K-Theory, Quadratic Forms and Number Theory Seminar

Title: Appell-Lerch sums and their modular transformation properties

Speaker: Dr. Sander Zwegers (UCD)

Date: Wed 5th December 2007 at 4:00PM

Location: Mathematical Sciences Seminar Room

Abstract: In this talk, we'll discuss the so called Appell functions. These functions and their elliptic and modular transformation properties have been studied by Appell (1884), Lerch (1892), Mordell (1920), and others, and more recently by Polishchuk (2001) and Semikhatov-Taormina-Tipunin (2004) . Also, they show up in the theory of mock theta functions (Watson, 1936 and Ono-Bringmann, 2006). We'll discuss the elliptic and modular transformation properties of these functions in detail and give some general results. As an example, we get a generalization of a result by Ono-Bringmann, concerning the rank generating function.