Flattening knotted surfaces

Eva Horvat
University of Ljubljana, Faculty for Education
eva.horvat@pef.uni-lj.si

A knotted surface $\mathcal{K}$ in the 4-sphere admits a projection to a 2-sphere, whose set of critical points coincides with a hyperbolic diagram of $\mathcal{K}$. We apply such projections, called flattenings, to define three invariants of embedded surfaces: the width, the trunk and the partition number. These invariants are studied for satellite 2-knots.