1142-13-91   **Josh H Pollitz*** (`jpollitz@huskers.unl.edu`), 904 S S 17TH St, APT C2, Lincoln, NE 68508.
The derived category of a locally complete intersection ring.

Let R be a commutative noetherian ring. It is well known that R is regular if and only if every complex with finitely generated homology is a perfect complex. The goal of this talk is to explain how one can characterize whether R is locally a complete intersection in terms of how each complex with finitely generated homology relates to the perfect complexes. Namely, R is locally a complete intersection if and only if each nontrivial complex with finitely generated homology can build a nontrivial perfect complex in the derived category using finitely many cones and retracts. This characterization gives a completely triangulated category characterization of locally complete intersection rings. In this talk, we will introduce a theory of support varieties and discuss how they can be applied to yield this characterization. (Received August 30, 2018)