

# Lecture 1: Introduction

8th January, 2016

- **Administrivia.**

- Welcome to E0234, Randomized Algorithms.
- The venue for the lectures will be ?? and the timings will be Wednesdays and Fridays, 2 to 3:30pm.
- Your Instructors are **Arnab Bhattacharyya** and **Deeparnab Chakrabarty**.
- Course Webpage: ???
- **Grading:**
  - \* Exams: Midterm (30%) and Endterm (40%).
  - \* Scribing: (10%).
  - \* Homeworks (20%).
- To make the most use of your time, you should (a) attend lectures as many as possible, and (b) earnestly do **all** the homeworks which will be assigned regularly (most-weekly). We expect that apart from the 3 hours of lecture, your workload will be around 6-8 hours per week to understand the material for the week and do the assignments.
- **Honor Code.** There will be 0% tolerance for plagiarism and copying. If suspected, all parties will be immediately awarded 0 and given a warning, and consequences will be direr for repeat offenders.

- **What are Randomized Algorithms?** These are algorithms that have the extra (magic) ability of tossing coins. For instance, in Python, if you run the following code:

```
from random import *  
t = randint(1,6)
```

then at every run, the variable `t` would take an integer value uniformly at random from 1 to 6. It is as if the piece of code will roll a dice somewhere and return the value it rolls! At this point, if you've never encountered randomized algorithms before, you should be amazed. Rolling dice and tossing coins are all well and good in real physical life, but how and where is the CPU going to toss a coin? Indeed, this is a deep question – but if you think about it, you should ask the same question for physically tossing coins as well. In any case, for most of the course we will *take for granted* that we have access to random coins in the CPU.