1026-05-73 **Louis Petingi*** (petingi@mail.csi.cuny.edu), 2800 Victory Boulevard, Building 1N, Staten Island, NY 10314. *On the Problem of Packing Steiner trees of a Graph.*

In this talk we are concerned with undirected graphs $G = (V, E)$ with distinguished set of vertices $K \subseteq V$, $|K| \geq 2$, called terminal vertices. A K-Steiner tree T of G is a minimal tree containing all the vertices of K. The K-edge-connectivity of a connected graph G with terminal vertices K, and denoted as $\lambda_K(G)$, is the minimum number of edges whose removal disconnect at least two vertices of K.

In this talk we will investigate the relationship between the maximum number of edge-disjoint K-Steiner trees and the K-edge-connectivity of a graph G. This problem known as the *Steiner tree packing problem* has attracted considerable attention from researchers in different areas because of its wide applicability.

In 2003, the EGRES group (the Ergervay Research Group on Combinatorial Optimization) conjectured that any graph $G = (V, E)$ with arbitrary set of terminal vertices K, $|K| \geq 2$, contains at least $\lfloor \lambda_K(G)/2 \rfloor$ edge-disjoint K-Steiner trees.

With regard to this conjecture, we will give a summary of results obtained hitherto and we will show that it can be proven to be true whenever a graph G is formed as the union of pair-wise edge-disjoint K-Steiner trees. (Received February 13, 2007)