

Generic linkage and regularity of algebraic Varieties

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In this talk, by using multiplier ideal sheaves we give a description for the Grauert-Riemenschneider canonical sheaf of the generic linkage of a variety. This provides a criterion for determining rational singularities of a linkage. As another application, we provide a liaison-theoretical method to establish a Castelnuovo-Mumford regularity bound for a projective variety under certain singularity conditions.