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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)