

Abstract Submitted
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Bulk-surface Correspondence and the Hofstadter Problem of SU(2) Landau Levels in 3D Lattices YI LI, Princeton University — We show that the continuum description of topological states in three-dimensional SU(2) Landau levels can be connected to topological Bloch states in three dimensions. We consider SU(2) Landau levels in a cubic lattice, which exhibits spin-orbit coupled surface states protected by the time-reversal symmetry. We show that the bulk topological properties can be obtained from the topology in the surface states. We also show a generalized Hofstadter problem in three dimensions.

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