

# Publication List of Birgit Kaufmann

## Refereed Publications

29. J. Bland, C.H. Greene and B. Wehefritz–Kaufmann, *Observability of a sharp Majorana transition in a few-body model*, Phys. Rev. A 103 (2021) 023310
28. J. Copenhaver, A. Wasserman and B. Wehefritz–Kaufmann, *Using quantum annealers to calculate ground state properties of molecules*, J. Chem. Phys. 154 (2021) 034105
27. R.M. Kaufmann, S. Khlebnikov, and B. Wehefritz–Kaufmann, *Local models and global constraints for degeneracies and band crossings*, J. Geom. and Phys. 158 (2020) 103892-103901
26. S.R. Dahmen, and B. Wehefritz–Kaufmann, *A novel exponent in the Equilibrium Shape of Crystals*, Stat. Mech. (2019) 104005
25. R.M. Kaufmann and B. Wehefritz-Kaufmann, *Theoretical Properties of Materials Formed as Wire Network Graphs from Triply Periodic CMC Surfaces, Especially the Gyroid*, book chapter for the Springer book *The Role of Topology in Materials*, edited by Gupta, S. and Saxena, A., Springer Solid State Sciences 2018, by invitation, 27 pages
24. G.M. Schütz and B. Wehefritz–Kaufmann, *Kardar-Parisi-Zhang modes in d-dimensional directed polymers*, Phys. Rev. E 96 (2017) 032119
23. R.M. Kaufmann, D. Li and B. Wehefritz–Kaufmann, *Notes on Topological Insulators*, Reviews in Mathematical Physics 28 (2016) 1630003, 57 pages
22. R.M. Kaufmann, S. Khlebnikov, and B. Wehefritz–Kaufmann, *Singular geometry of the momentum space: From wire networks to quivers and monopoles*, J. Sing. 15 (2016) 53–80
21. R.M. Kaufmann, S. Khlebnikov, and B. Wehefritz–Kaufmann, *Re-gauging groupoid, symmetries and degeneracies for Graph Hamiltonians and applications to the Gyroid wire network*, Annales Henri Poincaré 17 (2016) 1383–1414
20. R.M. Kaufmann, S. Khlebnikov, and B. Wehefritz–Kaufmann, *Projective representations from quantum enhanced graph symmetries*, J. Phys.: Conf. Ser. 597 (2015) 012048, 16 pages
19. E. Antillon, B. Wehefritz-Kaufmann and S. Kais, *Avalanches in the Raise and Peel model in the presence of a wall*, J. Phys. A: Math. Theor. 46 (2013) 265001
18. R.M. Kaufmann, S. Khlebnikov, and B. Wehefritz–Kaufmann, *The geometry of the double gyroid wire network: quantum and classical*, Journal of Noncommutative Geometry 6 (2012) 623–664

17. R.M. Kaufmann, S. Khlebnikov, and B. Wehefritz-Kaufmann, *Singularities, swallow-tails and Dirac points. An analysis for families of Hamiltonians and applications to wire networks, especially the Gyroid*, Annals of Physics 327 (2012) 2865–2884
16. E. Antillon, B. Wehefritz-Kaufmann, and S. Kais, *Finite size scaling for quantum criticality using the finite element method*, Phys. Rev. E 85 (2012), 036706, 12 pages
15. R.M. Kaufmann, S. Khlebnikov, and B. Wehefritz-Kaufmann, *The noncommutative geometry of wire networks from triply periodic surfaces*, J. Phys.: Conf. Ser. 343 (2012) 012054, 15 pages
14. B. Wehefritz-Kaufmann, *Dynamical critical exponent for two-species totally asymmetric diffusion on a ring*, SIGMA 6 (2010), 039, 15 pages
13. B. Wehefritz-Kaufmann, *Clifford algebras, Fermions and Spin Systems*, in: Conference proceedings of the “26th International Colloquium in Group Theoretical Methods in Physics”, Graduate Center of the City University of New York City, June 2006, edited by Joseph L. Birman, Sultan Catto and Bogdan Nicolescu, Canopus Academic Publishing (2009) 325-330
12. B. Wehefritz-Kaufmann, *New results for the XX-model with boundaries*, J. Phys. A 40 (2007) 217-226
11. B. Wehefritz-Kaufmann, *Clifford representations in integrable systems*, J. of Math. Phys. 47 (2006) 123509-123517
10. H. Saleur and B. Wehefritz-Kaufmann, *Integrable quantum field theories with supergroup symmetries: the  $OSP(1/2)$  case*, Nucl. Phys. B 663 (2003) 443–466
9. H. Saleur and B. Wehefritz-Kaufmann, *Integrable quantum field theories with  $OSP(m/2n)$  symmetries*, Nucl. Phys. B 628 (2002) 407–441
8. H. Saleur and B. Wehefritz-Kaufmann, *Scattering in supersymmetric models*, Proceedings of the NATO Advanced Research Workshop on “Statistical Field Theories”, Villa Olmo, Como, 18-23 June 2001, 239–249, Kluwer Acad. Publ. (2002), Dordrecht, NL
7. H. Saleur and B. Wehefritz-Kaufmann, *Thermodynamics of the complex  $su(3)$  Toda theory*, Phys. Lett. B 481 (2000) 419–426
6. U. Bilstein and B. Wehefritz, *The XX-quantum spin chain with boundaries: I. Diagonalisation of the finite chain*, J. Phys. A 32 (1999) 191-233
5. U. Bilstein and B. Wehefritz, *Spectra of non-hermitian quantum spin chains describing boundary induced phase transitions*, J. Phys. A 30 (1997) 4925–4938
4. G. Albertini, S.R. Dahmen and B. Wehefritz, *The free energy singularity of the asymmetric six-vertex model and the excitations of the asymmetric XXZ chain*, Nucl. Phys. B 493 (1997) 541–570

3. G. Albertini, S.R. Dahmen and B. Wehefritz, *Phase diagram of the non-Hermitian asymmetric XXZ spin chain*, J. Phys. A 29 (1996) L369–L376
2. K. Krebs, M. Pfannmüller, H. Simon and B. Wehefritz, *Finite-Size Scaling Studies of One-Dimensional Reaction-Diffusion Systems, Part II. Numerical Methods*, J. Stat. Phys. 78 (1995) 1471–1491
1. K. Krebs, M. Pfannmüller, B. Wehefritz and H. Hinrichsen, *Finite-Size Scaling Studies of One-Dimensional Reaction-Diffusion Systems, Part I. Analytical Results*, J. Stat. Phys. 78 (1995) 1429–1470

### Preprints

30. R.M. Kaufmann, D. Li and B. Wehefritz–Kaufmann, *Topological Insulators and K-Theory*, arXiv:1510.08001
31. R.M. Kaufmann, D. Li and B. Wehefritz–Kaufmann, *The Stiefel–Whitney theory of topological insulators*, arXiv:1604.02792
32. R.M. Kaufmann, D. Li and B. Wehefritz–Kaufmann, *Noncommutative topological  $\mathbb{Z}_2$  invariant*, arXiv:1605.09470