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Tensor topology

Any braided monoidal category comes with a built-in notion of space, namely, a meet-semilattice of so-called idempotent subunits, generalising Balmer's tensor triangular geometry. For a classical example, in a sheaf category this recovers the lattice of open sets of the base space. But the theory also captures non-cartesian examples such as Hilbert modules and quantales. There is an accompanying notion of support, showing 'where' a morphism acts, that satisfies a universal property. The meet-semilattice can be completed to a preframe via the Yoneda embedding. Availability of a functorial support structure enables an embedding theorem into a homogeneous monoidal category in which the spatial and nonspatial aspects are neatly separated. Finally, there are appropriate notions of restriction and localisation. Time permitting we will sketch example applications.

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