

The diameter, connectivity and the giant component of the uniform random intersection graph

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A uniform random intersection graph $G(V, W, d)$ is defined on a set V of n vertices. There is an auxiliary set W consisting of m objects and each vertex $v \in V$ is assigned a random subset of objects $D(v) \subseteq W$ such that $D(v)$ is chosen uniformly at random from all d -element subsets of W . Given two vertices $v_1, v_2 \in V$ a pair (v_1, v_2) is an edge in $G(V, W, d)$ if and only if $D(v_1) \cap D(v_2) \neq \emptyset$.