
LUCA CHIANTINI, Università di Siena, Italy
Geometric methods for the study of tensors

I will present geometric methods that, starting with the study of secant varieties to algebraic varieties, have direct application to the theory of rank and decomposition of tensors. Mainly, I will focus on the problem of the uniqueness of the decomposition (i.e. the identifiability problem). Using the concept of weakly defective varieties, one can prove criteria for generic identifiability, which go beyond the widely used Kruskal's bound. I will also show how results on the structure of the Hilbert functions of sets of points, can be applied to determine criteria for the identifiability of specific symmetric tensors.