

1079-05-399

Axel Brandt (brandtat@muohio.edu) and **Tao Jiang*** (jiangt@muohio.edu), Dept. of Math,
Miami University, Oxford, OH 45056. *Turan numbers of expanded hypergraphs*. Preliminary report.

Given an r -graph H , the Turán number $ex(n, H)$ is the largest number of edges in an n -vertex r -graph not containing H as a subgraph. Let F be an r -graph on t vertices, let \mathcal{H}_ℓ^F be the family of r -graphs obtained as follows: label the vertices as v_1, \dots, v_t , add $\ell - t$ new vertices v_{t+1}, \dots, v_ℓ , then for every pair v_i, v_j not covered by an edge of F add edge $\{v_i, v_j\} \cup D_{i,j}$ through a set $D_{i,j}$ of $r - 2$ new vertices (where the sets $D_{i,j}$ are not necessarily disjoint for different $\{i, j\}$). We denote the unique member of \mathcal{H}_ℓ^F in which the sets $D_{i,j}$ are pairwise disjoint by H_ℓ^F . Several results on $ex(n, \mathcal{H}_\ell^F)$ or $ex(n, H_\ell^F)$ were obtained by Frankl-Füredi, Goldwasser, Mubayi, Mubayi-Pikhurko, Sidorenko, and other authors. We obtain some new results down this line, some of which generalize or strengthen some of the old results. (Received January 18, 2012)