

MATEMATISKA INSTITUTIONEN  
STOCKHOLMS UNIVERSITET  
Avd. Matematik

## SJÄLVSTÄNDIGT ARBETE I MATEMATIK

Torsdagen den 13 juni kl. 10.00–11.00 presenterar Mattias Timonen sitt arbete “The class of distance-hereditary graphs, the Hamiltonian problems and a linear time algorithm ” (30 högskolepoäng, grundnivå).

Handledare: Jörgen Backelin

Plats: Sal 32, hus 5, Kräftriket

Sammanfattning: This paper deals with graphs and graph algorithms for solving the Hamiltonian Problems. We consider the class of distance-hereditary graphs, for which there exist linear time algorithms for determining whether a given distance-hereditary graph is Hamiltonian or not. We present such an algorithm. We also give a new idea on the existence of Hamiltonian cycle in graphs that are not trivially non-hamiltonian. We give an algorithm, based on this new idea, for solving the Hamiltonian Problem on graphs with maximum degree greater than one. Each algorithm is exemplified.

Alla intresserade är välkomna!