

## COXETER GROUPS, BRUHAT GRAPHS AND RICCI CURVATURE

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**Abstract:** The notion of discrete Ricci curvature for graphs was introduced in 1999 by Schmuckenschlager, it is part of the attempt to translate some notions of Riemannian geometry to graph theory. Among some more recent approaches to the discrete Ricci curvature there is a paper from Klartag et al. where the curvature of various Cayley graphs is computed. From these results arose the interest for the discrete Ricci curvature of graphs in Coxeter theory. During the talk I will recall the definition of discrete Ricci curvature together with some basic properties. I will then compute it for graphs associated to Coxeter groups, namely Bruhat graphs and weak order graphs. Finally I will describe some general results about the discrete Ricci curvature.