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Title: Vector bundles on the space of forms

Abstract:

On the projective space \mathbb{P}^n , say for $n > 3$, vector bundles of rank $r < n$ are difficult to find. For $n > 5$ and $r < n-1$, no such bundle is known. A couple of well-known results constructions provide bundles of rank $r = n-1$ (Tango bundles, instanton bundles) and allow to define new bundles starting from these; but that is all we know up to now.

In this talk, I will present a construction providing new bundles of rank $r = n-1$, homogeneous for the action of SL_2 operating by the action on binary forms. The construction generalizes to give SL_m -homogeneous bundles on the space of symmetric forms of degree d in m variables.