

1009-05-183

Sergei V Chmutov* (chmutov@math.ohio-state.edu), The Ohio State University, 1680 University Drive, Mansfield, OH 44906. *The Bollobás-Riordan polynomial and virtual links*. Preliminary report.

The Bollobás-Riordan polynomial is a three variable generalization of the Tutte polynomial to ribbon graphs. It is well known that the Jones polynomial of an alternating link is equal (up to a sign and a power of the variable) to a specialization of the Tutte polynomial of a planar graph corresponding to a link diagram. Using the Bollobás-Riordan polynomial instead of the Tutte polynomial allows us to generalize this classical result to checkerboard colorable virtual links as well as to non planar graphs. This is a joint work with Igor Pak (MIT). (Received August 15, 2005)