Seminar on Combinatorial Computing
December 7, Wednesday, 6:30 p.m.
Room 6417, Graduate Center
365 Fifth Avenue, New York

A characterization of projective–planar signed graphs

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Abstract

A *signed graph* has a plus or minus sign on each edge. A simple cycle is *positive* or *negative* depending on whether it contains an even or odd number of negative edges, respectively. We consider embeddings of a signed graph in the projective plane for which a simple cycle is essential if and only if it is negative. We characterize those signed graphs that have such a projective-planar embedding. Our characterization is in terms of a related signed graph formed by considering the theta subgraphs in the given graph. (Joint work with D. Archdeacon.)

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