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Michael Ferrara, Bill Kay, Lucas Kramer, Ryan M. Martin, Benjamin Reiniger, Heather C. Smith* (hcsmith@davidson.edu) and **Eric Sullivan**. *Saturation for Induced Subposets*.

Graph saturation was first introduced in 1964 by Erdős, Hajnal, and Moon. The notion of saturation can be extended to posets as follows: Fix a target poset P . A family \mathcal{F} of points in the Boolean lattice is called P -saturated if (1) \mathcal{F} contains no copy of P as a subposet and (2) every strict superset of \mathcal{F} contains a copy of P as a subposet. For each n , the saturation number for P is the size of the smallest family in \mathcal{B}_n which is P -saturated.

Gerbner et. al. (2013) first studied saturation for the chain. We bound the induced saturation number for several small posets and prove a logarithmic lower bound for the saturation number for posets from a rich infinite family. (Received September 24, 2018)