Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Topological parity invariant in interacting two-dimensional systems from quantum Monte Carlo THOMAS C. LANG, Department of Physics, Boston University, VICTOR GURARIE, ANDREW M. ESSIN, Department of Physics, University of Colorado, STEFAN WESSEL, Institute for Theoretical Solid State Physics, RWTH Aachen University — We report results on calculating the parity invariant from Green's functions in quantum Monte Carlo simulations of strongly interacting systems. The topological invariant is used to study the trivial- to topological-insulator transitions in the Kane-Mele-Hubbard model with an explicit bond dimerization. We explore accessibility and behavior of this invariant within quantum Monte Carlo simulations.

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Date submitted: 09 Nov 2012 Electronic form version 1.4