

THE MATHEMATICS DEPARTMENT PRESENTS

A MATHEMATICS COLLOQUIUM

TUESDAY, January 22, 2008

BOND HALL 227

4:00 pm

Title: Arithmetic of the Fourier Coefficients of Modular Forms

Speaker: Stephanie Treneer, Dartmouth

Abstract: In the last decade, the theory of modular forms has provided an important framework in which to study questions in arithmetic number theory. Modular forms act as generating functions for many partition functions, divisor functions, and other combinatorial functions. We will review the role modular forms have played in establishing congruence properties for such functions, and give general results about congruences for the coefficients of weakly holomorphic modular forms. If time permits, we will also discuss new work involving harmonic Maass forms.

Refreshments will precede the talk at 3:30pm in Bond Hall 300
courtesy of Nora Hartsfield.