

Meeting: 1002, Pittsburgh, Pennsylvania, SS 1A, Special Session on Invariants of Knots and 3-Manifolds

1002-57-231 **Ted Stanford*** (stanford@nmsu.edu), Department of Mathematical Sciences, New Mexico State University 3MB, Las Cruces, NM 88003. *Presentations of groups of n -trivial knots*. Preliminary report.

Because knot groups have cyclic abelianizations, their lower central series stabilize after one term and are not useful for providing information about knots. Given a knot K and a positive integer n , it is easy to write a presentation for the group G of K which shows the generators of the commutator subgroup to lie in the n th group of the lower central series of G . However, it is in general not possible to write such a presentation with deficiency 1. The first Alexander ideal of G provides an obstruction, which corresponds to the obstructions in the Alexander polynomial for K to be n -trivial. (Received September 14, 2004)