

**Balakin, G. V.; Kolchin, V. F.; Khokhlov, V. I.**

**Hypercycles in a random hypergraph.** (Russian) Zbl 0745.05036

Diskretn. Mat. 3, No. 3, 102-108 (1991).

Let  $G$  be a hypergraph. The authors define a hypercycle of  $G$  to be a set  $A$  of edges of  $G$  such that each vertex of  $G$  is incident with an even number of edges in  $A$ . Let  $S(G) = 2^{s(G)} - 1$ , where  $s(G)$  is the maximum number of independent cycles in  $G$ . It is shown that for  $r$ -regular random hypergraph with  $n$  vertices and  $t$  edges, each edge having at most  $r$  vertices,  $n, t \rightarrow \infty$ ,  $\frac{n}{t} \rightarrow \alpha$  there exists a constant  $\alpha_r$  such that  $MS(G) \rightarrow 0$  for  $\alpha < \alpha_r$  and  $MS(G) \rightarrow \infty$  for  $\alpha > \alpha_r$ .

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**MSC:**

05C65 Hypergraphs

05C38 Paths and cycles

Cited in **3** Reviews  
Cited in **2** Documents

**Keywords:**

hypercycles; random hypergraph