A SPLITTING PROPERTY OF MAXIMAL ANTICHAINS

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Abstract

In every *dense* poset $\mathcal{P}$ every maximal antichain S may be partitioned into disjoint subsets S_1 and S_2 , such that the union of the upset of S_1 with the downset of S_2 yields the entire poset: $\mathcal{U}(S_1) \cup \mathcal{D}(S_2) = \mathcal{P}$. To find a similar splitting of maximal antichains in posets is NP–hard in general.