

Chordal Coxeter Groups

John Ratcliffe

Vanderbilt University

Abstract. A solution of the isomorphism problem is presented for the class of Coxeter groups W that have a finite set of Coxeter generators S such that the underlying graph of the presentation diagram of the system (W, S) has the property that every cycle of length at least four has a cord. As an application, we construct counterexamples to two main conjectures concerning the isomorphism problem for Coxeter groups.