Spring 2017 Prof. Rafail Ostrovsky

Introduction to Algorithms and Complexity

First lecture: Monday, April 3rd, 12noon-1:50PM **CS180**

When/where: SPRING 2017, M,W 12noon-1:50pm Boelter 3400;
Prof: Rafi Ostrovsky;
Office: 3732D Boelter Hall;
Office hours: Each Wednesday 2-3pm, (starting from April 12) or by appointment.

TA's:
LI, ANG – BOELTER 2760 Friday 12:00pm-1:50pm
KAPBASOV, ARMAN – BOELTER 5440 Friday 2:00pm-3:50pm;
HE, YUAN – BOELTER 5440 Friday 10:00am-11:50am;

Description: Introduction to design and analysis of algorithms. Design techniques: reduction, divide-and-conquer, greedy method, dynamic programming, network flow; choice of data structures and representations. We will cover complexity measures including time and space, upper and lower bounds, asymptotic complexity; NP-completeness, use of randomness. If time permits, I will present advanced topics, such as PSPACE and other complexity classes.
Prerequisites: CS32, CS61.
Textbook: *Algorithm Design* by Jon Kleinberg and Eva Tardos, published by Addison-Wesley.

Grading Policy:

- Homework: 15%. HW will be assigned most weeks on Wednesday, due the following Wednesday.
- Midterm 40%. The midterm will be held on **May 1st** during normal lecture hours.
- Final 45%. The final will be held during final exam week. All exams will be closed book.