

1135-20-3200

**Zachary Gates\*** (zg8bf@virginia.edu). *Finite presentability of Kac-Moody groups over finite fields.*

Kac-Moody groups are groups associated to a class of infinite-dimensional Lie algebras and exist over any ground field. They come with an associated Weyl group and hence Coxeter diagram. A Kac-Moody group  $G$  over  $F_q$  is always finitely generated, so it is natural to ask if it is also finitely presented. If all labels in the Coxeter diagram are finite, then Abramenko and Mühlherr showed that  $G$  is finitely presented with a few exceptions if  $q=2$  or  $3$ . It has been conjectured that  $G$  is never finitely presented if there is one infinite label in the Coxeter diagram. We show that this is the case for at least a few classes of such diagrams by utilizing a theorem of Gandini and choosing an appropriate space on which we let  $G$  act. (Received September 27, 2017)