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On the singularities of secant varieties

In this talk, we study the singularities of secant varieties of smooth projective varieties when the embedding line bundle is sufficiently positive. We give a necessary and sufficient condition for these to have p-Du Bois singularities. In addition, we show that the singularities of these varieties are never higher rational. From our results, we deduce several consequences, including a Kodaira-Akizuki-Nakano type vanishing result for the reflexive differential forms of the secant varieties. Work in collaboration with S. Olano and L. Song.