

1106-VQ-2078 **Thomas A Hulse*** (hulse@mast.queensu.ca). *Sign Changes of Fourier Coefficients of Half-Integral Weight Cusp Forms*. Preliminary report.

The author is able to demonstrate that given a particular half-integral weight cusp form with real Fourier coefficients, the coefficients on the square-free integers change sign infinitely often. More specifically, it is shown that this is the case when the form is an element of a subspace of new forms which is characterized by the Shimura correspondence. Expanding on the results of a 2011 paper co-authored with E.M. Kiral, C.I. Kuan and L. Lim, and making use of a 2013 sign-changing axiomatization theorem due to J. Meher and M. Ram Murty, this expanded argument hinges on a better understanding of the Rankin-Selberg L-function for averages of cusp forms shifted by additive character as well as when orthogonality of automorphic forms is preserved by this averaging. (Received September 15, 2014)