

Sessão: Algebraic and Geometric Topology

Freiheitssatz on meridional knot groups and immersed planar surfaces

João Nogueira¹,

¹ CMUC, Universidade de Coimbra

The Freiheitssatz for 1-relator groups states that any subgroup generated by a proper subset of the generators is free. We consider a Freiheitssatz type question on meridional knot groups: whether every subgroup generated by a proper subset of minimal meridional generators is free. We discuss this question for knots in general and answer it for Montesinos knots. We also present its relation to meridional immersed essential planar surfaces in knot exteriors which leads us to a somewhat surprising result related to existence of immersed essential planar surfaces.