On intrinsically knotted or completely 3-linked graphs

Ryo Hanaki

Wasada University

Abstract. It is known that the graphs obtained from K_7 by Delta-Y moves are intrinsically knotted. Flapan and Naimi showed that there exists a graph obtained from K_7 by Delta-Y moves and Y-Delta moves which is not intrinsically knotted. We show that the graphs obtained from K_7 by Delta-Y moves and Y-Delta moves are intrinsically knotted or completely 3-linked. Here a graph is said to be intrinsically knotted or completely 3-linked if every embedding of the graph in R^3 contains a nontrivial knot or a 3-component link each of whose 2-component sublink is nonsplittable.