1090-03-88 Uri Andrews and Julia F. Knight* (knight.1@nd.edu). Strongly minimal theories with computable models.

In computable model theory, we may look for conditions guaranteeing that a theory T has a computable model. The expectation is that for a theory with "nice" model-theoretic properties, building a model should be simpler. Here we show that for a strongly minimal theory T in a finite relational language, if $T \cap \Sigma_{n+3}$ is Δ_n^0 uniformly in n, then there is a computable model. In the construction, for each $n \geq 1$, a Δ_n^0 worker assigns B_{n-1} types (made up of formulas that are Boolean combinations of Σ_n formulas) to tuples. Strong minimality is used in showing that there is an enumeration of the B_n types computable relative to T_{n+2} . Our assumptions mean that Δ_n^0 can check the consistency of B_{n-1} types $p(\overline{u}, \overline{x})$ with B_n -types $q(\overline{u})$. We hope for a better result. (Received February 19, 2013)