

SUPER ULTRAFILTERS AND RAMSEY THEORY

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[Joint work with Nadav Samet.]

We introduce *super ultrafilters* a generalization of the notion of ultrafilter, which captures the underlying concept in Ramsey-theoretic theorems, such as van der Waerden's Theorem, Schur's Theorem, etc.

We establish several properties of super ultrafilters, generalizing both Ramsey's Theorem and its variant for ultrafilters on the natural numbers. We use them to confirm a conjecture of Kočinac and Di Maio, which is a generalization of a celebrated Ramsey-theoretic result of Scheepers, concerning selections from open covers.

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