



Seminar

K-Theory, Quadratic Forms and Number Theory

Title: Linear Mahler measures and double L-values of modular forms

Speaker: Dr. Masha Vlasenko (TCD)

Date: Thu 5th April 2012 at 4:00PM

Location: Mathematical Sciences Seminar Room (Ag 1.01)

Abstract: There are plenty of examples and conjectures where the Mahler measure of a Laurent polynomial in several variables is equal to a special value of a certain L-function. The simplest linear Mahler measures $M_n = m(1 + x_1 + \dots + x_n)$ were computed by Smyth for $n = 2, 3$ about 30 years ago and are not yet evaluated for larger n . Rodriguez Villegas showed that both of these cases can be treated using modular forms. We develop this approach and values of pairs of certain modular forms. Unfortunately the forms appear to be meromorphic in the most cases. This is joint work with Evgeny Shinder.