

1089-11-194

Alia Hamieh* (ahamieh@math.ubc.ca), Department of Mathematics, The University of British Columbia, Room 121, 1984 Mathematics Road, Vancouver, B.C. V6T 1Z2, Canada. *Ternary Quadratic Forms and Half-Integral Weight Modular Forms.*

Let k be a positive integer such that $k \equiv 3 \pmod{4}$, and let N be an odd positive square-free integer. In this talk, we show how to compute a basis for the two-dimensional subspace $S_{\frac{k}{2}}(\Gamma_0(4N), F)$ of half-integral weight modular forms associated, via the Shimura correspondence, to a newform $F \in S_{k-1}(\Gamma_0(N))$, which satisfies $L(F, \frac{1}{2}) \neq 0$. This is accomplished by using a result of Waldspurger, which allows one to produce a basis for the forms that correspond to a given F via local considerations, once a form in the Kohnen space has been determined. (Received February 14, 2013)