

【CL7-3】

Topological complexity of subgroups of the braid groupsDavid Recio-Mitter, Mark Grant*University of Aberdeen*

Topological complexity (TC) was introduced in the early 2000s by Michael Farber in the context of topological robotics. It is a numerical homotopy invariant of a space which measures the instability of motion planning. Moreover, TC can also be defined for a (discrete) group π , as the TC of its Eilenberg-Mac Lane space $K(\pi, 1)$. In particular the TC of the full braid group B_n is by definition equal to the TC of the unordered configuration space of n points on the plane.

In this talk the TC of groups will be introduced and calculated for some subgroups of the full braid groups, for instance mixed (or coloured) braid groups and congruence subgroups. The methods used in the calculations are algebraic rather than topological.

This is joint work with Mark Grant.