SEMINÁRIO DE TEORIA DOS NÚMEROS
Quarta-feira, 22 de setembro
Horário Especial: 10:00

Taxicab numbers and sums of two cubes: two stories and one theorem

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In this survey talk, we consider the distribution of numbers that are the sum of two positive cubes of integers. This theme is developed in two directions. First, we shall explain why a typical sum of two cubes as exactly two representations in this way. Those numbers that have more such representations, like 1729, have become known as taxicab numbers, and we discuss a heuristical argument that tells us how many such taxicab number there should be. Then, we follow a different path and figure out what analytic number theory has to say concerning the distribution of sums of two cubes in arithmetic progressions