AUTOMORPHISM GROUPS OF HYPERBOLIC LATTICES

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ABSTRACT. Based on the ideas of the classical Voronoi algorithm we present an explicit algorithm to compute generators for the automorphism group of an integral lattice L endowed with a hyperbolic bilinear form or equivalently, for the group of all unimodular matrices g with $gAg^tr = A$, where A is an integral, symmetric matrix with signature $(n-1,1)$.