CSE 525: Randomized Algorithms and Probabilistic Analysis

Welcome!!
Administrivia

• **Anna Karlin**
  – karlin@cs
  – Office hours: TBD

• **Dorna Abdolazimi**
  – dorna.abdolazimi@gmail.com
  – Office hours: Thursday, 5:30-6:30pm

• **Course web page:**
Background expected

• Introductory probability at the level of CSE 312:
  – Probability space, random variables, basic distributions, independence, conditional probability, expectation, ...

• Algorithms at the level of CSE 421
  – 521 is formally a prerequisite, but we don’t generally require it..... There will be a little bit of overlap.

• “Mathematical maturity”
  – Linear programming
  – Linear algebra
Workload

• 5-6 problems sets (submission on Gradescope)
  – 6 late days over the quarter, at most 2 on any one pset. None on the final pset.

• Project (paper and possible presentation) on a research paper relevant to the course and to you!
  – Can/should work in pairs.
  – Details coming
My goals for the course

• To teach you the fundamental techniques that are useful in the design of randomized algorithms and in the analysis of probabilistic processes.

• To show you how much fun, beautiful and clever the myriad of ideas in this space are.

• To convince you that no matter what area you end up working in, knowing more about probabilistic analysis will serve you well.

• To help you develop a toolkit that is crucial if you want to pursue any theoretical research