From two dimensions to three dimensions: applications of graph theory to knot theory

Gelasio Salazar
Universidad Autónoma de San Luis Potosí, México

If we project a knot to a plane we obtain a 2-dimensional curve, a *shadow* of the knot. We are interested in the following general question: which properties of a knot can be obtained from its shadow? In this talk we will illustrate how standard techniques from topological and extremal graph theory can be used to investigate this problem. No previous knot theory knowledge is expected from the audience (and very little knot theory knowledge should be expected from the speaker).