HILBERT SCHEMES OF SOME THREEFOLD SCROLLS OVER HIRZEBRUCH SURFACES

by Flaminio Flamini

Abstract

In this talk I will report on some recent results (in collaboration with A. Besana and M.L. Fania) concerning Hilbert schemes of smooth threefold scrolls over the Hirzebruch surface F_e which arise from suitable rank-two vector bundles over F_e that are very-ample and uniform (in the sense of Brosius and Aprodu-Brinzanescu).

An irreducible component of the Hilbert scheme parametrizing such varieties is shown to be regular (i.e. generically smooth and of the expected dimension). Furthermore, the general point of such a component is described.