Institut for Matematik og Datalogi
Syddansk Universitet

December 1, 2004
JFB

DM19 – Algorithms and Complexity – E04 – Lecture 13

Announcement 1

On Tuesday, December 7, Rasmus Pagh, IT University, will speak at 14:15 in IMADA's seminar room on "Ready, Set, Approximate!".

Announcement 2

The sign-up sheets for the oral exam are in IMADA's departmental office now. Please sign up in good time. The dates of the exam are January 3, 4, and 5. The questions can be found on the course's home page.

Lecture, November 29

We finished with approximation algorithms from chapter 35 in the textbook (section 35.4, especially Theorem 35.6) and randomized rounding for MAX-SAT from the notes from Motwani and Raghavan's book *Randomized Algorithms*. We also began on branch-and-bound from the notes by Jens Clausen.

Lecture, December 6

We will finish with branch-and-bound from the notes and begin on heuristics (also from the notes), covering up through and including section 10.4.2 on genetic algorithms.

Lecture, December 13

We will finish with heuristics from the notes and begin on on-line algorithms, also from the notes.

Problems to be discussed December 16 and December 10

1. From Jens Clausens's notes on branch-and-bound, do exercises 2, 3, 4, 6.

2. Define a branch-and-bound algorithm for solving the independent set problem.

3. Try the nearest insertion construction heuristic on the Bornholm example from Figure 3 in the notes by Jens Clausen.

4. Try the 2-opt heuristic on the same example.