

List of final projects/problems (1-2 students)

The projects must have a clearly written introduction (up to 5 pages) on the topic or topics and the solution of the corresponding problems, when applicable. All sections and problem numbers refer to the textbook.

The written projects should be handed in at least two weeks before the end of the term, but can be submitted at any time before that.

The projects will be assigned on a first come first served basis.

1. Bose-Einstein condensation (project and exercise BT 4.12) Lopo Mateus.
2. Statistical Physics of Galaxies (project and exercise 28.7) Pedro Santos e Daniel Bento
3. Thermodynamics & SP of Black Holes (project and exercise BT 4.16) Francisco Silva.
4. Thermodynamics & SP of Black Holes (project and exercise BT 4.16) Rafael Orelhas.
5. Structure formation in the expanding Universe (project) Valentim Goes.
6. Electron-positron equilibrium at low temperatures (project and exercise BT 5.9) Lucia Crespo Gonzalez e João Tiago.
7. Out-of-Equilibrium Gibbs Potential for Water: Surface Tension and Nucleation (project and exercise BT 5.14) Marta Botas
8. Information & Communication (project) Vram Davtyan
9. Diffusion equation (project and exercises BT 3.17 and 6.3) Hubert Almeida.
10. Diffusion equation (project and exercises BT 3.20 and 6.10) Leonor Bernardo
11. Noise and filters (project and exercise BT 6.9) Jordi Wijnen
12. Brownian motion (project and exercise BT 6.10) Tomás Campante.
13. FD theorem (project and exercise BT 6.18) João Sena
14. FP equation (project and exercises BT 6.21 and 6.22) João Gonçalves
15. Suggestions by the students subject to prior approval.