

Cactus rank and varieties

mardi 9 mai 2023 11:00 (1 heure)

The cactus variety of a projective variety X is a version of the secant variety, where we take into account the linear spans of all finite subschemes of bounded length, not only the smooth ones or smoothable ones. I will discuss the definitions and basic properties of cactus rank and cactus varieties, with a particular focus on why they are relevant as an obstruction to study secant varieties. I will also explain the what is the Hilbert scheme of points and what we know about its components. Finally I will relate the components of the cactus variety (typically, one of these components would be the secant variety) to components of Hilbert scheme.

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