

1113-05-254

Bobby DeMarco and **Arran Hamm*** (hamma@winthrop.edu), 142 Bancroft Hall, Rock Hill, SC 29733, and **Jeff Kahn**. *On the Triangle Space of a Random Graph.*

The clique complex of a graph G is the (abstract) simplicial complex where the vertex set of each clique of size k corresponds to a $(k - 1)$ -face and it is denoted $X(G)$. M. Kahle conjectured a value of p so that a.s. the k^{th} homology group over a field Γ of $X(G)$ vanishes. We settle the case where $k = 1$ and $\Gamma = \mathbb{Z}_2$; in this setting, the problem reduces to showing that a.s. the triangle space equals the cycle space. If time permits, generalizations to higher homology groups and other fields will be discussed. (Received August 24, 2015)