

Séminaire d'Algèbre, Topologie et Géométrie
Jeudi 9 février à 14h00
Salle I

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Title : *Threefolds with defect*

Abstract : On a smooth variety every Weil divisor is a Cartier divisor. An obvious question is then how singular a variety needs to be in order to have a Weil divisor that is not a Cartier divisor.

In the case of nodal hypersurfaces in \mathbb{P}^4 Cheltsov determined the minimal number of singular points to have such a Weil divisor.

We present two different approaches to reprove Cheltsov's result, one using the syzygies of the singular locus, the other using the explicit Noether-Lefschetz theorem of Green and Voisin. Each of the approaches can be extended to several other classes of singular threefolds.