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DIOPHANTINE EQUATIONS AND WHEN TO QUIT TRYING TO SOLVE THEM

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Abstract

The study of integer or rational solutions to polynomial equations with integer coefficients is one of the oldest areas of mathematics and remains a very active field of research. The most basic question we can ask about such an equation is whether its set of rational solutions is empty or not. This turns out to be a very hard question! I will discuss modern methods for proving that the set of rational solutions is empty, touching upon some recent work with Martin Bright concerning the wild part of the Brauer–Manin obstruction.

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Time: 17:00