Gale Stewart Games

11th December 2024

Abstract: When we play games, we usually think of finite games, such as chess, or tic-tac-toe. In this talk, we will examine a game that can go on infinitely, the two-player Gale Stewart Game, which is examined in Descriptive Set Theory. In this talk, in order of priority, we will examine:

Scenarios in which a player of the game has a winning strategy (The Gale Stewart Theorem) How in some versions of the game, neither player has a winning strategy

How assuming a winning strategy exists for all games, and by rejecting the Axiom of Choice, we can prove that every set is Lebesgue measurable.

Speaker: **Daya Singh**

Location: Gordon Street (25) Maths 505
Time: **2pm - 4pm**