1090-03-336 **Uri Andrews**, **Mingzhong Cai** and **David Diamondstone***, ddiamondstone@gmail.com, and **Steffen Lempp** and **Joseph Miller**. *Degree Spectra of Theories.* Preliminary report.

A classic problem in computable model theory is the problem of computing a copy of a given structure. The difficulty of this problem is measured by the degree spectrum of the structure: the set of Turing degrees which can present a structure isomorphic to the given structure. Andrews and Miller recently introduced an analogue for theories, which measures how hard it is to present a model of the given theory. We give several interesting, natural examples of degree spectra of theories. For example, we show that for all n,

$$\{\mathbf{d} : \mathbf{d} \not\leq \mathbf{0}^{(n)}\}$$

is the degree spectrum of a theory. For $n \geq 2$, this collection of degrees is known, by a result of Andrews, Cai, Lempp, Miller, and Kalimullin, not to be the degree spectrum of a structure. (Received March 04, 2013)