

Ehrenfest Model for Random Knots

Yurii Miniailyk¹

We consider the Ehrenfest model for random knots, where at each moment of time some k of n crossings of knot diagram change their types from one to another. Values of Kauffman brackets for knots from this model are studied and the average value is established. This model for the family of torus knots $T(2, q)$, where q is odd, is studied. We consider a sequence of random braids and define its length. We prove limit theorems for length of random braids which consist of 2 threads.

¹Richelieu Scientific Lyceum, Odessa, Ukraine. Email: uragenesis206@gmail.com