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Spherical objects in dimension two and three

Wednesday, 20 December 2023 11:00 (30 minutes)

During this talk we discuss the classification problem of spherical "like" objects in various geometric settings including the minimal resolution of an ADE surface singularity and a 3-fold flopping contraction. The classification of spherical objects is related to questions about the autoequivalence groups or Bridgeland stability conditions, but in 3-fold settings this is not always a correct problem to ask. During the talk, we discuss what kind of objects should be classified, and then, a sketch of the proof will be explained. Our new technique also can be applied to the heart of a bounded t-structure, and classifies all t-structures of the associated null category. As a corollary, the connectedness of the space of stability conditions follows. This is all joint work with Michael Wemyss.

Presenter: HARA, Wahei (Tokyo)