## Speaker: Noah Schweber

Title: Uniform reducibilities and counterexamples to Vaught's conjecture

**Abstract:** If A, B are countable structures in (possibly different) computable languages, we say A is Muchnik reducible to B if every copy of B computes a copy of A - nonuniformly. Montalban gave a characterization of counterexamples to Vaught's conjecture in terms of Muchnik reducibility: a theory T with uncountably many countable models is a counterexample to Vaught's conjecture iff the set of countable models of T is linearly ordered by Muchnik reducibility modulo some fixed real parameter ("on a cone"). We give a characterization of counterexamples to Vaught's conjecture in terms of \*uniform\* reducibilities, as an outgrowth of studying the degree structure of countable ordinals under Medvedev reducibility (= the uniform version of Muchnik reducibility).