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**Matthew D Moore\*** (notmattmoore@gmail.com). *The Undecidability of the Definability of Principal Subcongruences.*

For each Turing machine  $\mathcal{T}$ , we construct an algebra  $\mathbb{A}'(\mathcal{T})$  such that the variety generated by  $\mathbb{A}'(\mathcal{T})$  has definable principal subcongruences if and only if  $\mathcal{T}$  halts, thus proving that the property of having definable principal subcongruences is undecidable. Using this, we present another proof that A. Tarski's finite basis problem is undecidable. (Received February 19, 2013)