DM508 – Algorithms and Complexity – 2014
Lecture 3

Lecture, April 9

Magnus Gausdal Find lectured, finishing sections 3.2, 3.3 and 3.5 of the DM508 notes. , plus median finding from chapter 9 (section 9.3) in the textbook.

Lecture, April 22

We will cover the algorithm for median finding from section 9.3 in the textbook. We will begin on NP-completeness, from chapter 34 in the textbook and the section by Papadimitriou and Steiglitz from the course notes.

Lecture, April 23

We will continue with NP-Completeness, defining reductions (section 34.3 in the textbook) and showing that 3-SAT and CLIQUE, are NP-Complete. The latter two reductions are in sections 34.4 and 34.5 in the textbook.

Problems to be discussed in U30a on April 28, 12–14

Do problems:

1. 34.2-8.

2. 34.3-7 (34.3-6 has the definition of complete you need).

3. 34.4-4, 34.4-5, 34.4-6, 34.4-7.

4. 34.5-1, 34.5-2 (for 34.5.2, try a reduction from Vertex Cover, too).

If not all problems are finished, the most important ones missed will be done later.