Linearly Algebra 2
Autumn Term 2016

Python project (physics students)

In this project you will combine the math taught in this course with a bit of Python programming, to do a project regarding **The Special Theory of Relativity**.

You will work in groups, and together hand in IPython notebooks, which have been prepared with the exercises, in which you solve both exercises with pen and paper and Python code.

Project introduction

The project will be introduced in the lecture on September 5th.

Groups and supervision

You will work in groups of 3-5 people. You are supposed to plan and carry out your work yourselves. All members of the group must participate, and be able to understand all parts of the solutions.

Each group will be assigned a teaching assistant, either Chen Fanyao or Björn Linse. The teaching assistant will be available for questions during office hours, which will be provided.

Preparations

Between September 5th to 9th, you are supposed to:

- Split yourself into groups.

- Write an email to chen@astro.lu.se **and** atf10bli@student.lu.se specifying the group members.

- in return you will be assigned a teaching assistant.

- Download the exercise from the course web page and get started.

Deadlines

The project is split into three parts with separate deadlines. They are:

First part (Galilean transformations and aberration of starlight): Sep. 23rd by 12:00.

Second part (Derivation of the Lorentz transformation): Oct. 7th by 12:00.

Third part (Relativistic aberration): Oct. 14th by 12:00.

All parts of the project are supposed to be handed in to your assigned teaching assistant.

Discussion

When the last part of the exercise is handed in, your group will scheduled a small meeting with your teaching assistant, in which you will go through the exercises. This is in order to ensure that everyone in the group participated, and that everyone understands the solution. The exercise is graded pass/fail.

Contact

For further questions, problems or concerns, please contact:

Chen Fanyao (chen@astro.lu.se) or Björn Linse (atf10bli@student.lu.se).