

Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Counting Majorana zero modes in superconductors LUIZ SANTOS, Harvard University, YUSUKE NISHIDA, MIT, CLAUDIO CHAMON, Boston University, CHRISTOPHER MUDRY, PSI, Switzerland — We present a counting formula for computing the number of (Majorana) zero modes bound to topological point defects. The counting formula is evaluated in a gradient expansion for systems with charge-conjugation symmetry. We will consider examples that include Dirac fermions and the chiral p-wave superconductor in two-dimensional space. In all cases, we explicitly relate the counting of zero modes to Chern numbers.

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Date submitted: 19 Nov 2010

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