

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Chiral p-wave superconductivity in 2D lattices of magnetic atoms on a superconductor¹ JIAN LI, BOGDAN BERNEVIG, Department of Physics, Princeton University — We investigate chiral p-wave superconductivity in 2D lattices of magnetic atoms on an s-wave superconductor. We identify criteria of obtaining topologically nontrivial phases in such systems. In particular, we prove that a non-commuting helix pattern along the x and y directions is a necessary condition. When such a condition is satisfied, the system displays a rich phase diagram that generically allows for an arbitrary Chern number.

¹We acknowledge Swiss National Science Foundation and NSF.

Jian Li
Department of Physics, Princeton University

Date submitted: 15 Nov 2013

Electronic form version 1.4