

SUPPORT FOR NON-NOETHERIAN RINGS AND TENSOR TRIANGULATED CATEGORIES

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ABSTRACT. We define and characterise small support for complexes over non-Noetherian rings and in this context prove a vanishing theorem for modules. Our definition of support makes sense for any rigidly compactly generated tensor triangulated category. Working in this generality, we establish basic properties of support and investigate when it detects vanishing. We use pointless topology to relate support, the topology of the Balmer spectrum, and the structure of the idempotent Bousfield lattice.

I am helping a former postdoctoral candidate at the Norwegian University of Science and Technology finish a paper he started several years ago. I am checking through his work and editing the paper to be in publishable format. There is more work to be done to continue research in this direction once this paper is published. I hope to be able to submit this paper in the next academic year.