

$H(2)$ -Gordian Distance of Knots

Taizo Kanenobu

Osaka City University

Abstract. An $H(2)$ -move is a local move of a knot, which is performed by adding a half-twisted band. It is known an $H(2)$ -move is an unknotting operation. We define the $H(2)$ -Gordian distance of two knots to be the minimum number of $H(2)$ -moves needed to transform one into the other. We give several methods to estimate the $H(2)$ -Gordian distance of knots; many of them are generalizations of the methods used to estimate an $H(2)$ -unknotting number. Then we give a table of $H(2)$ -Gordian distances of knots with up to 7 crossings.