Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Sorting Category: 07.6 (T)

Time reversal symmetric Kitaev model and topological superconductor RYOTA NAKAI, Department of Physics, University of Tokyo, SHINSEI RYU, Department of Physics, University of Illinois, AKIRA FURUSAKI, Condensed Matter Theory Laboratory, RIKEN — We study a time reversal symmetric quantum spin model in two dimensions that is introduced as a higher spin extension of the Kitaev model and is exactly solvable [1]. The ground state of the topological phase of this model can be viewed as a time reversal symmetric topological superconductor in two dimensions. The helical Majorana edge modes which appear in time reversal pair in the topological phase are explained by topological argument. The correlation functions along the edge are derived from the gapless edge theory.

[1] R. Nakai, S. Ryu, and A. Furusaki, arXiv:1111:1230.

[X] Prefer Oral Session
[ ] Prefer Poster Session

Ryota Nakai
rnakai@vortex.c.u-tokyo.ac.jp
Department of Physics, University of Tokyo

Date submitted: 22 Dec 2011 Electronic form version 1.4