01 Course Information

CS216 Algorithm Design and Analysis (H)

Instructor: Shan Chen

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Instructor – About Me

CHEN Shan (陈杉)

- **Affiliation:** Department of Computer Science and Engineering, SUSTech

- **Office:** Room 614, South Tower, CoE Building

- **Homepage:** https://shanchencrypto.github.io/

- **Research interests:** cryptography and information security
  - ➢ current focus: real-world cryptography

Course Information

- **Platforms:**
  - ➢ Course website: https://bb.sustech.edu.cn
  - ➢ Lab online judge: http://10.16.63.78/   (Please register with your student ID)

- **Grading scheme:**
  - ➢ Assignments: 20%   Labs: 40%   Final exam: 40%

- **Q&As:**
  - ➢ Open office hours: 16:00-18:00 on Wednesdays (excluding holidays) at my office
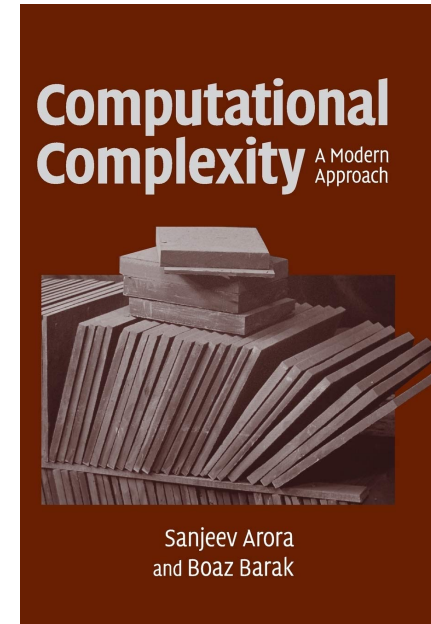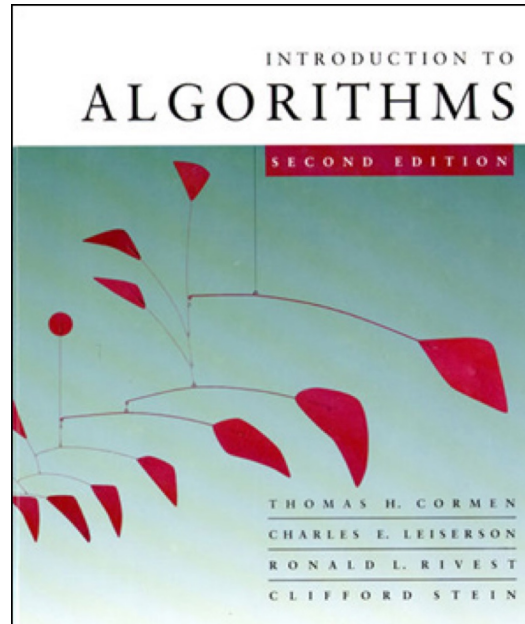 - ➢ QQ group chat (with all TAs) for online Q&A: 984582610
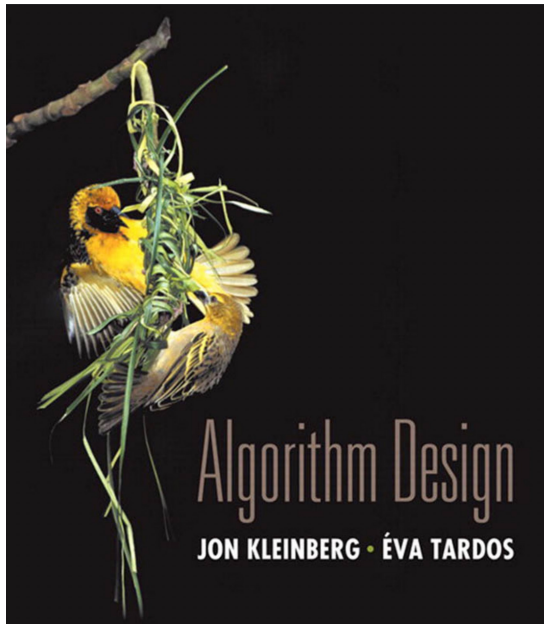
- **Teaching assistants:**
  - ➢ Assignments: PAN Kaige (潘凯歌) 12331240
  - ➢ Labs: ZENG Yijun (曾益军) 12432654 WANG Yuchen (王宇琛) 12432704
            LI Haoyang (李昊洋) 12332414

Resources

- **Textbook:** Algorithm Design

- **Reference books:**
  - ➢ Introduction to Algorithms
  - ➢ Computational Complexity: A Modern Approach

Course Overview

- Algorithm Analysis

- Stable Matching

- Greedy Algorithms

- Divide and Conquer

- Dynamic Programming

- Network Flow

- Computational Intractability

- Randomized Algorithms

About Plagiarism

- **Assignment 0** (please submit it on Blackboard by Mar 11)
  - ➢ Please fill out the Undergraduate Students Declaration Form with your handwritten signature (中文签名). Otherwise, your course grade will be 0.

南方科技大学 | 计算机科学与工程系
SOUTHERN UNIVERSITY OF SCIENCE AND TECHNOLOGY | Department of Computer Science and Engineering

本科生作业承诺书

本人＿＿＿＿＿＿（学号＿＿＿＿＿＿）本学期已选修计算机科学与工程系

＿＿＿＿＿＿课程。本人已阅读并了解《南方科技大学计算机科学与工程系

本科生作业抄袭学术不端行为的认定标准及处理办法》制度中关于禁止本科生

作业抄袭的相关规定，并承诺自觉遵守其规定。

About Plagiarism

- **Plagiarism policy:**
  - ➢ If plagiarism is found in a student's assignments, course projects, or exams, the corresponding assignment, course project, or exam will receive a score of 0; If the same student is found to have plagiarized for the second time in the same course, the grade for that course will be 0 points.
  - ➢ If a student does not sign the Declaration Form or cheats in the course, including regular assignments, midterms, final exams, etc., in addition to the grade penalty, the student will not be allowed to enroll in the two CS majors through 1+3 mode, and cannot receive any recommendation for postgraduate admission exam exemption and all other academic awards.
  - ➢ As it may be difficult to determine who actually wrote it when two assignments are identical or nearly identical, the policy will apply to BOTH students, unless one confesses having copied without the other knowing (uploading your code to public sites like GitHub is considered as one having the knowledge).

About Plagiarism

- **What is OK, and what is not OK?**

  ➢ It's OK to work on an assignment with a friend, and think together about the program structure, share ideas and even the global logic. At the time of actually writing the code, you should write it alone.

  ➢ It's OK to use in an assignment a piece of code found on the web, as long as you indicate in a comment where it was found and don't claim it as your own work.

  ➢ It's OK to help friends debug their programs (you'll probably learn a lot yourself by doing so).

  ➢ It's OK to show your code to friends to explain the logic, as long as the friends write their code on their own later.

  ➢ It's NOT OK to take the code of a friend, make a few cosmetic changes (comments, some variable names) and pass it as your own work.

Acknowledgements

- My slides are edited from the slides used in
  - ➢ CS 216 Fall 2022 instructed by Prof. YU Shiqi at CSE SUSTech
- The above slides and most of my slides are further based on the slides by Kevin Wayne in Princeton University:
  - ➢ https://www.cs.princeton.edu/~wayne/kleinberg-tardos/
- Some of my other slides are based on the slides used in the following universities:

A few words before our class starts…

- This course is taught **bilingually**:
  - ➢ The main lectures are taught in English:
    - ✓ I hope you can practice English during class, and I am sure you will benefit from it!
    - ✓ 希望大家在课堂上练习用英语提问（不会的部分用中文代替）
  - ➢ The lab lectures are taught in Chinese:
    - ✓ Me, our TAs, and even your classmates may contribute to the lab lectures.
    - ✓ If you were/are an OIer/ACMer, please help your classmates with their lab assignments. You will benefit from this experience!

- Please ask questions in class and your classmates will appreciate that!