Institut für Analysis und Zahlentheorie

Zahlentheoretisches Kolloquium

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On the representation of k-free integers by binary forms

Dr. Stanley Yao Xiao

(University of Oxford)

Let F be a binary form of degree $r \geq 3$, integer coefficients, on-zero discriminant, and such that the largest irreducible factor of F has degree d. For a positive number Z and a positive integer $k \geq 2$ put $\mathrm{R}_{F,k}(Z)$ for the number of k-free integers in the interval $[-Z, Z]$ which is representable by F. We shall give an asymptotic formula for $R_{F,k}(Z)$ when $k > \min\{7d/18, \lceil d/2 \rceil - 2\}$. This is joint work with C.L. Stewart.

K. Lapkova