Les Houches Summer School on “Modern theories of correlated electron systems”, Les Houches, Haute Savoie, France (May 2009), Daniel C. Cabra, Andreas Honecker, and Pierre Pujol, editors, *Lecture Notes in Physics* 843, Springer-Verlag Berlin Heidelberg (2012), doi:10.1007/978-3-642-10449-7_2; arXiv:1004.1104
171. Erez Berg, Eduardo Fradkin and Steven A. Kivelson, *Pair Density Wave correlations in the Kondo-Heisenberg Model*, *Physical Review Letters* **105**, 146403 (2010), doi:10.1103/PhysRevLett.105.146403; arXiv:1005.0623.
172. Daniel G. Barci and Eduardo Fradkin, *Role of nematic fluctuations in the thermal melting of pair-density-wave phases in two-dimensional superconductors*, *Physical Review B* **83**, 100509(R) (2011); doi:10.1103/PhysRevB.83.100509; arXiv:1005.1928.
173. Benjamin Hsu and Eduardo Fradkin, *Universal Behavior of Entanglement in 2D Quantum Critical Models*, *Journal of Statistical Mechanics: Theory and Experiment*, **2010**, P09004 (2010), doi:10.1088/1742-5468/2010/09/P09004; arXiv:1006.1361.
174. Akbar Jaefari, Siddhartha Lal and Eduardo Fradkin, *Charge-Density-Wave and Superconductor Competition in Stripe Phases of High Temperature Superconductors*, *Physical Review B* **82**, 144531 (2010), doi:10.1103/PhysRevB.82.144531; arXiv:1007.2187.
175. Dirk Schuricht, Fabian H. L. Essler, Akbar Jaefari, and Eduardo Fradkin, *Boundary effects on the local density of states of one-dimensional Mott insulators and charge density wave states*, *Physical Review B* **83**, 035111 (2011), doi:10.1103/PhysRevB.83.035111; arXiv:1009.5587.
176. Taylor L. Hughes, Robert G. Leigh and Eduardo Fradkin, *Torsional Response and Dissipationless Viscosity in Topological Insulators*, *Physical Review Letters* **102**, 075502 (2011), doi:10.1103/PhysRevLett.102.075502; arXiv:1101.3541.
177. Bruno Uchoa, James P. Reed, Yu Gan, Young Il Joe, Eduardo Fradkin, Peter Abbamonte, and Diego Casa, *The electron many-body problem in*

- graphene, Proceedings of the Nobel Conference on Graphene and Quantum Matter, Physica Scripta T **2012**, 144 (2012), doi:10.1088/0031-8949/2012/T146/014014; arXiv:1109.1577.
178. Liliana Arrachea and Eduardo Fradkin, *Chiral heat transport in driven quantum Hall and quantum spin Hall edge states*, Physical Review B **84**, 235436 (2011), doi:10.1103/PhysRevB.84.235436; arXiv:1110.1408.
 179. Akbar Jaefari and Eduardo Fradkin, *Pair-density-wave superconducting order in two-leg ladders*, Physical Review B **85**, 035104 (2012), doi:10.1103/PhysRevB.85.035104; arXiv:1111.6320.
 180. Benjamin Hsu and Eduardo Fradkin, *Dynamical stability of the quantum Lifshitz theory in 2 + 1 Dimensions*, Physical Review B **87**, 085102 (2013), doi:10.1103/PhysRevB.87.085102; arXiv:1205.4911
 181. Xiao Chen, Benjamin Hsu, Taylor Hughes and Eduardo Fradkin, *The Rényi Entropy and the Multifractal Spectrum of Systems Near the Localization Transition*, Physical Review B **86**, 134201 (2012), doi:10.1103/PhysRevB.86.134201; arXiv:1205.5276.
 182. AtMa Chan, Taylor L. Hughes, Shinsei Ryu, and Eduardo Fradkin, *Effective field theories for topological insulators by functional bosonization*, Physical Review B **87**, 085132 (2013), doi:10.1103/PhysRevB.87.085132; arXiv:1210.4305.
 183. Eduardo Fradkin and Steven A. Kivelson, *High Temperature Superconductivity: Ineluctable Complexity*, invited News & Views article, Nature Physics **8**, 864 (2012); doi:10.1038/nphys2498.
 184. Ariel Dobry, Akbar Jaefari, and Eduardo Fradkin, *Inhomogeneous superconducting phases in the frustrated Kondo-Heisenberg chain*, Physical Review B **87**, 245102 (2013), doi: 10.1103/PhysRevB.87.245102; arXiv:1304.5256.
 185. Hugo Aita, Liliana Arrachea, Carlos Naón, and Eduardo Fradkin, *Heat transport through quantum Hall edge states: Tunneling versus capacitive coupling to reservoirs*, Physical Review B **88**, 085122 (2013), doi: 10.1103/PhysRevB.88.085122; arXiv:1305.5833.
 186. Xiao Chen and Eduardo Fradkin, *Quantum Entanglement and Thermal Reduced Density Matrices in Fermion and Spin Systems on Ladders*, Journal of Statistical Mechanics: Theory and Experiment, **2013**, P08013 (2013), doi:10.1088/1742-5468/2013/08/P08013; arXiv:1305.6538.
 187. Y. I. Joe, X. M. Chen, P. Ghaemi, K. D. Finkelstein, G. A. de la Peña, Y. Gan, J. C. T. Lee, S. Yuan, J. Geck, G. J. MacDougall, T. C. Chiang, S. L. Cooper, E. Fradkin, P. Abbamonte, *Emergence of charge density wave domain walls above the superconducting dome in TiSe_2* , Nature Physics **10**, 421 (2014), doi:10.1038/nphys2935; arXiv:1309.4051.

188. Stefanos Papanikolaou, Daniel Charrier and Eduardo Fradkin, *Ising nematic phase of hard-core dimers on the square lattice*, Physical Review B **89**, 035128 (2014), doi:10.1103/PhysRevB.89.035128; arXiv:1310.4173.
189. Yizhi You and Eduardo Fradkin, *Field Theory of Nematicity in the Spontaneous Quantum Anomalous Hall effect*, Physical Review B **88**, 235124 (2013) (Editor's suggestion), doi:10.1103/PhysRevB.88.235124; arXiv:1310.5727.
190. Eduardo Fradkin, *Field Theories of Condensed Matter Physics, second edition*, Cambridge University Press (Cambridge, UK) (2013) (ISBN 978-0-521-76444-5; www.cambridge.org/9780521764445).
191. Eduardo Fradkin, Enrique Moreno and Fidel A. Schaposnik, *Bosonization of fermions coupled to topologically massive gravity*, Physics Letters B **730**, 284 (2014), <http://dx.doi.org/10.1016/j.physletb.2014.01.057>; arXiv:1401.3018.
192. Shih-Chang Weng, Ruqing Xu, Ayman Said, Bogdan Leu, Hawoong Hong, Xinyue Fang, M. Y. Chou, A. Bosak, P. Abbamonte, S. L. Cooper, E. Fradkin, S. L. Chang, and T.-C. Chiang, *Pressure-induced antiferrodistortive phase transition in SrTiO₃: Common scaling of soft-mode with pressure and temperature*, Europhysics Letters **107**, 36006 (2014), doi:10.1209/0295-5075/107/36006.
193. Rodrigo Soto Garrido and Eduardo Fradkin, *Pair-Density-Wave Superconducting States and Electronic Liquid Crystal Phases*, Physical Review B **89**, 165126 (2014), doi:10.1103/PhysRevB.89.165126; arXiv:1403.7530.
194. Gil Young Cho, Yizhi You and Eduardo Fradkin, *Geometry of Fractional Quantum Hall Fluids*, Physical Review B **90**, 115139 (2014), doi: <http://dx.doi.org/10.1103/PhysRevB.90.115139>; arXiv:1406.2700.
195. Krishna Kumar, Kai Sun, and Eduardo Fradkin, *Chern-Simons theory for magnetization plateaus of the spin- $\frac{1}{2}$ XXZ quantum Heisenberg model on the kagome lattice*, Physical Review B **90**, 174409 (2014), doi:<http://dx.doi.org/10.1103/PhysRevB.90.174409>; arXiv:1409.2171.
196. Eduardo Fradkin, Steven A. Kivelson, and John M. Tranquada, *Theory of Intertwined Orders in High Temperature Superconductors*, Reviews of Modern Physics **87**, 457 (2015), doi:<http://dx.doi.org/10.1103/RevModPhys.87.457>; arXiv:1407.4480.
197. Gil Young Cho, Rodrigo Soto-Garrido and Eduardo Fradkin, *Topological Pair-Density-Wave Superconducting States*, Physical Review Letters **113**, 256405 (2014), doi:10.1103/PhysRevLett.113.256405; arXiv:1407.6358.
198. Yizhi You, Gil Young Cho and Eduardo Fradkin, *Theory of the Nematic Fractional Quantum Hall State*, Physical Review X **4**, 041050 (2014), doi:10.1103/PhysRevX.4.041050; arXiv:1410.3390.

199. Andrey Gromov, Gil Young Cho, Yizhi You, Alexander G. Abanov, and Eduardo Fradkin, *Framing Anomaly in the Effective Theory of Fractional Quantum Hall Effect*, Physical Review Letters **114**, 016805 (2015) (Editor's suggestion), doi:<http://dx.doi.org/10.1103/PhysRevLett.114.016805>; arXiv:1410.6812.
200. Andrey Gromov, Gil Young Cho, Yizhi You, Alexander G. Abanov, and Eduardo Fradkin, *Erratum: Framing Anomaly in the Effective Theory of Fractional Quantum Hall Effect*, Physical Review Letters **114**, 149902 (2015), <http://dx.doi.org/10.1103/PhysRevLett.114.149902>; arXiv:1410.6812.
201. X. M. Chen, A. J. Miller, C. Nugroho, G. A. de la Peña, Y. I. Joe, A. Kogar, J. D. Brock, J. Geck, G. J. MacDougall, S. L. Cooper, E. Fradkin, D. J. Van Harlingen, P. Abbamonte, *Influence of Ti doping on the incommensurate charge density wave in 1T-TaS₂*, Physical Review B **91**, 245113 (2015), doi: <http://dx.doi.org/10.1103/PhysRevB.91.245113>; arXiv:1411.6604.
202. Xiao Chen, Gil Young Cho, Thomas Faulkner, and Eduardo Fradkin, *Scaling of entanglement in 2 + 1-dimensional scale-invariant field theories*, Journal of Statistical Mechanics: Theory and Experiment, **2015**, P02010 (2015), doi:10.1088/1742-5468/2015/02/P02010; arXiv:1412:3546.
203. Yu Gan, Gilberto de la Peña Muñoz, Anshul Kogar, Bruno Uchoa, Diego Casa, Thomas Gog, Eduardo Fradkin, and Peter Abbamonte, *Reexamination of the effective fine structure constant of graphene, as measured in graphite*, Physical Review B **93**, 195150 (2016), doi:10.1103/PhysRevB.93.195150; arXiv:1501.06812.
204. S. L. Gleason, Y. Gim, T. Byrum, A. Kogar, P. Abbamonte, E. Fradkin, G. J. MacDougall, D. J. Van Harlingen, Xiangde Zhu, C. Petrovic, and S. L. Cooper, *Structural contributions to the pressure-tuned charge-density-wave to superconductor transition in ZrTe₃: Raman scattering studies*, Physical Review B **91**, 155124 (2015), doi:<http://dx.doi.org/10.1103/PhysRevB.91.155124>; arXiv:1501.06871.
205. Kai Sun, Krishna Kumar, and Eduardo Fradkin, *A discretized Chern-Simons gauge theory on arbitrary graphs*, Physical Review B **92**, 115148 (2015) (Editor's suggestion), doi: <http://dx.doi.org/10.1103/PhysRevB.92.115148>; arXiv:1502.00641.
206. Rodrigo Soto-Garrido, Gil Young Cho and Eduardo Fradkin, *Quasi One Dimensional Pair Density Wave Superconducting State*, Physical Review B **91**, 195102 (2015), doi:<http://dx.doi.org/10.1103/PhysRevB.91.195102>; arXiv:1502.07349.
207. Jeffrey C. Y. Teo, Taylor L. Hughes, and Eduardo Fradkin, *Theory of Twist Liquids: Gauging and Anyonic Symmetry*, Annals of Physics **360**,

- 349 (2015), doi: <http://dx.doi.org/10.1016/j.aop.2015.05.012>;
arXiv:1503.06812.
208. Krishna Kumar, Kai Sun, and Eduardo Fradkin, *Chiral spin liquids on the kagome lattice*, Physical Review B **92**, 094433 (2015),
doi:10.1103/PhysRevB.92.094433; arXiv:1507.01278.
209. N. Samkharadze, K.A. Schreiber, G.C. Gardner, M.J. Manfra, E. Fradkin, and G.A. Csáthy, *Observation of a transition from a topologically ordered to a spontaneously broken symmetry phase*, Nature Physics **12**, 191 (2016); published online on 25 October, 2015, doi:10.1038/nphys3523; arXiv:1509.03658.
210. Xiao Chen, Xiongjie Yu, Gil Young Cho, Bryan K. Clark, and Eduardo Fradkin, *Many-body Localization Transition in Rokhsar-Kivelson-type wave functions*, Physical Review B **92**, 212204 (2015),
doi:10.1103/PhysRevB.92.214204; arXiv:1509.03890.
211. Sean Vig, Anshul Kogar, Matteo Mitrano, Ali A. Husain, Luc Venema, Melinda S. Rak, Vivek Mishra, Peter Johnson, Genda D. Gu, Eduardo Fradkin, Michael R. Norman, and Peter Abbamonte, *Measurement of the dynamic charge response of materials using low-energy, momentum-resolved electron energy-loss spectroscopy (M-EELS)*, SciPost **3**, 026 (2017),
doi: 10.21468/SciPostPhys.3.4.026; arXiv:1509.04230.
212. AtMa P. O. Chan, Thomas Kvorning, Shinsei Ryu, and Eduardo Fradkin, *Effective hydrodynamic field theory and condensation picture of topological insulators*, Physical Review B **93**, 155122 (2016),
doi:<http://dx.doi.org/10.1103/PhysRevB.93.155122>; arXiv:1510.08975.
213. Luiz H. Santos and Eduardo Fradkin, *Instanton effects in lattice models of bosonic symmetry-protected topological states*, Physical Review B **93**, 15145 (2016), doi:<http://dx.doi.org/10.1103/PhysRevB.93.155145>;
arXiv:1512.06864.
214. Yizhi You, Gil Young Cho, and Eduardo Fradkin, *Nematic quantum phase transition of composite Fermi liquids in half-filled Landau levels and their geometric response*, Physical Review B **93**, 205401 (2016),
doi:<http://dx.doi.org/10.1103/PhysRevB.93.205401>; arXiv:1602.01482.
215. Yuxuan Wang, Gil Young Cho, Taylor L. Hughes, and Eduardo Fradkin, *Topological superconducting phases from inversion symmetry breaking order in spin-orbit-coupled systems*, Physical Review B **93**, 134512 (2016),
doi:<http://dx.doi.org/10.1103/PhysRevB.93.134512>; arXiv:1602.02778.
216. Peng Ye, Taylor L. Hughes, Joseph Maciejko, and Eduardo Fradkin, *Composite Particle Theory, Fractional Axion Angles, and Extrinsic Twist Defects in Three-Dimensional Gapped Fermionic Phases*, Physical Review B **94**, 115104 (2016),
doi:<http://dx.doi.org/10.1103/PhysRevB.94.115104>; arXiv:1603.02696.

217. Krishna Kumar, Hitesh Changlani, Bryan K. Clark, and Eduardo Fradkin, *Numerical evidence for a chiral spin liquid in the XXZ model on the kagome lattice at $m = \frac{2}{3}$ magnetization*, Physical Review B **94**, 134410 (2016), doi:<https://doi.org/10.1103/PhysRevB.94.134410>; arXiv:1606.04103.
218. Tianci Zhou, Xiao Chen, Thomas Faulkner, Eduardo Fradkin, *Entanglement Entropy and Mutual Information of Circular Entangling Surfaces in 2 + 1-dimensional Quantum Lifshitz Model*, Journal of Statistical Mechanics: Theory and Experiment, **2016**, 093101 (2016), doi:<http://dx.doi.org/10.1088/1742-5468/2016/09/093101>; arXiv:1607.01771.
219. Shichao Yan, Davide Iaia, Emilia Morosan, Eduardo Fradkin, Peter Abbamonte, and Vidya Madhavan, *The influence of domain walls in the incommensurate charge density wave state of Cu intercalated 1T-TiSe₂*, Physical Review Letters **116**, 106405 (2017), doi:<https://doi.org/10.1103/PhysRevLett.118.106405>; arXiv:1609.08249.
220. Xiao Chen, Tianci Zhou, David A. Huse, and Eduardo Fradkin, *Out-of-time-order correlations in many-body localized and thermal phases*, Annalen der Physik **529**, 1600332 (2016), doi:<https://doi.org/10.1002/andp.201600332>; arXiv:1610.00220.
221. Eduardo Fradkin, *Disorder Operators and their descendants*, published in a special memorial issue for Leo Kadanoff of the Journal of Statistical Physics, Journal of Statistical Physics **167**, 427 (2017), doi:[10.1007/s10955-017-1737-7](https://doi.org/10.1007/s10955-017-1737-7); arXiv:1610.05780.
222. Xiao Chen, William Witczak-Krempa, Thomas Faulkner, and Eduardo Fradkin, *Two-cylinder entanglement entropy under a twist*, Journal of Statistical Mechanics: Theory and Experiment, **2017**, 043104 (2017), doi:<https://doi.org/10.1088/1742-5468/aa668a>; arXiv:1611.01847.
223. A. Kogar, M. S. Rak, S. Vig, A. A. Husain, F. Flicker, Y. I. Joe, L. Venema, G. J. MacDougall, T. C. Chiang, E. Fradkin, J. van Wezel, and P. Abbamonte, *Signatures of exciton condensation in a transition metal dichalcogenide*, Science **358**, 1314 (2017), doi:[10.1126/science.aam6432](https://doi.org/10.1126/science.aam6432); arXiv:1611.04217.
224. Laimei Nie, Akash V. Maharaj, Eduardo Fradkin, and Steven A. Kivelson, *Vestigial nematicity from spin and/or charge order in the cuprates*, Physical Review B **96**, 085142 (2017), doi:<https://doi.org/10.1103/PhysRevB.96.085142>; arXiv:1701.02751.
225. Zhenyu Wang, Daniel Walkup, Philip Derry, Thomas Scaffidi, Melinda Rak, Sean Vig, Anshul Kogar, Ilija Zeljkovic, Ali Husain, Luiz H. Santos, Yuxuan Wang, Andrea Damascelli, Yoshiteru Maeno, Peter Abbamonte, Eduardo Fradkin, and Vidya Madhavan, *Quasiparticle Interference and Strong Electron-Mode Coupling in the Quasi-One-Dimensional Bands of*

- Sr_2RuO_4 , Nature Physics **13**, 799 (2017) (cover issue),
doi:<http://dx.doi.org/10.1038/nphys4107>; arXiv:1701.02773.
226. Peng Ye, Meng Cheng, and Eduardo Fradkin, *Fractional S duality, classification of fractional topological insulators, and surface topological order*, Physical Review B **96**, 085125 (2017),
doi:<https://doi.org/10.1103/PhysRevB.96.085125>; arXiv:1701.05559.
227. Rodrigo Soto-Garrido, Yuxuan Wang, Eduardo Fradkin and S. Lance Cooper, *Higgs modes in the Pair-Density-Wave Superconducting State*, Physical Review B **95**, 214502 (2017),
doi:<https://doi.org/10.1103/PhysRevB.95.214502>; arXiv:1703.02541.
228. Hitesh J. Changlani, Dmitrii Kochkov, Krishna Kumar, Bryan K. Clark, and Eduardo Fradkin, *Macroscopically Degenerate Exactly Solvable Point in the Spin-1/2 Kagome Quantum Antiferromagnet*, Physical Review Letters **120**, 117202 (2018) (Editor's Suggestion),
doi:<https://doi.org/10.1103/PhysRevLett.120.117202>; arXiv:1703.04659.
229. Victor Chua, Wathid Assawasunthonnet, and Eduardo Fradkin, *Effective field theory of an anomalous Hall metal from interband quantum fluctuations*, Physical Review B **96**, 035110 (2017),
doi:<https://doi.org/10.1103/PhysRevB.96.035110>; arXiv:1704.03883.
230. Gil Young Cho, Jeffrey Teo, and Eduardo Fradkin, *Symmetric Gapped Surface States of Fractional Topological Insulators*, Physical Review B **96**, 161109(R) (2017), doi:<https://doi.org/10.1103/PhysRevB.96.161109> ;
arXiv:1706.00429.
231. Xiao Chen, Eduardo Fradkin and William Witczak-Krempa, *Quantum spin chains with multiple dynamics*, Physical Review B **96**, 180402(R) (2017), doi:[10.1103/PhysRevB.96.180402](https://doi.org/10.1103/PhysRevB.96.180402); arXiv:1706.02304.
232. Ramanjit Sohal, Luiz H. Santos and Eduardo Fradkin, *Chern-Simons Composite Fermion Theory of Fractional Chern Insulators*, Physical Review B **97**, 125131 (2018), doi:<https://doi.org/10.1103/PhysRevB.97.125131>;
arXiv:1707.06118.
233. Xiao Chen, Eduardo Fradkin and William Witczak-Krempa, *Quantum spin chains with multiple dynamics: DMRG, conformal wavefunctions and non-equilibrium analogs*, Journal of Physics A: Mathematical and Theoretical **50**, 464002 (2017) (Invited article to a special issue in honor of John Cardy), doi:[10.1088/1751-8121/aa8dbc](https://doi.org/10.1088/1751-8121/aa8dbc); arXiv:1707.02317.
234. Pablo Roura-Bas, Liliana Arrachea, and Eduardo Fradkin, *Enhanced thermoelectric response in the fractional quantum Hall effect*, Physical Review B **97**, 081104(R) (2018), doi:<https://doi.org/10.1103/PhysRevB.97.081104>;
arXiv:1711.09721.

235. Hart Goldman and Eduardo Fradkin, *Loop Models, Modular Invariance, and Three Dimensional Bosonization*, Physical Review B **97**, 195112 (2018), doi:<https://doi.org/10.1103/PhysRevB.97.195112>; arXiv:1801.04936.
236. Yuxuan Wang, Stephen D. Edkins, Mohammad H. Hamidian, J. C. Séamus Davis, Eduardo Fradkin, and Steven A. Kivelson, *Pair Density Waves in Superconducting Vortex Halos*, Physical Review B **97**, 174510 (2018), doi:<https://doi.org/10.1103/PhysRevB.97.174510> (Editor's suggestion); arXiv:1802.01582.
237. Eugeniu Plamadeala and Eduardo Fradkin, *Scrambling in the Quantum Lifshitz Model*, Journal of Statistical Mechanics: Theory and Experiment, **2018**, 063102 (2018), doi:<https://doi.org/10.1088/1742-5468/aac136>; arXiv:1802.07268.
238. Yago Ferreirós and Eduardo Fradkin, *Boson-Fermion Duality in Three Dimensions*, Annals of Physics **399**, 1-25 (2018), doi:<https://doi.org/10.1016/j.aop.2018.10.001>, arXiv:1802.06087.
239. Daniel G. Barci, Eduardo Fradkin, and Leonardo Ribeiro, *Bosonization of Fermi liquids in a weak magnetic field*, Physical Review B **98**, 155146 (2018), doi:<https://doi.org/10.1103/PhysRevB.98.155146>, arXiv:1805.05337.
240. Pablo Roura-Bas, Liliana Arrachea and Eduardo Fradkin, *Helical spin thermoelectrics controlled by a side magnetic quantum dot in the quantum spin Hall state*, Physical Review B **98**, 195429 (2018), doi:<https://doi.org/10.1103/PhysRevB.98.195429>; arXiv:1808.05570.
241. Hart Goldman and Eduardo Fradkin, *Dirac composite fermions and emergent reflection symmetry about even denominator filling fractions*, Physical Review B **98**, 165137 (2018), doi:<https://doi.org/10.1103/PhysRevB.98.165137>; arXiv:1808.09314.
242. D. R. Hamilton, G. D. Gu, E. Fradkin and D. J. Van Harlingen, *Signatures of pair-density wave order via phase sensitive measurement of $La_{2-x}Ba_xCuO_4$ SQUIDS*, submitted to Physical Review Letters (November 2018); arXiv:1811.02048.
243. Luiz H. Santos, Yuxuan Wang, and Eduardo Fradkin, *Pair-Density-Wave Order and Paired Fractional Quantum Hall Fluids*, Physical Review X **9**, 021047 (2019), doi:[10.1103/PhysRevX.9.021047](https://doi.org/10.1103/PhysRevX.9.021047); arXiv:1811.08897.
244. J. Schmidt, V. Bekeris, G. S. Lozano, M. V. Bortulé, M. Marziali Bermúdez, C. W. Hicks, P. C. Canfield, E. Fradkin, and G. Pasquini, *Nematicity in the superconducting mixed state of strain detwinned underdoped $Ba(Fe_{1-x}Co_x)_2As_2$* , Physical Review B **99**, 064515 (2019), doi:<https://doi.org/10.1103/PhysRevB.99.064515>; arXiv:1901.02504.

245. Daniel F. Agterberg, J.C. Séamus Davis, Stephen D. Edkins, Eduardo Fradkin, Dale J. Van Harlingen, Steven A. Kivelson, Patrick A. Lee, Leo Radzihovsky, John M. Tranquada, and Yuxuan Wang, *The Physics of Pair Density Waves: Cuprate Superconductors and Beyond*, Annu. Rev. Condens. Matter Phys. **11**, 231 (2020), doi:<https://doi.org/10.1146/annurev-conmatphys-031119-050711>; arXiv:1904.09687.
246. Hart Goldman, Ramanjit Sohal, and Eduardo Fradkin, *Landau-Ginzburg Theories of Non-Abelian Quantum Hall States from Non-Abelian Bosonization*, Physical Review B **100**, 115111 (2019), doi:<https://doi.org/10.1103/PhysRevB.100.115111>; arXiv:1906.00983.
247. Julian May-Mann, Ryan Levy, Rodrigo Soto-Garrido, Gil Young Cho, Bryan K. Clark, and Eduardo Fradkin, *Topology and the one-dimensional Kondo-Heisenberg model*, Physical Review B **101**, 165133 (2020), doi:<https://doi.org/10.1103/PhysRevB.101.165133>; arXiv:2002.01483.
248. Ramanjit Sohal and Eduardo Fradkin, *Intertwined Order in Fractional Chern Insulators from Finite-Momentum Pairing of Composite Fermions*, Physical Review B **101**, 245154 (2020), doi:[10.1103/PhysRevB.101.245154](https://doi.org/10.1103/PhysRevB.101.245154); arXiv:2003.04324.
249. Hart Goldman, Ramanjit Sohal, and Eduardo Fradkin, *Non-Abelian Fermionization and the Landscape of Quantum Hall Phases*, Physical Review B **102**, 195151 (2020), doi:[10.1103/PhysRevB.102.195151](https://doi.org/10.1103/PhysRevB.102.195151); arXiv:2009.00011.
250. Hart Goldman, Ramanjit Sohal and Eduardo Fradkin, *A composite particle construction of the Fibonacci fractional quantum Hall state*, Physical Review B **103**, 235118 (2021), doi:<https://doi.org/10.1103/PhysRevB.103.235118>; arXiv:2012.11611.
251. Eduardo Fradkin, *Quantum Field Theory, An Integrated Approach*, Princeton University Press (Princeton, New Jersey) (2021) (LCCN 2020044826; ISBN 9780691149080).
252. Sangjun Lee, John Collini, Stella X. L. Sun, Matteo Mitrano, Xuefei Guo, Chris Eckberg, Johnpierre Paglione, Eduardo Fradkin, and Peter Abbamonte, *Multiple charge density waves and superconductivity nucleation at antiphase domain walls in the nematic pnictide $Ba_{1-x}Sr_xNi_2As_2$* , Physical Review Letters **127**, 027602 (2021), doi:<https://doi.org/10.1103/PhysRevLett.127.027602>; arXiv:2102.03592.
253. Ramanjit Sohal, Laimei Nie, Xioaqi Sun and Eduardo Fradkin, *Thermalization of Randomly Coupled SYK Models*, Journal of Statistical Mechanics: Theory and Experiment, **2022**, 013103 (2022), doi:<https://dx.doi.org/10.1088/1742-5468/ac416b>; arXiv:2110.00017.
254. Sangjun Lee, Edwin W. Huang, Thomas A. Johnson, Xuefei Guo, Ali A. Husain, Matteo Mitrano, Kannan Lua, Alexander V. Zakrzewski, Gilberto

- A. de la Peña, Yingying Peng, Hai Huang, Sang-Jun Lee, Hoyoung Jang, Jun-Sik Lee, Young Il Joe, William B. Doriese, Paul Szypryt, Daniel S. Swetz, Songxue Chi, Adam A. Aczel, Gregory J. MacDougall, Steven A. Kivelson, Eduardo Fradkin, and Peter Abbamonte, *Generic character of the charge and spin density waves in superconducting cuprates*, Proceedings of the National Academy of Sciences U.S.A. **119**, e2119429119/1-6 (2022), doi:<https://doi.org/10.1073/pnas.2119429119>; arXiv:2110.13991.
255. Ramiro Sebastián Severino, Pablo Daniel Mininni, Eduardo Fradkin, Victoria Bekeris, Gabriela Pasquini, Gustavo Sergio Lozano, *Vortices in a Ginzburg-Landau Theory of Superconductors with Nematic Order*, Physical Review B **106**, 094512 (2022), doi:<https://doi.org/10.1103/PhysRevB.106.094512>; arXiv:2204.07260.
256. Benjamin Moy, Hart Goldman, Ramanjit Sohal, and Eduardo Fradkin, *Theory of Oblique Topological Insulators*, SciPost Physics **14**, 023 (2023), doi:[10.21468/SciPostPhys.14.2.023](https://doi.org/10.21468/SciPostPhys.14.2.023); arXiv:2206.07725.
257. Anuva Aishwarya, Julian May-Mann, Arjun Raghavan, Laimei Nie, Marisa Romanelli, Sheng Ran, Shanta R. Saha, Johnpierre Paglione, Nicholas P. Butch, Eduardo Fradkin, and Vidya Madhavan, *Magnetic-field sensitive charge density wave orders in the superconducting phase of UTe_2* , Nature (London) **618**, 928-933 (2023), doi:<https://doi.org/10.1038/s41586-023-06005-8>; arXiv:2207.09491.
258. Eduardo Fradkin, *Field Theoretic Aspects of Condensed Matter Physics: An Overview*, *Encyclopedia of Condensed Matter Physics 2e* **1**, 27 (2024), doi:<https://doi.org/10.1016/B978-0-323-90800-9.00269-9>; arXiv:2301.13234.
259. Anuva Aishwarya, Julian May-Mann, Sheng Ran, Shanta R. Saha, Johnpierre Paglione, Nicholas P. Butch, Eduardo Fradkin, and Vidya Madhavan, *Visualizing the magnetic field induced melting of a charge density wave order in UTe_2 by the generation of pairs of topological defects with opposite winding*, Nature Physics **20**, 964-969 (2024), doi:<https://doi.org/10.1038/s41567-024-02429-9>.
260. Arjun Raghavan, Marisa Romanelli, Julian May-Mann, Anuva Aishwarya, Leena Aggarwal, Anisha G. Singh, Maja D. Bachmann, Leslie M. Schoop, Eduardo Fradkin, Ian R. Fisher, and Vidya Madhavan, *Atomic-Scale Visualization of a Cascade of Magnetic Orders in the Layered Antiferromagnet $GdTe_3$* , npj Quantum Mater. **9**, 47 (2024). <https://doi.org/10.1038/s41535-024-00660-4>; arXiv:2308.15691.
261. Matthew O'Brien and Eduardo Fradkin, *An Exactly Solvable Model of Randomly Pinned Charge Density Waves in Two Dimensions*, Journal of Statistical Mechanics: Theory and Experiment, **2024**, 013104 (2024), doi:[10.1088/1742-5468/ad17b3](https://doi.org/10.1088/1742-5468/ad17b3); arxiv:2309.10030.

262. Junyi Cao, Angela Kou and Eduardo Fradkin, *Signatures of Parafermion Zero Modes in Fractional Quantum Hall-Superconductor Heterostructures*, Physical Review B **109**, L161106 (2024), doi:<https://doi.org/10.1103/PhysRevB.109.L161106>; arXiv:2309.14411.
263. Ramiro Severino, Pablo Mininni, Eduardo Fradkin, Victoria Bekeris, Gabriela Pasquini, Gustavo Lozano, *A Ginzburg-Landau approach to the vortex-domain wall interaction in superconductors with nematic order*, Physical Review B **109**, 094513 (2024), doi:<https://doi.org/10.1103/PhysRevB.109.094513>; arXiv:2401.06639.
264. Songyang Pu, Ajit C. Balram, Joseph Taylor, Eduardo Fradkin, and Zlatko Papić, *Microscopic Model for Fractional Quantum Hall Nematics*, Physical Review Letters **132**, 236503 (2024), doi:[10.1103/PhysRevLett.132.236503](https://doi.org/10.1103/PhysRevLett.132.236503); arXiv:2401.17352.
265. Marcus Rosales and Eduardo Fradkin, *Electronic structure of topological defects in the pair-density-wave superconductor*, Physical Review B **110**, 214508 (2024), doi:<https://doi.org/10.1103/PhysRevB.110.214508>; arXiv:2406.03538.
266. Caitlin S. Kengle, Dipanjan Chaudhuri, Xuefei Guo, Thomas A. Johnson, Simon Bettler, Wolfgang Simeth, Matthew J. Krogstad, Zahir Islam, Sheng Ran, Shanta R. Saha, Johnpierre Paglione, Nicholas P. Butch, Eduardo Fradkin, Vidya Madhavan, and Peter Abbamonte, *Absence of a bulk charge density wave signature in x-ray measurements of UTe_2* , Physical Review B **110**, 145101 (2024), doi:<https://doi.org/10.1103/PhysRevB.110.145101>; arXiv:2406.14688.
267. Matthew C. O'Brien and Eduardo Fradkin, *Interplay of Quantum and Thermal Fluctuations in Two-Dimensional Randomly Pinned Charge Density Waves*, Journal of Statistical Mechanics: Theory and Experiment, **2025**, 013105 (2025), doi:[10.1088/1742-5468/ada919](https://doi.org/10.1088/1742-5468/ada919); arXiv:2410.16375.
268. Tomáš Jungwirth, Rafael M. Fernandes, Eduardo Fradkin, Allan H. MacDonald, J. Sinova and L. Šmejkal, *Altemagnet: an unconventional spin-ordered phase of matter*, Newton **0**, 100162 (2025), doi:[10.1016/j.newton.2025.100162](https://doi.org/10.1016/j.newton.2025.100162); arXiv:2411.00717.
269. Dipanjan Chaudhuri, Qianni Jiang, Xuefei Guo, Jin Chen, Caitlin S. Kengle, Farzaneh Hoveyda-Marashi, Camille Bernal-Choban, Niels de Vries, Tai-Chang Chiang, Eduardo Fradkin, Ian R. Fisher, Peter Abbamonte, *Measurement of the dynamic charge susceptibility near the charge density wave transition in $ErTe_3$* , Proceedings of the National Academy of Sciences U.S.A. **122**, e2424430122 (2025), doi:<https://doi.org/10.1073/pnas.2424430122>; arXiv:2411.14746.
270. Benjamin Moy and Eduardo Fradkin, *Intertwined order of generalized global symmetries*, SciPost **18**, 157 (2025), doi: [10.21468/SciPostPhys.18.5.157](https://doi.org/10.21468/SciPostPhys.18.5.157); arXiv:2412.02748.

271. Thomas Johnson, Sangjun Lee, Camille Bernal-Choban, Xuefei Guo, Jin Chen, Stella Sun, John Collini, Christopher Eckberg, Johnpierre Paglione, Rafael M. Fernandes, Eduardo Fradkin, Peter Abbamonte, *Giant nematic response of the incommensurate charge density wave in the nickel-pnictide $Ba_{1-x}Sr_xNi_2As_2$* , submitted to Nature Physics (April 2025); arXiv:2504.13133.
272. Eduardo Fradkin, *Aventuras en la Física de Materia Condensada y Teoría de Campos*, Ciencia e Investigación Reseñas **13**, 1 (2025) (in Spanish); url: <https://aargentinapciencias.org/publicaciones/revista-resenas/resenas-tomo-13-no-1-2025/>.
273. F. Castillo Menegotto, R. S. Severino, P. D. Mininni, E. Fradkin, V. Bekkeris, G. Pasquini, and G. S. Lozano, *Vortex flow resistivity in nematic superconductors*, Physical Review B **112**, 134506 (2025), doi:<https://doi.org/10.1103/p7ml-94gq>; arXiv:2504.21794.
274. Eduardo Fradkin, *Intertwined Orders and the Physics of High Temperature Superconductors*, published in the Proceedings of the Conference on Recent Progress in Many Body Theories RPMBT22, Tsukuba (Japan, 23-27 September 2024), Particles **8**, 70 (2025), doi:10.3390/particles8030070; arXiv:2506.21673.
275. Xuan Zou, Rafael M. Fernandes and Eduardo Fradkin, *Superconducting states of metallic altermagnets*, submitted to Physical Review B (October 2025); arXiv:2510.xxxxx.