1046-03-1799 **Tyler J Markkanen*** (markkanen@math.uconn.edu), 647 Cherry Brook Rd, Canton, CT 06019.
Separating the Degree Spectra of Structures.

In computable model theory, the notion of degree spectrum is very interesting when studying the computable properties of a countable structure $\mathfrak{A}$. The degree spectrum of $\mathfrak{A}$, denoted $\mathrm{DgSp}(\mathfrak{A})$, is the set $\{\deg(\mathfrak{B}) \mid \mathfrak{B} \cong \mathfrak{A}\}$, where $\deg(\mathfrak{B})$ is the Turing degree of $\mathfrak{B}$.

Now, pick your two favorite classes of structures: $\mathcal{C}_1$ and $\mathcal{C}_2$ (e.g., choose two from a list like: linear orderings, graphs, and boolean algebras). In this talk, we will investigate one kind of question in particular: "Given a structure $\mathfrak{A} \in \mathcal{C}_1$, is it the case that $\mathrm{DgSp}(\mathfrak{A}) \neq \mathrm{DgSp}(\mathfrak{B})$ for *any* structure $\mathfrak{B} \in \mathcal{C}_2$?" An answer of "Yes" will separate $\mathcal{C}_1$ from $\mathcal{C}_2$ in a computability theoretic way.

Specifically, we will answer "Yes" to this question when $\mathcal{C}_1$ = linear orderings and $\mathcal{C}_2$ = finite-component graphs. We will also see how the technique used to give this answer may lead to more general classes of structures for $\mathcal{C}_1$ and $\mathcal{C}_2$. (Received September 16, 2008)