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Ryan R. Martin, Heather C. Smith and Shanise Walker* (walkersg@uwec.edu). *Lower bounds for induced poset saturation.*

Given a finite poset \mathcal{P} , a family \mathcal{F} of elements in the Boolean lattice is induced- \mathcal{P} -saturated if \mathcal{F} contains no copy of \mathcal{P} as an induced subposet but every proper superset of \mathcal{F} contains a copy of \mathcal{P} as an induced subposet. The minimum size of an induced- \mathcal{P} -saturated family in the n -dimensional Boolean lattice, denoted $\text{sat}^*(n, \mathcal{P})$, was first studied by Ferrara et al. (2017).

We are interested in improving the lower bounds for $\text{sat}^*(n, \mathcal{P})$. In particular, for the 4-point poset known as the diamond, we improve upon a logarithmic lower bound. For the antichain with $k + 1$ elements, we improve upon a previously known lower bound. (Received September 17, 2019)