CMSC 858M: Algorithmic Lower Bounds: Fun with Hardness Proofs
Spring 2019
Course Agenda

Instructor: Mohammad T. Hajiaghayi
TA: Alireza Farhadi

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1 Overview

This document details the administrative portion of the lecture from the first day of class. Particularly, this document describes the handouts provided, and the discussions about grading, homeworks (assignments), scribe notes, exam, paper presentation, project, and communication.

2 General Information

- Course Website: http://www.cs.umd.edu/ hajiagha/ALB19/ALB19.html.
- Physical Location: CSI Building, Room# 3118
- Time: TuTh, from 3:30 PM to 4:45 PM.
- Office Hours: The hour after class (confirm it in the class though), or by appointment.

3 References

Since to the best of our knowledge this is the first course by Erik Demaine at MIT and myself ever taught with focus on algorithmic lower bounds, there is no particular textbook for this course, but there are two recommended books and several useful websites.

- Computers and Intractability A Guide to the Theory of

- NP-Completeness: book by Michael R. Garey and David S. Johnson
- Johnson's followup NP-completeness Columns
- Games, Puzzles, & Computation: book by Robert A. Hearn and Erik D. Demaine
- Complexity Zoo
- A compendium of NP optimization problems

Also our handwritten notes, scribe notes, and other references will be available from course webpages (see also the sister course to this course at MIT by Erik Demaine taught simultaneously at http://courses.csail.mit.edu/6.890/).

4 Honor code

We take the Code of Academic Integrity and the University of Maryland Student Honor Pledge ("I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination") very seriously. For details, see Code and Pledge. Our policy is that "authorized" assistance includes talking together about assignments and approaches to them, but *not* writing up with assistance or collaboration on—or with access to another's—actual final materials to hand in.

Also note that posting project/assignment/homework solutions publicly (e.g., in a public online location) is a violation of your academic integrity policy. See http://www.ugst.umd.edu/courserelatedpolicies.html for more information.

5 Requirements

Grading for this course can be broken down into the following categories:

Three Homework Assignments:	15% (5% each)
Class Discussions:	5%
Exam:	35%
Presentation:	15%
Project:	30%

However a strong project can easily help other sections of your grade as a bonus.

6 Homework

Three homeworks are given during the semester and they are due two weeks after in the class (or in the mailbox of the instructor).

7 Exam

The exam will be based on what is covered in class (see the exact date and time in the course webpage). If you learn what is covered in the class notes, assignments, and you understand the concept and theory, you should be okay.

8 Paper and Project

You are to present a published paper specific to what we cover in this course. It is encouraged for the presented paper to be linked to the topic you are researching for your project, though this is not mandatory. Projects may be done in groups of two or three, though exceptions can be made. Please start working on the project early, and email hajiagha@cs.umd.edu, who will coordinate projects. The presentation itself should be an hour long: half the time should be spent presenting the topic, and the remaining half should be used to present your project. The project paper should be 15 pages in length (in 11pt font and one inch margin all around): The first 5 pages should be a nice lecture notes of your paper presentation; and the remaining 10 pages should contain a general background about the topic you are researching and details of your new findings. A strong project can easily help other sections of your grade as well.

9 Communication

An email was sent out to everyone who registered for the course. The instructor's email address is: hajiagha@cs.umd.edu. The TA's email address is: farhadi94@gmail.com. Please add the following to the subject line when emailing the instructor:

- "cmsc858m" (all lowercase) for course related emails.
- "assignment" (all lowercase) for assignment related emails.
- "scribe" (all lowercase) for scribe related emails.
- "project" (all lowercase) for project related emails.
- "exam" (all lowercase) for exam related emails.

Also, feel free to send the instructor an email with any suggestions you have for the class with the subject line "suggestion".