CS4384/5349 Automata Theory

(ECSS 2.311 4:00-5:15pm MW)

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Textbooks : Ding-Zhu Du and Ker-I Ko, *Problem-Solving in Automata, Languages, and Complexity*, John-Wiley, 2001;

Topics :

Week 1: Strings and languages;

Week 2: Regular sets and graph representation;

Week 3-6: Finite automata;

Week 7-8: Contex-free languages and push-down automata.

Week 9-10: Turing machines;

Week 11-12: Computability and undecidability;

Week 13: Computational complexity;

Week 14: NP-hard problems.

Assignments : There will be five assignments (only four top schores will be counted). Each assignment will be due at the time as shown in my homepage. **No late assignment will be accepted**. It is possible that the exam for cs5349 may contain a different set of problems from cs4384.

Examinations : There will be three examinations. The 1st midterm examination (for Chapters 1-2) is on 10/1, the 2nd midterm examination (for Chapter 3-4-5) is on 11/10. The final examination (for Chapters 5-7) is at 2pm on 12/12. All examinations are in class (open books/notes). It is possible that the exam for cs5349 may contain a different set of problems from cs4384.

Weights of Assignments and Exams : Each assignment 10%; each examination 20%. Grades will be assigned according to the total points as follows: $A \geq 85 > B \geq 70 > C \geq 50$.