

STABLE ULRICH BUNDLES ON CUBIC FOURFOLDS

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ABSTRACT. In this talk, we examine the presence of Ulrich bundles on cubic fourfolds. We establish necessary and sufficient conditions for the existence of Ulrich bundles of a specific rank r . As a consequence, we show the existence of a family of non-decomposable Ulrich bundles of rank r on certain cubic fourfolds, which are dependent on approximately r parameters and have wild representation type. Our study also encompasses examples of arithmetically Cohen-Macaulay smooth surfaces that are not intersections of cubic fourfolds and codimension two subvarieties. This result is a joint work with Hoang Ngoc Yen.

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