Seminar

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Hadwiger number of

Title: graphs with small

chordality

Date: Friday, 17 Oct 2014

Time: 18:30-19:20

Univeristy of Athens,

Location: Department of

Mathematics, University

of Athens, room Γ33

Abstract

The Hadwiger number of a graph G is the largest integer h such that G has the complete graph K_h as a minor. We show that the problem of determining the Hadwiger number of a graph is NP-hard on co-bipartite graphs, but can be solved in polynomial time on cographs and on bipartite permutation graphs. We also consider a natural generalization of this problem that asks for the largest integer h such that G has a minor with h vertices and diameter at most s. We show that this problem can be solved in polynomial time on AT-free graphs when s>1, but is NP-hard on chordal graphs for every fixed s>1.

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