

Imre Leader: *Independence for partition regular equations*

One of the cornerstones of Ramsey Theory is van der Waerden's theorem, which states that whenever we partition the natural numbers into finitely many classes there must be some class that contains an arithmetic progression (of any chosen length). Another is Schur's theorem, which states that whenever we partition the natural numbers into finitely many classes there must be some class that contains x, y, z with $x + y = z$.

Each of these theorems concerns the existence of a certain linear structure. The talk will concern a conjecture about how the existence of such structures is related. It will not assume any prior knowledge of Ramsey Theory.