**Abstract:**

Topological insulators are noninteracting gapful fermionic systems which have gapless boundary excitations. They are characterized by topological invariants. The topological invariants can be written in many different ways, including in terms of the Green's functions. We show that the existence of the boundary states directly follows, and can be derived by simple manipulations, from the existence of the bulk topological invariant written in terms of the Green's functions, for all types of topological insulators in all spacial dimensions. At the same time, the same procedure explains why topological insulators, once the interactions are turned on, can lose their boundary states.