

# Theoretical Machine Learning - COS 511

## Homework Assignment 4

*Due Date: two weeks from class in which this was announced, in class*

- (1) Consulting other students from this course is allowed. In this case - clearly state whom you consulted with for each problem separately.**
- (2) Searching the internet or literature for solutions, other than the course lecture notes, is NOT allowed.**

### **Ex. 1-3:**

The following questions are taken from the book draft on online convex optimization (reading material number 1).

- (1) problem 2 in chapter 5.
- (2) problem 5 in chapter 5.
- (3) problem 11 in chapter 5.

### **Ex. 4:**

Describe a boosting algorithm based on the Online Gradient Descent algorithm. Give a bound on its running time.