

Module 2 of the IFA challenge track program deals with theoretical problems in special relativity, and takes place in weeks 45-50 (exact dates to be announced).

## Module aims

In this module you are asked to:

- Solve a number of theoretical problems involving advanced aspects of special relativity.
- Write a report where you present your solutions in a clear and concise manner.
- Correct the solutions submitted by your peers.

## Café sessions

We will organize two café sessions where your instructor will be available to answer questions and help you get started on the theoretical problems.

## The report

You are welcome to work in groups on solving the theoretical problems, but you have to write your own report. Solutions must be typed into LaTeX, Word or similar. Derivations and explanations must be self-contained, i.e., variables and notation must be properly introduced. The report must be in English. You are strongly encouraged to include graphical illustrations. Since we want the peer review (see below) to be anonymous, we ask you not to write your name anywhere in the report.

## Peer review and evaluation

Soon after the submission deadline you will receive the report of one of your peers along with a solution's manual. This will be sent to you by e-mail. You are asked to evaluate the report that you have been sent using the solution's manual as guidance. Remember to justify your grading, especially when only 1 or 0 points are given. The instructor will go through all the evaluations. In cases of disagreement, you will be contacted by the instructor. If agreement cannot be reached, the instructor will have the final say. Your final score will be e-mailed to you before the end of October. You will also receive detailed feedback on the overall quality of your report. The course is graded as Pass/Not Pass.

## Acquired skills

By the conclusion of this module you should be able to:

- Solve theoretical problems in special relativity involving advanced concepts.
- Explain your reasoning in written form, making use of equations and figures.

- Critically evaluate the solutions of your peers.

## Important dates

**Deadline for signing up to the module: TBA**

Send an email to Oliver Kirsebom (oliskir@phys.au.dk), including your student number and FYS-team number.