DECIDABILITY, EFFECTIVE CATEGORICITY AND COMPLEXITY OF DESCRIPTIONS

EKATERINA FOKINA

We call a structure *categorical relative to n-decidable presentations* (or *autostable relative to n-constructivizations*) if any two n-decidable copies of $\mathcal{A}$ are computably isomorphic. For $n = 0$, we get the classical definition of a computably categorical (autostable) structure. Downey, Kach, Lempp, Lewis, Montalbán, and Turetsky proved that there is no simple syntactic characterization of computable categoricity. More formally, they showed that the index set of computable categorical structures is Π_1^1-complete. In this talk we study the complexity of index sets of structures that are n-decidable and categorical relative to m-decidable presentations, for various $m, n \in \omega$. This is joint work with S. Goncharov, V. Harizanov, O. Kudinov and D. Turetsky.