Mathematics > Rings and Algebras

On representations of Clifford algebras of ternary cubic forms

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In this article, we provide an overview of a one-to-one correspondence between representations of the generalized Clifford algebra C_f of a ternary cubic form f and certain vector bundles (called Ulrich bundles) on a cubic surface X. We study general properties of Ulrich bundles, and using a recent classification of Casanellas and Hartshorne, deduce the existence of irreducible representations of C_f of every possible dimension.

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