NON-SPLITTING ENUMERATION DEGREES

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There are not many properties that hold for all proper ideals of Σ^0_2-enumeration degrees. For example, it is known that there are ideals of Σ^0_2-enumeration degrees which contain only properly Σ^0_2 degrees except $\mathbf{0}_e$ (and hence no low-degree), while there are also non-trivial ideals consisting of only low-degrees. The authors have shown that any proper ideal contains a non-splitting degree, and thus the non-splitting degrees are downwards dense in the Σ^0_2-enumeration degrees. In proving this result, they also introduce a new form of permitting, which allows them to build below an arbitrary Σ^0_2-set.

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