

Abstract: The local character of non-forking independence states that there is a cardinal $\kappa(T)$ so that any complete type over a set A does not fork over a set $B \subseteq A$ with $|B| \leq \kappa$. This property of non-forking independence is characteristic of simple theories and is fundamental for the structure theory for these theories. Recently, in joint work with Itay Kaplan, we introduced *Kim-independence*, which corresponds to non-forking at a generic scale, and show that the class of NSOP₁ theories, a broad class of theories containing the simple theories and many other examples of interest, can be characterized by the good behavior of Kim-independence, e.g. Kim's lemma, symmetry, and the independence theorem. In recent joint work with Itay Kaplan and Saharon Shelah, we prove additionally a strong form of local character and show it characterizes NSOP₁. We will describe the basics of the theory of NSOP₁ theories and explain how the proof of local character involves some surprising set-theoretic ingredients: stationary logic and generalizations of the club filter.