ODTU-Bilkent Algebraic Geometry

Finite Length Koszul Modules and Vector Bundles

By

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Abstract: Let V be a complex vector space of dimension n≥ 2 and K be a subset of Λ2V of dimension m. Denote the Koszul module by W(V,K) and its corresponding resonance variety by $\mathcal{R}$(V,K). Papadima and Suciu showed that there exists a uniform bound q(n,m) such that the graded component of the Koszul module Wq(V,K)=0 for all q≥ q(n,m) and for all (V,K) satisfying $\mathcal{R}$(V,K)={0}. In this talk, we will determine this bound q(n,m) precisely, and find an upper bound for the Hilbert series of these Koszul modules. Then we will consider a class of Koszul modules associated to vector bundles. This is a joint work with B.Karadeniz, H. Mourtada and C.Plenat.

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Time: 15:40 (GMT+3)
Place: Zoom

To request the event link, please send a message to sertoz@bilkent.edu.tr