985-05-162 **Ignacio M Pelayo*** (ignacio.m.pelayo@upc.es), Universitat Politecnica de Catalunya, Dpt. Matematica Aplicada III, Campus Nord, C/ Jordi girona-1-3, 08034 Barcelona, Spain, and **Merce Mora**, **Carmen Hernando** and **Carlos Seara**. *Convexity in graphs: Steiner sets, Hull sets and Geodesic sets.*

The most natural convexities in a graph $G = (V, E)$ are path convexities defined by a system $\mathcal{P}$ of paths in G that contain all geodesics. The canonical choices for $\mathcal{P}$ are provided by selecting all paths, triangle paths, minimal paths and geodesics. The standard convexity is the geodesic convexity in which a vertex set S is said to be (geodesically) convex if $S = I[S]$, where $I[S]$ (called the geodetic closure of S) is the set of all shortest $x - y$ paths (also called geodesics) for every $x, y \in S$. A set of vertices is called geodesic if $I[S] = V$, and it is said to be a hull set if $[S] = V$, where $[S]$ (called the convex hull of S) is the smallest convex set containing S. Certainly, every geodetic set is a hull set. Given a vertex set W, a Steiner W-tree is a tree containing W, of minimum order. Moreover, W is called an Steiner set if $S(W) = V$, where $S(W)$ (called the Steiner interval of W) is the collection of all vertices of G which lies on some Steiner W-tree. Contrarily to what was stated in a recent published paper [Disc. Math. 242 (2002), no. 1-3, 41–54.] we have proved that not every Steiner set is a geodesic set. Going one step further, we have approached the following question: Is every Steiner set a Hull set?.

(Received February 07, 2003)