

1125-AB-2602 **Edva Roditty-Gershon*** (er14265@bristol.ac.uk), United Kingdom. *Arithmetic statics over function fields.*

In my talk I will explain how to express the variance of sums of certain arithmetic functions in both arithmetic progressions and short intervals in terms of zeros of certain associate L-functions. This is in the context of the ring of polynomials over a finite field of q elements, in the limit q goes to infinity. This study uses several recent equidistribution results due to N. Katz to express the zeros of the L-functions in terms of matrix integrals over the unitary group. (Received September 20, 2016)