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Petter Andreas Bergh* (petter.bergh@ntnu.no), **Julia Plavnik** (jplavnik@iu.edu) and
Sarah Witherspoon (sjw@math.tamu.edu). *Support varieties for finite tensor categories.*

This talk is a report on recent joint work where we develop a theory of cohomological support varieties for finite tensor categories. Under suitable finite generation conditions - conjectured to hold for all finite tensor categories - the varieties encode homological properties of the objects, as in the classical case for group algebras. For example, the dimension of a variety equals the complexity of the corresponding object, so that the objects having trivial support varieties are precisely the projective ones. Moreover, every potential variety is actually the support variety of some object, and the support variety of an indecomposable object is connected. (Received January 17, 2021)