Knot groups and discreteness conditions

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Abstract

Various necessary discreteness conditions for groups of isometries of a hyperbolic 3-space were obtained by Jorgensen, Gehring, Martin, and Tan. All of them look as inequalities on traces of generators and their commutators. We will discuss groups of hyperbolic 3-orbifolds with singularities along knots, links, or graphs, which are extreme for these conditions.