ADP2 – Numerical Modelling, 763315A spring 2007

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Introduction

The goal of this class is to learn to solve mathematical problems in physics with the aid of a computer. The software we'll be using is called Mathematica, which is a useful tool for light symbolic and numerical computation. The class is comprised of lecture-type excercises, in which we skim through a piece of the lecture material and an excercise sheet each. All material is available as Mathematica notebooks in the homepage of this class.

Excercise Works and the Exam

There will be an exam at the end of April, by which the class is graded. The exam date will be given later. Additionally, there are three **excercise works**, quite extensive tasks. A report is done of each of these and returned to the lecturer. **You must return all three reports before taking the exam!** The excercise works can be done at home or at specific excercise work sessions (see the schedule).

Schedule

All excercises and excercise work sessions will be held in the room KO130. The excercises will begin on week 3, i.e. the first excercises are on 15th of January. The excercise work sessions will begin on week 6, i.e. the first sessions are on 6th of February.

Excercises: 3h a week, 3 groups

- **Mon 8–11**
- **Mon 12–15**
- **Mon 15–18**

Excercise work sessions: 3h a week, 1 group

- **Tue 8–11**

Using Mathematica at the University

The computer class KO130 is not in public use. Mathematica is installed at least to the following computers:

- Theoretical physics lobby (Windows)
- Computer class TK142 (lastu20–33, Linux)

Mathematica can also be used through SSH. In addition to the above, Mathematica is installed to the computer `haapa`. Text-based Mathematica starts by typing `math` and for a graphical user interface (for this you need X-window system in your computer) starts with `mathematica`.