

Preparing for the In-Class Discussion:

In order to prepare for the in-class discussion, you need to understand the paper very deeply. Not only do you need to read the paper, but you need to reflect on why the paper's results are that way. For example, you need to get to a level such that when you come to class, you are able to answer very easily questions such as:

- What is the main problem that the paper addresses?
- What is the main idea in the paper, on how to solve this problem?
- What is the main result of the paper?
- Why is this result significant?

- Why is the graph in Fig. X increasing as a function of bandwidth?
- Explain the main idea of the proof of Theorem 1.
- What is the geometrical intuition behind the arguments in Section V?

These answers may or may not be in the paper. You need to reach this understanding of the paper by your own critical reading and thinking.

Here is a suggested way of reading each paper. (Individual styles differ, so this is only one possible way to prepare well.)

1. Do a quick skim through the paper to assess which parts of the paper are important and have the key main ideas. Then, browse or read those sections to understand the key ideas. (10 minutes).
2. Read the paper from the beginning to the end once. Skip any sections that you already know. However, do NOT skip if you don't know that material. Upon first reading, skip any proofs within the body of the text, and in the appendix. Aim at reading the paper to understand the main arguments and results of the paper. (at least 2 hours).
3. Read the paper from the beginning to the end again, now focusing on the parts that you skipped or did not understand. (at least 2 hours.)
4. Read and interpret the equations, graphics, and the results carefully. Why are the graphs increasing, decreasing or staying constant? What effects are relevant in this regime? For what regime is the data shown? (at least 1 hour.)
5. Take out your pencil/paper/computer. Work out the equations, parts you did not understand fully. Fill in the gaps by performing the algebra as needed. Read through the proofs to understand the main argument in each proof. (at least 2 hours.)
6. Come back to the high level again, and ascertain that you have full mastery of the paper now. (about $\frac{1}{2}$ - hour). Fill in any gaps.