Seminar on Combinatorial Computing
September 21, Wednesday, 6:30 p.m.
Room 6417, Graduate Center
365 Fifth Avenue, New York

On the Empty Hexagon Theorem

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Abstract

Tobias Gerken has recently solved a longstanding open problem of Erdős and Szekeres by showing that any sufficiently large set P of points in general position in the plane has six elements that form the vertex set of an empty convex hexagon. (A hexagon is "empty" if it has no elements of P in its interior.) Gerken proved that this statement is true for any P with $|P| > r(9)$, where $r(9)$ is the largest number of points that can be selected in the plane such that no 9 of them are in convex position. Valtr modified Gerken's proof to give a shorter argument for a weaker quantitative result.

For further information contact Janos Pach at pach@cims.nyu.edu, or visit our website
http://www.math.nyu.edu/p̃ach/public_html/combinatorics_seminar.html