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Linear Extension Diameter and Reversal Ratio

The linear extension diameter of a poset is the maximum distance between two of its linear extensions. (Distance is the number of incomparable pairs appearing in opposite orders.) The reversal ratio $RR(\mathbf{P})$ is the ratio of the linear extension diameter to the number of incomparable pairs. We use probabilistic techniques to define posets \mathbf{P}_k for which $RR(\mathbf{P}_k) \leq C \log k$. We also examine bounding the reversal ratio in terms of dimension and width. Joint work with Graham Brightwell.