1154-05-1848 **Patrick Bennett**, **Andrzej Dudek** and **Shira Zerbib***, Iowa State University, Ames, IA. *Large triangle packings and Tuza's conjecture in sparse random graphs.*

The triangle packing number $\nu(G)$ of a graph G is the maximum size of a set of edge-disjoint triangles in G. Tuza conjectured in 1981 that in any graph G there exists a set of at most $2\nu(G)$ edges intersecting every triangle in G. We show that Tuza's conjecture holds in the random graph $G = G(n, m)$, when $m \leq 0.2403n^{3/2}$ or $m \geq 2.1243n^{3/2}$. This is done by analyzing a greedy algorithm for finding large triangle packings in random graphs. (Received September 16, 2019)