

Department of Applied Mathematics and Statistics
The Johns Hopkins University

SEMINAR

Klas Markström
Department of Mathematics
and Mathematical Statistics
Umeå University, Sweden

October 22, 2009
304 Whitehead Hall
Refreshments: 3:30 p.m.
Seminar: 4:00 p.m.

GUESSING GAMES, CORRELATIONS, AND PERFECT GRAPHS

ABSTRACT

There are several mathematical games in which the participants are supposed to guess the color of some unseen object, either using the guesses of the other participants or minimizing the number of incorrect guesses. The following game was introduced by Søren Riis. A group of people are given dice and each person throws the die so that everyone else can see the outcome, but nobody can see their own result. Next everybody has to guess their own results without communicating with the others, and the group wins the game if everybody guesses correctly.

In this talk I will discuss how a version of this game where each player can see the throws of only some subset of the other players relates to graph colorings, linear programming, and entropy inequalities for random variables.