Diana Piguetová
A canonical Ramsey-type theorem for finite subsets of $\mathbb{N}$

Abstract: T. Brown proved that whenever we color $\mathcal{P}_f(\mathbb{N})$ (the set of finite subsets of natural numbers) with finitely many colors, we find a monochromatic structure, called an arithmetic copy of an ω-forest.
In this paper we show a canonical extension of this theorem; i.e. whenever we color $\mathcal{P}_f(\mathbb{N})$ with arbitrarily many colors, we find a canonically colored arithmetic copy of an ω-forest. The five types of the canonical coloring are determined. This solves a problem of T. Brown.