

Additive Combinatorics
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On Waring's problem for cubes of smooth numbers

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Abstract

The subject of the talk is representation of numbers as the sum of seven cubes of smooth numbers, or, numbers without large prime factors. It will be reported that every sufficiently large integer n can be written as the sum of seven cubes of natural numbers which have no prime factor exceeding $n^{\theta/3}$, with any fixed

$$\theta > \frac{2608\sqrt{2833} - 106527}{41(8\sqrt{2833} + 517)\sqrt{e}} (= 0.50659\dots).$$