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Katie Haymaker* (kathryn.haymaker@villanova.edu), **Allison Beemer** and **Christine A Kelley**. *Absorbing sets of LDPC codes from finite incidence structures.*

An absorbing set is a graph substructure that can impact iterative decoding algorithms for codes on graphs. We examine the presence of absorbing sets, fully absorbing sets, and elementary absorbing sets in low-density parity-check codes arising from certain classes of finite geometric structures. In particular, we prove the parameters of the smallest absorbing sets for finite geometry codes using a tree-based argument. Moreover, we obtain the parameters of the smallest absorbing sets for a special class of codes whose graphs are d -left-regular with girth g . (Received September 24, 2018)