KMI Theory/EHQG seminar

Particle–Vortex Duality from 3d Bosonization

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Abstract:

We provide a simple derivation of particle-vortex duality in d=2+1 dimensions. Our starting point is a relativistic form of flux attachment, designed to transmute the statistics of particles. From this seed, we derive a web of new dualities. These include particle-vortex duality for bosons as well as the recently discovered counterpart for fermions.

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