Bernoullis Tafelrunde

Graduate Student Seminar

Thursday, 3 November 2016, 12:15-13:00
Seminarraum 00.003, Spiegelgasse 1

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Hilbert's tenth problem: Diophantine equations and decidability

Abstract

In 1900, Hilbert asked whether there exists an algorithm that, given a polynomial with integer coefficients in arbitrarily many variables and of arbitrary degree, determines whether this polynomial has a zero with integer coordinates or not. 70 years later, Matiyasevich showed that such an algorithm cannot exist, using work of Davis, Putnam and Julia Robinson. We present the history of and some ideas behind the proof as well as some interesting consequences of it.