

# The 16-fold way in the Kitaev model

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We revisit the Kitaev compass model on the honeycomb lattice. This model maps on non-interacting real (Majorana) fermions in the presence of a  $Z_2$  gauge potential consisting in the presence or absence of  $\pi$ -fluxes in each hexagonal plaquette of the lattice. Depending on the Chern number of the corresponding fermion groundstate, the gapped excitations are anyons of different types. Here, we show that the predicted 16 different types of anyons are possible in this simple model by playing with different vortex patterns.