



DD2446, Complexity theory, 2011

Goal

The goal of the course is to

- give an introduction to complexity theory

in order that students should

- be familiar with the basic complexity classes
- understand the notion of complete problems
- be able to read some research articles on complexity theory

Prerequisites

Corresponding to one of the courses DD1352 Algorithms, data structures and complexity or DD2352 Algorithms and complexity. Knowledge of probability theory, mathematics and theory of algorithms corresponding to the required courses of the KTH educations D or F.

Professor

Johan Håstad is responsible for the course and also the principal lecturer. The safest way to reach him is by email at <johanh@kth.se>, but he can also sometimes (usually?) be found in his office 1435 at Nada.

Schedule

vecka 35	F1	2011-08-30	Ti	10-11	E35
vecka 35	F2	2011-09-02	Fr	9-10	E51
vecka 36	F3	2011-09-06	Ti	13-14	D3
vecka 36	F4	2011-09-08	To	15-16	D34
vecka 37	F5	2011-09-13	Ti	10-12	Q33
vecka 37	F6	2011-09-15	To	15-17	D34
vecka 38	F7	2011-09-20	Ti	14-15	L21
vecka 38	F8	2011-09-22	To	15-16	D34
vecka 39	F9	2011-09-27	Ti	10-11	E32
vecka 39	F10	2011-09-30	Fr	15-16	D34
vecka 40	F11	2011-10-04	Ti	15-16	D34
vecka 40	F12	2011-10-06	To	15-16	M31
vecka 40	F13	2011-10-07	Fr	14-15	E36
vecka 41	F14	2011-10-11	Ti	15-16	Q26
vecka 41	F15	2011-10-14	Fr	13-14	D41

A preliminary plan of the content of the lectures is given by a separate document.

Course material

As a main text for the course we recommend

Arora, Barak "Computational complexity: a modern approach," Cambridge, 2009.

There are also a set of course notes from an early version of the course written by Johan Håstad. These are available on the course home page.

To register

Many categories of students are welcome to this course and different students might face different administrative problems. We encourage each student to make sure that he/she does not have any problems.

Examination

There is no final exam. Details of examination will be discussed on the first lecture but a tentative plan is to have three sets of homework problems and possibly a student lecture.

The Nada Code of Honor applies to these homework problems but there are also some rules specific to this course. These rules are available electronically from the course home page.

The grade determined by the score on the homework is final and the deadlines for handing in the solutions are normally not negotiable. Note that late solutions are accepted with some penalties described in the rules for the homework sets. Some circumstances such as severe illnesses can, however, be taken as an excuse for late homework, while lack of time due to work outside the university or many parallel courses are not considered as legitimate reason for a change of this policy. If you feel you have a good reason to hand in homework late, please contact the lecturer as soon as possible.

Important source of information

Important information about the course will continuously be published at the course home page, <<http://www.csc.kth.se/utbildning/kth/kurser/DD2446/kplx11/>>.