Colloquium on Combinatorial Computing
February 28, 2002, Thursday, 4:00 p.m.
Note special date, time, and place!
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365 Fifth Avenue, New York

Testing graph properties

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Abstract

Let P be a property of graphs. A testing algorithm for P is a randomized algorithm which, given the ability to make queries whether a desired pair of vertices of an input graph G on n vertices are adjacent or not, determines, with high probability, if G satisfies P or it has to be modified by deleting and adding to it at least epsilon n^2 edges so that it satisfies P. After a very brief discussion of some of the known results on testable graph properties, I will describe a new result on the complexity of testing if G contains no copy of a fixed given graph H. The essence of this result is that this complexity is much lower for every bipartite graph H than it is for any non-bipartite H.

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