A tourist's guide to the (first) incompleteness theorem

Ryan L. Acosta Babb

Week 10 - Term 2

WARWICK MATHEMATICS

POSTGRADUATE SEMINAR

Abstract

Trisecting an angle, squaring a circle, doubling a cube or solving a general polynomial equation using "elementary" operations all turned out to be impossible problems. But the crowning achievement of such "impossibility" results was Gödel's celebrated *incompleteness theorem*: there will always remain unprovable theorems in mathematics, no matter how many tricks we devise, or axioms contrive in vain attempts to patch the holes.

The main goal of this talk will be to explain exactly what this means (and what it *does not*), and to give a not-too-technical presentation of the surprisingly ingenious ideas which lie behind the proof.

Time

12 pm, 15^{th} March 2023

Location

Room B3.02

Organisers

Alvaro Gonzalez Hernandez
Katerina Santicola