1161-05-15 **Asaf Ferber** and **Matthew Kwan***, Department of Mathematics, 450 Jane Stanford Way, Stanford, CA 94305. *Dirac-type theorems in random hypergraphs.*

For positive integers $d < k$ and n divisible by k, let $m_d(k,n)$ be the minimum d-degree ensuring the existence of a perfect matching in a k-uniform hypergraph. In the graph case (where $k = 2$), a classical theorem of Dirac says that $m_1(2,n) = \lceil n/2 \rceil$. However, in general, our understanding of the values of $m_d(k,n)$ is still very limited, and it is an active topic of research to determine or approximate these values. In this talk, we discuss a new "transference" theorem for Dirac-type results relative to random hypergraphs. Specifically, for any $d < k$, any $\varepsilon > 0$ and any "not too small" p, we prove that a random k-uniform hypergraph G with n vertices and edge probability p typically has the property that every spanning subgraph of G with minimum d-degree at least $(1+\varepsilon)m_d(k,n)p$ has a perfect matching. One interesting aspect of our proof is a "non-constructive" application of the absorbing method, which allows us to prove a bound in terms of $m_d(k,n)$ without actually knowing its value. (Received July 19, 2020)