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# Seminar des SFB/TRR 326 GAUS

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Freitag, 24.10.2025

**Ass. Prof. Dipramit Majumdar**

IIT Madras / Universität Heidelberg

spricht über das Thema

## **Some cases of cube sum problem**

An integer  $n$  is said to be a rational cube sum or simply a cube sum if  $n$  can be written as a sum of cubes of two rational numbers. For example,  $6 = (\frac{17}{21})^3 + (\frac{37}{21})^3$ . A cube-free integer  $n > 2$  is a cube sum if and only if the elliptic curve  $y^2 = x^3 - 432n^2$  has infinitely many solutions over the rational numbers. A recent result of Alpöge–Bhargava–Shnidman–Burungale–Skinner shows that a positive proportion of integers are cube sums and a positive proportion of integers are not.

We will discuss the cube sum problem for some special family of integers. This talk is based on joint works with De, Jha, Mondal, Shingavekar and Sury.

Ort: **INF 205, SR A**

Beginn: **13:30 Uhr**

Alle Interessenten sind herzlich eingeladen.

Prof. Dr. Otmar Venjakob