1092-08-77 **Jonah Horowitz*** (jonah.horowitz@gmail.com). *A Syntactic Approach to Linear Idempotent Mal'cev Conditions.*

Linear Idempotent Mal'cev conditions are key to the study of the complexity of constraint satisfaction problems. Naturally then, we wish to know how to distinguish those clones which satisfy a particular Mal'cev condition from those which do not. Building on the work of Freese and Valeriote (2009), we develop a class of Mal'cev conditions whose satisfaction can be reduced to a local question, when the clone under consideration is idempotent.

Initially we define the sort of Mal'cev condition we are examining and proceed to explain what properties a "local" version of that condition would have. We then prove, by inductive syntactic construction, that when enough such "local" versions are satisfied they produce a term which satisfies the original Mal'cev condition. We proceed to give examples of Mal'cev conditions already in use to which this result can be applied, in particular allowing us to determine whether or not a given finite idempotent algebra satisfies a particular one of these Mal'cev conditions. (Received July 29, 2013)