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Behaviors of meridional ranks under various operations

The meridional rank of a knot is the minimum number of nice generators needed to generate the fundamental group of the knot complement. It is not known whether the meridional rank of knots is additive under connected sum. The definition of meridional rank generalizes naturally to higher dimensional knots. In this talk, we will show that the meridional rank is not necessarily additive for surface knots. We will also discuss the exact values of the meridional ranks of some deform-spun knots and satellite 2-knots. This is joint work with Jason Joseph.