

## On-Line Algorithms – F09 – Lecture 2

### **Lecture, April 6**

We began with an introduction to the course. Then, we covered up through Theorem 1.1 in chapter 1 in the textbook.

### **Lecture, April 15**

We will continue with chapter 1 in the textbook, probably getting up through section 1.6.

### **Lecture, April 27**

We will finish chapters 1 and 2 in the textbook.

### **Problems for April 29**

1. Problems that we didn't finish on February 8.
2. Exercise 1.11 in the textbook. To make the factoring lemma hold in the full cost model, change the definition of  $\text{ALG}(x, j)$  to add one for the positive comparison. Try adding something to the original definition, even in the case where  $r_j$  is in front of  $x$ . Then, when comparing MTF to OPT, try looking at two different times where MTF pays the maximum, while OPT pays the minimum.
3. Exercise 1.12 in the textbook.
4. Give a request sequence for **TIMESTAMP**, where **TIMESTAMP**'s performance ratio is asymptotically 2 in the partial cost model. You may assume any starting configuration.