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Tamvana Makuluni* (makuluni@math.wisc.edu). *Bounded Quantifier Strong Minimality.*

A structure \mathcal{M} is said to be *strongly minimal* if for every definable family of subsets of M^1 there is some n so that a set in the family is infinite iff it has more than n elements. The complex numbers and \mathbb{Q} -vector spaces are classic examples. Strongly minimal structures have a notion of independence and a dimension which can be used to classify the structure and understand its definable structure. However, this notion of independence requires information of arbitrary quantifier-complexity, and so is not a priori computable on a computable structure.

This talk will investigate the notion of “bounded quantifier independence” which results from considering only a bounded quantifier fragment of the language. The resulting notion does not satisfy exchange or closure, however we demonstrate that it satisfies an analogous set of axioms and show how they can be used to similar effect. (Received August 30, 2016)