Seminar on Combinatorial Computing
April 3, 2002, Wednesday, 6:30 p.m.
Room 6417, Graduate Center
365 Fifth Avenue, New York

On finding symmetries and related algorithmic problems

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Abstract

Finding symmetries of geometric objects is a natural and well-published problem of computational geometry; for convex polyhedra these problems were optimally solved in the middle of the 1980s and turned out to be strongly related to the problem of testing the congruence of two point sets. In this talk I will give an optimal algorithm also for non-convex three-dimensional polyhedra, and discuss some related problems like congruence-testing, finding symmetric subobjects, finding repeated patterns, and the associated geometric problems.

For further information contact Janos Pach at pachcims.nyu.edu, or visit our website: http://cs.gc.cuny.edu/ pach/