Meeting: 1000, Albuquerque, New Mexico, SS 14A, Special Session on Braids and Knots

1000-57-165 **Abhijit Champanerkar*** (achampanerkar@jaguar1.usouthal.edu), Department of Mathematics and Statistics, ILB 325, Mobile, AL 36608, and **Ilya Kofman** (ikofman@math.columbia.edu), Department of Mathematics, MC 4406, Columbia University, 2990 Broadway, New York, NY 10027. *Mahler measure of Jones Polynomials under twisting.*

We show that the Mahler measure of the Jones polynomial and of the colored Jones polynomials converges under twisting for any link. In terms of Mahler measure convergence, the Jones polynomial, like the Alexander polynomial, behaves like hyperbolic volume under Dehn surgery. For pretzel links $P(a_1, ..., a_n)$, we show that the Mahler measure of the Jones polynomial converges if all a_i approach infinity, and approaches infinity for a_i =constant if n approaches infinity, just as hyperbolic volume. We also show that after sufficiently many twists, the coefficient vector of the Jones polynomial and of any colored Jones polynomial decomposes into fixed blocks according to the number of strands twisted. The main proofs combine the representation theory of braid groups with linear skein theory. (Received August 23, 2004)