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The tree property revisited (joint work with Spencer Unger)

An old open problem in set theory asks whether it is consistent that every  $\kappa > \aleph_1$  has the tree property. Motivated by this problem we prove:

Theorem (Cummings and Unger): It is consistent from large cardinals that there is a singular strong limit cardinal  $\kappa$  such that  $\kappa^{++}$  has the tree property, and there is no special  $\kappa^+$ -tree.