1002-52-16   **Horst Martini*** (`martini@mathematik.tu-chemnitz.de`), Mathematical Faculty, University of Technology Chemnitz, D-09107 Chemnitz, Germany. *Some new results on geometric graphs.*
A finite set E of line segments in the plane $\mathbb{R}^2$ may be considered as a *geometric graph $G = (V, E)$*, where V is the set of vertices of the segments from E and no open segment from E contains a vertex from V. We present some new results on applications of certain types of geometric graphs in geometric convexity, e.g. referring to sets of constant width, to the number of maximal regular simplices determined by m points in $\mathbb{R}^n$, and to special convex bodies in close relation to the famous Borsuk problem from the combinatorial geometry of convex bodies. (Received June 17, 2004)