Geometry Seminar
April 26, 2005, Tuesday, 6:00 p.m.
Room 613, Courant Institute
251 Mercer Street, New York

# On geometric graphs with no pair of parallel edges

Rom Pinchasi
Technion, Israel Institute of Technology

**Abstract**

We provide two very short proofs to a theorem of Katchalski, Last, and Valtr solving a conjecture of Kupitz. We show that a geometric graph on $n$ vertices and with no pair of "parallel" edges has at most $2n-2$ edges. In a related work, joint with Amitai Pearlstein, we examine geometric graphs in $R^3$ and present an alternative proof for the upper bound number on the number of diameters determined by a set of $n$ points in $R^3$, and provide some generalizations. Several open problems will also be presented.

For further information contact Janos Pach at pachcims.nyu.edu, or visit our website: http://www.math.nyu.edu/seminars/geometry_seminar.html