On non-forking spectra

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Abstract

Given a first order theory T, we consider the function

$$f(\kappa, \lambda) = \sup |\{\text{types over a model } M \text{ of size } \lambda \text{ that do not fork over a submodel of size } \kappa\}|$$

(where $\kappa \leqslant \lambda$).

This function is called the non-forking spectrum of T and generalizes the usual stability function. We make some progress towards classifying possible non-forking spectra.