

# Infinite products in geometry and arithmetic

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## Abstract

Some years ago R. Borcherds discovered a particular type of automorphic forms, which have certain infinite product expansions analogous to the Dedekind eta-function. Apart from the combinatorial information such Borcherds products provide, they turned out to be very useful in the study of geometric properties of modular varieties associated with orthogonal groups. We discuss some extensions and applications in the geometry and arithmetic of Heegner cycles.