Use the hand-out “On Preparing A Manuscript for Publication” and the following description of a scientific paper as guideline for the two papers of your main project. The first paper should include the title, the “introduction/background”, the “model/method” and the “references”, which are cited in these parts of the paper. In the second and final paper you will write the complete paper (revisit the sections of the first paper for changes.) Use a more formal writing style than you will use in your oral presentation.

**Audience:** Your audience will be juniors and seniors who most likely do not have your background. Include therefore all information which is necessary to understand your project.

**Examples:**

**Contents:**
- Title
- Author(s), Address
- Abstract: An abstract is a summary of what you did and your results. The abstract is for a reader who might not have time to read the rest of your paper or who decides depending on your abstract if she or he reads the whole paper. The abstract should be understandable without the rest of the paper and should contain: the system you study, the model, the method and the results.
- Text: The following text should be understandable by itself. Reference any information which you used from other sources or which includes details not necessary for the reader’s understanding.
  - Introduction/Background$^1$:
    This section might give some historical background and/or necessary background information. You might talk about other models than the one you use. The Introduction also serves as a motivation for why your project is of specific interest and importance. The main purpose of the introduction is to put your project into context and to give a general description of your project. You might end your introduction with an outline of the rest of the paper.

$^1$Sometimes this is split into two sections
- Model:
  In this section you describe your model exactly. This includes for example the
dimension of your system, whether you use a lattice and all applied rules (as
e.g. the steps in the Nagel-Schreckenberg traffic flow model). In principle, after
reading your description any reader should be able to write the program with
exactly the same model as yours.

- Theory:
  You may not need this section. This is a section one uses if there are analytical
calculations possible. For theoreticians this is the main section.  

- Simulation:
  This section includes the method you use

- Results:
  This section describes the results of your project. It can include tables, formulae
  and figures. Tables and figures should have captions and formulae should
  be numbered.

- Conclusions/Discussion:
  In this section you draw conclusions of your results and you might include what
  one could do in future work.

- References:
  This is the bibliography of all references to which you refer in the text.

---

2Rich, in your case you might need some background for percolation theory and/or fractal dimensions.
3This section is often combined with the section “Model.”
4Nick, in your case that might be the integration method you use. Alex, in case you pick the model
   of Levy et al. this means the optimization method you plan to use.