

SEMINARIO DI GEOMETRIA

13 december 2016, h.17.00-18.00

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ACM bundles on the intersection of 2 quadrics

In this talk we investigate the existence of Ulrich bundles on a smooth complete intersection of two 4-dimensional quadrics in \mathbb{P}^5 by two completely different methods. First, we find good ACM curves and use Serre correspondence in order to construct Ulrich bundles, which is analogous to the construction on a cubic threefold by Casanellas-Hartshorne-Geiss-Schreyer. Next, we use Bondal-Orlov's semiorthogonal decomposition of the derived category of coherent sheaves to analyze Ulrich bundles. Using these methods, we prove that any smooth intersection of two 4-dimensional quadrics in \mathbb{P}^5 carries an Ulrich bundle of rank r for every $r = 2$. Moreover, we provide a description of the moduli space of stable Ulrich bundles. .

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