

Additive Divisor Sums: bounds and conjectures.

Nathan Ng, University of Lethbridge

Let $k \geq 3$ be a natural number and d_k is the k -th divisor function. For $h \in \mathbb{N}$, consider the additive divisor sum $D_k(x, h) = \sum_{n \leq x} d_k(n) d_k(n+h)$. I will discuss upper and lower bounds for this sum and the conjectured asymptotic formula for $D_k(x, h)$.