

Lattice methods for algebraic modular forms on classical groups

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007 Kemeny Hall, 4:00PM

Tea 3:30PM 300 Kemeny Hall

Abstract

Given an integral positive definite quadratic form Q , the generating series which records the number of representations of an integer $n = Q(x)$ is a modular form: the series transforms nicely under certain change of variables. The connection between such arithmetically-defined counting functions and modular forms is one piece of the Langlands philosophy, which predicts deep connections between representations of classical groups and modular forms in different guises via associated Galois representations. In this talk, we consider algorithms for computing systems of Hecke eigenvalues for classical groups in the language of algebraic modular forms, as introduced by Gross. This is joint work with Matthew Greenberg.

This talk should be accessible to graduate students.