Seminar on Combinatorial Computing
October 19, Wednesday, 6:30 p.m.
Room 6417, Graduate Center
365 Fifth Avenue, New York

Simultaneous Embeddings of Planar Graphs

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Abstract

Given two graphs G and H on the same set of n vertices, when do they admit simultaneous straight-line embeddings on the same vertex set? More precisely, when can we draw them on the same vertex set in the plane so that no two edges belonging to G cross and no two edges belonging to H cross? We survey some recent developments related to this question. In particular we present a construction, due to Geyer, Kaufmann and Vrto, of two trees (sharing some edges) that do not admit such embeddings. It is not known whether there exist similar examples in which G and H have no edge in common.

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