The affine line in tensor triangular geometry

Inspired by the pioneering work of Hopkins, Neeman, and Thomason on the classification of thick subcategories of perfect complexes, Balmer constructed for any tensor triangulated category $T$ a geometric object $\text{Spc}(T)$ which parametrizes the global structure of $T$. The subject of tensor triangular geometry is then to study the subtle interplay between $\text{Spc}(T)$ and $T$ abstractly as well as for prominent examples.

The goal of this talk is to report on joint work in progress with Schlank and Stevenson which revisits and extends Balmer’s framework, by introducing the analogue of affine schemes in the context of (higher) tensor triangular geometry. In particular, we will construct the affine line.