Punctual Hilbert schemes of irreducible curve singularities

Wenhao Zhu*[1]

[1]Jussieu – Université Sorbonne Paris Cité – France

Résumé

We construct a tree structure on the set of sub-semimodules of a semi-group Gamma associated to an irreducible curve singularity (C,O). This tree encodes some aspects of the geometric structure of the punctual Hilbert schemes of (C,O). As an application, we compute the motivic Hilbert zeta function for some singular curves. We also study the geometry of subsets of these Hilbert schemes defined by constraints on the minimal number of generators of the defining ideal, and describe some of their geometric properties. The talk is partly based on joint work with Hussein Mourtada and Mounir Hajli.

*Intervenant