

## 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  $D(v_1) \cap D(v_2) \neq \emptyset$ .