

Knots and Motives

jeudi 16 juillet 2020 13:00 (1 heure)

The pure braid group is the fundamental group of the space of configurations of points in the complex plane. This topological space is the Betti realization of a scheme defined over the integers. It follows, by work initiated by Deligne and Goncharov, that the pronilpotent completion of the pure braid group is a motive over the integers (what this means precisely is that the Hopf algebra of functions on that group can be promoted to a Hopf algebra in an abelian category of motives over the integers). I will explain a partly conjectural extension of that story from braids to knots. The replacement of the lower central series of the pure braid group is the so-called Vassiliev filtration on knots. The proposed strategy to construct the desired motivic structure relies on the technology of manifold calculus of Goodwillie and Weiss.

Summary

Orateur: Prof. HOREL, Geoffroy (University Paris 13)