

1092-08-42

Alexander Wires* (slawkenbergius@hotmail.com). *Finite Taylor algebras, Pointing Terms, and Cubed Elements*. Preliminary report.

Following the use of *pointed elements* and *pointing terms* in the proof of robust satisfiability for algebras of bounded width (ECCC Report No.163,2011), Barto and Kozik recently announced that pointed elements can in fact characterize such algebras. A property of an algebra is said to be *hereditary* if every subalgebra inherits that property. They claim that an idempotent finite algebra generates a congruence meet-semidistributive variety iff the existence of pointed elements is hereditary.

We extend the notion of a pointing term and define *cubed elements* for algebras. We show a finite idempotent algebra generates a Taylor variety iff the existence of cubed elements is hereditary. We discuss the connection with admissible relations and the constraint satisfaction problem. (Received July 15, 2013)