SHAY FUCHS, University of Toronto, Canada
Additivity of $\mathrm{spin}\text{-}c$ *Quantization Under Cutting*

We describe a cutting construction for a compact oriented Riemannian manifold M, endowed with an S^1-equivariant spin^c structure. This produces two other equivariant spin^c manifolds (the "cut spaces"), denoted by M^+_{cut} and M^-_{cut}.

The spin^c structures on M, M^+_{cut} and M^-_{cut} (together with a connection on their determinant line bundles) enable us to define virtual representations of S^1, called the "$\mathrm{spin}\text{-}c$ quantization" of the manifold.

We claim that the representation that corresponds to M is the sum of the representations that correspond to those of the cut spaces, and we outline the main steps in the proof.