

The Hales–Jewett Theorem is a central result in Ramsey theory. Its density version was first proved by H. Furstenberg and Y. Katznelson in 1991 using Ergodic Theory. Since then, several other proofs have been discovered. The Carlson–Simpson Theorem is an extension of the Hales–Jewett Theorem and concerns the space of the left variable words. We will discuss some results in Density Ramsey Theory, mainly focusing on the density versions of the Hales–Jewett Theorem and the Carlson–Simpson Theorem, as well as, some consequences concerning the correlation of measurable events indexed by words.