

Complementary Regions of Knot and Link Projections

Colin Adams (Williams College)

Every projection of a knot or link generates a collection of complementary regions, each with some number of sides. How do constraints on those regions and their number of sides constrain the resultant knots? We will show that in fact every knot and link has a projection with only triangles, quadrilaterals and pentagons for complementary regions, including the outer region. We therefore call (3,4,5) a universal sequence. We will discuss what other universal sequences there are and open questions that remain.