

Dima Arinkin

Title: Microlocal analysis of categories over a variety.

Abstract: Many geometric objects can be studied 'microlocally': instead of just looking at their support (the set of points where an object is non-trivial), one can consider their 'singular support', which remembers the 'direction' of non-trivial behavior.

Examples include the wave front of a distribution, the singular support of a constructible sheaf, and the characteristic variety of a D-module.

The subject of this talk is a higher-categorical version of this formalism: the notion of singular support for categories over a (smooth) variety. My goal is to show that, while its definition is still somewhat cumbersome, it leads to a rich theory.