

# COMPUTING THE TAME CONGRUENCE THEORY TYPE SET OF AN ALGEBRA

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We discuss the algorithm used in our algebra program to compute the type set of an algebra. This is a modification of the algorithm given in [1]. The type set of an algebra  $\mathbf{A}$  is the same as the type set of  $\beta/\beta_*$ ,  $\beta$  join irreducible in  $\mathbf{Con A}$ . We find a subtrace for each such  $\beta$  and then find its type.

We give bounds on certain subalgebras of  $\mathbf{A}^4$ , which show that both our algorithm and the one in [1] are faster than previously thought. We discuss a result distinguishing type **5** from type **4** using a greatest lower bound property of an associated structure.

The talk will be accessible with little or no background in Tame Congruence Theory.

## REFERENCES

- [1] J. Berman, E. Kiss, P. Pröhle, and Á. Szendrei, *The type set of a finitely generated variety*, Discrete Math. **112** (1993), 1–20.
- [2] D. Hobby and R. McKenzie, *The structure of finite algebras (tame congruence theory)*, Contemporary Mathematics, American Mathematical Society, Providence, RI, 1988.