ID de Contribution: **1** Type: **Non spécifié**

Basics of border apolarity

mardi 9 mai 2023 09:30 (1 heure)

The aim of my talk is to introduce the border apolarity idea toegether with the tools necessary for its proof. I will recall the setting of border apolarity as it was done my joint paper with Jarek Buczynski. There we have formulated a version of apolarity lemma for a toric variety embedded via very ample line bundle and have proved it in the characteristic zero case. The main tool is to use the multigraded Hilbert scheme of ideals in the Cox ring of the variety X with fixed Hilbert function. In the context of calculating border rank the most interesting is the component containing ideals of the subsets of r points in general position in X. Finally, when there is a group action on X, and the point (tensor, polynomial) is a fixed point of this action, we get an even more useful version of the apolarity lemma. I will give some examples of how one can use the border apolarity theorem to calculate the border rank of a tensor or polynomial.

Orateur: BUCZYNSKA, Weronika (University of Warsaw)