

GENERATING LARGE RANDOM KNOT PROJECTIONS

Yuanan Diao, Claus Ernst, and Uta Ziegler

Preprint no. 2003-12

Abstract

In this paper, the problem of generating large random knot projections is explored. Regular knot projections without the usual over and under information at each crossing can be viewed as 4-regular planar graphs. Two methods are introduced that generate 4-regular planar graphs that can be viewed as projections of prime knots. Various questions that arise along the way are explored.

1991 AMS Subject Classification: Primary: 57M25

Key words and phrases: Knot diagrams.