1073-11-95 **Riad Masri***, Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77843-3368. *The asymptotic distribution of traces of cycle integrals of the j-function.*

Cycle integrals of the classical modular j-function can be viewed as real quadratic analogs of singular moduli. Recently, Duke, Imamoglu, and Toth proved that the generating function for traces of these cycle integrals is a mock modular form of weight $1/2$ for $\Gamma_0(4)$. They also established an exact formula for these traces, and made a conjecture concerning their asymptotic distribution. In this talk I will discuss a proof of this conjecture. A key role is played by the equidistribution of integral points on 1-sheeted hyperboloids, which is used to establish cancellation in Weyl sums for quadratic roots. (Received July 28, 2011)