Northeastern University   Mathematics Department

Geometry, Physics, and Representation Theory Seminar

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Wednesday, January 24, 2:50-3:50 pm, Lake Hall 509

Bridgeland stability for semiorthogonal decompositions and cubic fourfolds

Abstract

We illustrate a new method to induce stability conditions on semiorthogonal decompositions and apply it to the Kuznetsov component of the derived category of cubic fourfolds. We use this to reprove the Torelli theorem for cubic fourfolds, to generalize the results of Addington-Thomas, and to study the rich hyperkähler geometry associated to these hypersurfaces. This is the content of joint works with Arend Bayer, Emanuele Macrì, Howard Nuer, Alex Perry, and Paolo Stellari.