

PMath 930 (Topics in Logic)

Countably infinite Ramsey theory

In this course, we will explore how ideas from the uncountably infinite, such as topological dynamics, ultrafilters, and set-theoretic forcing, can yield Ramsey theoretic results about countable objects. Possible topics include the infinite Ramsey theorem, the Galvin-Prikry theorem, Ellentuck's theorem, Hindman's theorem, Van der Waerden's theorem, the Hales-Jewett theorem, the Carlson-Simpson theorem, the Halpern-Lauchli theorem, Milliken's theorem, and big Ramsey degrees.