

Kramers-Wannier-like duality defects in (3 + 1)d gauge theories

Friday, 26 November 2021 15:00 (30 minutes)

The 1+1d Majorana fermion has a chiral \mathbb{Z}_2 symmetry, which is “broken” after gauging the non-chiral fermion parity due to their mixed anomaly. However, it is better to think that the symmetry is preserved even after gauging, in the form of topological defect, and the defect implements the Kramers-Wannier self-duality of the Ising CFT. In this talk I will talk about an analogue of this story for some examples of (3+1)d continuum QFTs. In particular I will explicitly construct topological defects associated to self-dualities under gauging a one-form (aka center) symmetry of QFTs.

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