Columbia University
Algebraic Geometry Seminar

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THE CASTELNUOVO-MUMFORD REGULARITY OF SUBSPACE ARRANGEMENTS

The Castelnuovo-Mumford regularity of a finitely generated module M over a polynomial ring $k[x_0, ..., x_n]$ is a key ingredient in estimating the computational resources needed in working with M. We say that M is m-regular if its i-th syzygy module is generated in degrees less than or equal to $m + i$. I will discuss joint research with Harm Derksen on how both geometric and algebraic points of view can be brought to bear on a question posed Bernd Sturmfels: Is the homogeneous ideal of an arrangement of d linear subspaces of projective space d-regular?

Friday, November 2, 2001
2:30pm
Mathematics 417