PyBott: a tool for exploring topological phases in real space

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Abstract

The study of topological phases in disordered systems can be conducted by calculating topological invariants in real space. One such invariant is the Bott index, which has the advantage of being robust to disorder and can be computed for relatively small systems. For systems where time-reversal symmetry is not explicitly broken, analogous to quantum spin Hall effect systems, the spin Bott index can be calculated. In this poster, we present a Python package that enables the computation of both indices as well as many other features to spot topological phases in presence of disorder.

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