Upper bounds for Erdos-Hajnal coefficients of tournaments

Date Tuesday, February 8

Time 4 pm

Location 317 Mudd

Abstract: A version of the Erdos-Hajnal conjecture for tournaments states that for every tournament H every tournament G that does not contain H as a subtournament, contains a transitive subtournament of size $n^{\epsilon(H)}$ for some $\epsilon(H) > 0$, where n is the order of G. For any fixed tournament H we can denote by $\epsilon_{n_0}(H)$ the supremum over all $\epsilon \geq 0$ satisfying the following statement: every tournament G of the order $n \geq n_0$ that does not contain H as a subtournament, contains a transitive subtournament of size n^{ϵ}. The Erdos-Hajnal conjecture is true iff for every tournament H the limit $\lim_{n_0 \to \infty} \epsilon_{n_0}(H)$, denoted as $\xi(H)$, is positive. The main goal of this paper is to find the upper bounds for the parameter $\xi(H)$, called by us the Erdos-Hajnal coefficient of a tournament H, for many classes of tournaments H.