Universität Hamburg
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**Fakultät für
Mathematik, Informatik
und Naturwissenschaften**

Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 16. Januar 2024

17 Uhr, Geom H4

Prof. Nils Scheithauer
(Technische Universität Darmstadt)

Reflective modular varieties and their cusps

Abstract:

Automorphic forms for orthogonal groups are natural generalisations of the classical modular forms. A large class of these automorphic forms is given by automorphic products. In the representation theory of infinite-dimensional Lie algebras and in the theory of moduli spaces reflective automorphic products of singular weight play an important role. We describe how these functions can be classified. It turns out that under certain regularity assumptions there are exactly 11 such automorphic forms. The corresponding modular varieties have a very rich geometry. We show that their 1-dimensional type-0 cusps are naturally parametrised by Schellekens' list. This is joint work with Janik Wilhelm and Thomas Driscoll-Spittler.

**Vor dem Vortrag (ab 16.30 Uhr) stehen im Foyer vor Hörsaal H4
Kaffee und Tee bereit**.