

FRAMES AND TRIANGULATED CATEGORIES

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In the past several decades, algebraists have used various notions of supports to study the thick subcategories of certain triangulated categories. However, in order to have some notion of support, the triangulated category in question must have additional structure, such as a Noetherian ring action or else a tensor triangulated action. In this talk, I will define a support theory for any triangulated category whose thick subcategories form a set. In particular, for such a triangulated category T , I will construct a space called $\text{spec } \mathbb{X}(T)$ and a function $T \rightarrow \text{spec } \mathbb{X}(T)$ which will allow us to approximate the lattice of thick subcategories of T with the lattice of open sets of $\text{spec } \mathbb{X}(T)$. Unfortunately, the space $\text{spec } \mathbb{X}(T)$ will be difficult to compute. We will discuss how we can use frames and other tools from pointless topology to describe $\text{spec } \mathbb{X}(T)$ and relate it to other support theories.