

Directed Ramsey number for trees

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Given an oriented graph H , the k -colour *oriented Ramsey number* of H , denoted by $\vec{R}(H, k)$, is the least integer n , for which every k -edge-coloured tournament on n vertices contains a monochromatic copy of H . We show that $\vec{R}(T, k) \leq c_k |T|^k$ for any oriented tree T , which, in general, is tight up to a constant factor. We also obtain a stronger bound, when H is an arbitrarily oriented path.