

Guidelines and Style Sheet for Writing Your Final Paper

Mathematical Models, Fall 2018

Your paper should be well written, clear, organized, and in your own words. Scientific results and conclusions you gather from articles should be paraphrased rather than quoted in lengthy passages. You should include a brief abstract at the start of your paper (one paragraph) stating the particular problem you are modeling, the questions you are trying to answer, and your important findings. Be sure to include both an introduction and conclusion to your paper.

All figures should have detailed captions and be appropriately referenced. For example, if you generate a figure, indicate the program used; if the figure comes from a paper or online source, be sure to cite the paper or website in the caption. Pages should be numbered. It is fine to write mathematical equations by hand in the narrative of your paper, or they may be included in an appendix. Take care to proofread your paper and make sure all equations and calculations are included.

References should be informative and in a consistent style. Be careful using material found on the Internet, as some information is inaccurate or out of date. Always try to find an author and date when using anything from the Internet. It is ok to use *Wikipedia* as a source on occasion, but your primary sources should be published (i.e., peer-reviewed) articles from mathematical and scientific journals.

Some other tips:

- One of the best ways to learn how to write a technical paper is to follow the writing style of other published papers. This is how I learned to write; I modeled my writing after my favorite papers.
- Don't quote long passages directly from another paper; instead, paraphrase them and then provide a citation. Try to understand and interpret the technical terms you are writing about, then present them in your own words. Take the time to look up the meanings of all unfamiliar and technical jargon.
- When an acronym is introduced for the first time, it should be written out in full. For example: "A general circulation model (GCM) is a more sophisticated and involved type of climate model than a conceptual climate model (CCM)."
- Be sure to define terms when they are first introduced in the text. Do not assume your reader is as familiar with the material as you are.
- Try not to begin sentences with a variable. "The variable α represents the albedo for the planet" is preferable to " α is the planet's albedo."
- Anything you include in an appendix should be referred to specifically in the text of your paper. For example: "The calculation for the average value of the profit margin is provided in Appendix 3."
- Every figure and table should be referred to and discussed in the text. For example: "In Figure 3, we see that CO₂ levels from the Mauna Loa Observatory have been steadily rising since measurements were first recorded in March of 1958." It's fine to say something similar in the caption of the figure or table.
- Be sure to label all figures and tables with a unique number. If they are in color, then make sure they are printed in color in your final version of the paper. This is particularly important if you are discussing different aspects of the figure that depend on color, e.g., "The blue curve represents the temperature profile for Earth, while the red curve shows the corresponding profile for Mars."