

# DM553 – Complexity and Computability – 2018

## Lecture 9

### **Lecture, March 13**

We finished chapter 4.

### **Lecture, March 15**

We will begin on chapter 5, starting with section 5.3. We will skip the last part of section 5.1, having to do with reductions via computation histories.

### **Lecture, March 20**

We will finish chapter 5. Then, we will begin on NP-Completeness. starting with section 7.3 in Sipser's book, introducing definitions and showing that 3-SAT and CLIQUE are NP-Complete. Note that some of this is also in chapter 34 in the CLRS book.

### **Problems to be discussed on March 21**

1. Page 239: 5.3, 5.4, 5.5, 5.6, 5.9, 5.10, 5.11
2. Page 240: 5.16, 5.18
3. Page 241: 5.28.

### **Study group suggestion**

Try preparing a presentation of the proof that the Post Correspondence Problem is undecidability.