

# Philadelphia Area Number Theory Seminar

**Austin J. Daughton**  
Franklin & Marshall College

## Fourier Coefficients of Vector-Valued Poincare Series

**Abstract:** Poincare series are an invaluable tool in the construction of automorphic forms, and their coefficients have been well studied. In the classical case, one can use Lipschitz summation to get an exact formula that involves Kloosterman sums and Bessel functions. For vector-valued Poincare series, if the associated representation is "normal", one also obtains a nice exact formula that involves Bessel functions and "generalized" Kloosterman