Philadelphia Area Number Theory Seminar

Charles Burnette

Drexel University

Laplace's Method for Sums Over Lattices

Abstract: Laplace's method is an umbrella term for techniques used to approximate integrals and summations involving functions of the form $e^{Mf(x)}$ where M is a large number and f is a twice-differentiable function. In this talk, I present a version of Laplace's method for sums over lattice point translates due to Greenhill, Janson, and Ruciński. As an example of this technique at work, I will then introduce the concept of nth order words offset by a fixed vector $\xi \in \mathbb{Z}^d$ and derive an asymptotic estimate of the number of such words as $n \to \infty$.

Wednesday, November 16, 2016
3:10–4:30PM

Bryn Mawr College
Department of Mathematics
Park Science Center **328**

Tea and refreshments at 2:50PM in Park 355