

- ▶ KLAUS AMBOS-SPIES, *Joins and meets in the computably enumerable cl -degrees*.
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Recently two variants of strongly bounded Turing reductions have been introduced. An *identity bounded Turing* reduction (*ibT*-reduction for short) is a Turing reduction where no oracle query is greater than the input while a *computable Lipschitz* reduction (*cl*-reduction for short) is a Turing reduction where the oracle queries on input x are bounded by $x + c$ for some constant c .

In our talk we discuss some algebraic properties of the partial orderings of the strongly bounded Turing degrees of the computably enumerable sets. In particular, we show that, for $r = ibT, cl$, the five element nonmodular lattice N_5 can be embedded into the partial ordering of the c.e. r -degrees by a map which preserves the least element whereas there is no such embedding of the five element nondistributive modular lattice M_3 . Moreover we show that every c.e. r -degree is meet reducible. It follows that, in the language $L(\leq, \vee, \wedge)$, the elementary Σ_1 -theory of the partial ordering of the c.e. r -degrees differs from the corresponding theories of the c.e. weak truth-table degrees and c.e. Turing degrees.

The results we present are joint work with Philipp Bodewig, Thorsten Kräling, and Liang Yu.