1127-05-79 **Patrick Bennett**, **Louis DeBiasio**, **Andrzej Dudek** and **Sean English*** (sean.j.english@wmich.edu). *Large Monochromatic Components in Sparse Random Hypergraphs.*

It is known, due to Gyárfás and Füredi, that for any r-coloring of the edges of K_n, there is a monochromatic component of order $(1/(r-1)+o(1))n$. They also showed that this is best possible if $r-1$ is a prime power. Recently, Dudek and Prałat showed that the binomial random graph $\mathcal{G}(n,p)$ behaves very similarly with respect to the size of the largest monochromatic component. More precisely, it was shown that a.a.s. for any r-coloring of the edges of $\mathcal{G}(n,p)$ and arbitrarily small constant $\alpha > 0$, there is a monochromatic component of order $(1/(r-1)-\alpha)n$, provided that $pn \to \infty$. As before, this result is clearly best possible.

In this talk we present a generalization of this result to hypergraphs. Specifically we show that in the k-uniform random hypergraph, $\mathcal{H}^{(k)}(n,p)$ a.a.s. for any k-coloring of the edges, there is a monochromatic component of order $(1-\alpha)n$ and for any $k+1$ coloring, there is a monochromatic component of order $(1-\alpha)\frac{k}{k+1}n$. (Received January 23, 2017)