Abstract of the introductory talk by Gábor Damásdi. The intersection graph of a family of sets F is the graph with vertex set F and edge set consisting of pairs of intersecting elements of F. We present a nice theorem of Pawlik et al. from combinatorial geometry regarding intersection graphs of segments in the plane. The question is due to Erdős who asked whether the chromatic number of intersection graphs of line segments is bounded by a function of their clique number. We show that the answer is no even for triangle free graphs. Specifically, for each positive integer k we construct a triangle-free family of line segments in the plane with chromatic number greater than k.

Abstract of the main lecture by János Pach. A geometric graph is a graph drawn in the plane such that its vertices are points in general position and its edges are straight-line segments between these points. There are many interesting results and open problems about geometric graphs that are relevant to well known problems in discrete and computational geometry, such as the halving line problem (Erdős–Lovász–Simmons–Straus), questions on repeated distances and incidences (Erdős, Szemerédi–Trotter), etc. We survey some basic results in geometric graph theory and highlight some open problems whose solution may be within reach.