## Summary of Lecture 3

Reading: [Arora-Barak (AB)] Chap 1.6, 2.1, 2.6, 2.7; Katz's Lecture Note 2.

- The use of *reduction* as a basic technique in the study of complexit theory.
- The definition of the complexity class P and criticisms of P as the *efficiently-computable* class of problems.
- Two definitions of the complexity class NP and why they are equivalent.
- Natural problems that are in NP and the definition of CoNP.
- The simple fact that P=CoP, whereas it is a highly non-trivial question to see the relation between NP and CoNP.