

- ▶ NOAH SCHWEBER, *More effective cardinal characteristics*.

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A *cardinal characteristic of the continuum* is a measure of the difficulty of finding a "sufficiently large" set of reals for a given task - for example, the smallest cardinality of a set of functions from naturals to naturals such that every function is dominated by one in the set, or the smallest cardinality of a non-measurable set. While these are purely set-theoretic objects, they often have computability-theoretic analogues - degree notions which similarly measure the difficulty of creating sufficient sets, but this time from a computational perspective.

In this talk I'll present work, joint with Ivan Ongay-Valverde, on a new class of effective cardinal characteristics. They form the effective analogue of problems such as "How large does a set of 2-branching subtrees of $3^{<\omega}$ have to be in order for every element of 3^ω to be a path through one of the trees?" We will show that on the effective side we get multiple distinct hierarchies, and discuss their interactions with classical computability-theoretic notions such as computable traceability.

Time permitting, I'll also say a bit about another less-studied appearance of cardinal characteristics in computability theory - this time, in computable structure theory (this part joint with Uri Andrews, Joe Miller, and Mariya Soskova).