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**Caroline Terry\*** (cterry3@uic.edu). *Zero-one laws for edge weighted graphs.*

Define a weighted graph  $G$  to be a pair  $(V, w)$  where  $V$  is a set of vertices and  $w : \binom{V}{2} \rightarrow \mathbb{N}$  is a weight function. Given integers  $k \geq 3$  and  $r \geq 2$ , define a  $(k, r)$ -graph to be a weighted graph  $(V, w)$  with the property that for any set of  $k$  points  $X \subseteq [n]$ ,  $\sum_{x \neq y \in X} w(x, y) \leq r$ . For each  $n \in \mathbb{N}$ , define  $F_{k,r}(n)$  to be the set of  $(k, r)$ -graphs with vertex set  $[n] = \{1, \dots, n\}$ . We present results on the approximate asymptotic structure of  $F_{k,r}(n)$  for various values of  $k$  and  $r$ . In special cases of  $k$  and  $r$  we refine these results to yield a logical 0-1 law. These results generalize existing 0-1 laws for the families of finite  $K_n$ -free graphs for  $n \geq 3$ . This is joint work with Dhruv Mubayi. (Received August 11, 2015)