

# PY 542: Non-Equilibrium Statistical Physics      Problem Set 11, Fall 2011

**Reading:** For this week, please finish reading section 12.2, and then sections 12.3 & 4. Please also read sections 13.1, 13.4 and 13.5. This is a lot of material and I will merely discuss the highlights of these topics in the lectures.

**Final Projects:** The final projects will be due on Friday December 16 — both the written part and the oral part. Please plan to be available for a period of approximately 2.5 hours in the middle of the day to be the audience for the the oral presentations of the final projects. Let me remind you about some guidelines for these projects:

- The final project should consist of a written section that should be no longer than 6 pages in 2-column revtex format (which looks like Physical Review Letters). There should also be an oral part of the presentation should be last 15 minutes. This oral presentation time should be divided equally among the team members.
- The project itself need not be a publishable result. It could be a small-scale simulation or a theoretical calculation of some non-equilibrium phenomenon or a detailed exploration of some of the open-ended problems in the text.
- If you need guidance or have questions, please feel free to come to my office.

**Problem:** Due Monday, November 28 by 5:00pm.

1. Text 12.9. This problem represents a useful exercise in the use the generating function technique. In this spirit, please ignore the added note in the problem. That is, do not skip step (a) of the problem.