Number Theory Seminar

Correlations of Farey fractions and distribution of eigenvalues in large sieve matrices

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Abstract: The large sieve inequality provides an estimate for the largest eigenvalue of a matrix $A^*A$, where $A$ is a Vandermonde type rectangular matrix defined by the roots of unity of order at most $Q$. The talk will discuss some aspects concerning the behavior of the eigenvalues of these matrices when $N \sim cQ^2$, with $Q$ large and $c > 0$ constant. In particular, we are interested in asymptotic formulas for their moments, and in establishing the existence of a limiting distribution as a function of $c$. This is joint work with Maksym Radziwill.

Join Zoom Meeting https://uic.zoom.us/j/88173268700?pwd=aEhmTGpSOVhidWE4L1VVUnNhNVlvUT09

Meeting ID: 881 7326 8700 Passcode: 0t198j41

Friday, March 4 at 1:00 PM in Zoom