

# CHAIN CONDITIONS, LAYERED PARTIAL ORDERS AND WEAK COMPACTNESS

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ABSTRACT. Motivated by a conjecture of Todorčević, we study strengthenings of the  $\kappa$ -chain conditions that are equivalent to the  $\kappa$ -chain condition in the case where  $\kappa$  is a weakly compact cardinal. We then use such properties to provide new characterizations of weakly compact cardinals. This is joint work in progress with Sean D. Cox (VCU Richmond).

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