DM69 — Lecture 11

Lecture 11 — April 20

- Greedy algorithms and matroids (Cormen 16.1–16.2 and 16.4–16.5).

Problem session April 22

Holiday (St. Bededag)

Problems for April 29

1. Problem 3.74 in Bang-Jensen and Gutin

2. Explain the example on pages 154–158 in Bang-Jensen and Gutin.

3. Problem 3.73 in Bang-Jensen and Gutin.

4. Problem 3.77 in Bang-Jensen and Gutin.

5. Give an efficient algorithm for finding a maximum matching in a tree.

Exam questions

For the material we have covered so far, the following are the possible main questions.

1. Shortest paths in weighted graphs

2. The maximum (s, t)-flow problem and the minimum (s, t)-flow problem

3. Polynomial algorithms for maximum flows

4. Minimum cost flows

5. Matchings: characterizations and algorithms

6. The primal-dual algorithm for the transportation and the assignment problem

7. The RSA cryptosystem