The assessment of the programming exercises will be in two parts:

1. Written report to be handed in on **Sunday July 26, 2015** at the latest via e-mail to katharina.kormann@tum.de. Please use PDF format.

2. Oral examination on **Tuesday July 28, 2015**. We will discuss the report and run some programs. Please bring your code on a USB-stick or on your laptop. Please contact Katharina Kormann to fix a time.

In your report, you should discuss your code design and the results. Also, attach all your codes in the appendix. Each code part should have a header explaining it. The report should not exceed 4 pages not counting the figures, tables and the appended codes.

The following three tasks should be covered in your report:

1. The results of each of the five exercises should be briefly presented and discussed.

2. Compare the solutions of the Landau problem with the fluid and the kinetic model.

3. Pick one other interesting aspect and discuss it in more detail. Below, you find a list of things that could be discussed.

Moreover, you are encouraged to discuss other interesting aspects that you encountered when coding or testing your code.

Some aspects that could be discussed are:

1. Comparison of the various solvers for the Poisson problem in terms of accuracy and computational complexity.

2. Study the convergence of your finite element code. Discuss the results for various orders and the two implementations of the right hand side.

3. Study and discuss the convergence of your fluid solver.

4. Study and discuss the convergence of your PIC solver.