Research Hints

Here are things that make research easier for me.

1. Reading unfamiliar articles is very hard work. Give it your best hours - when you aren't tired, when you think clearly, when you are in the best mood.
2. Work at doing research every day.
3. Keep notes as you read. I keep electronic notes. For each article I read I record:
   1. complete reference information (just lift using the mouse, if from an electronic version of the paper)
   2. quotes from the paper (just lift using the mouse)
   3. My opinion of the paper.

   Having a separate file for each article makes me feel good - like I've accomplished something specific as I can see what I've done easier.

   I also like having a hardcopy of the paper on which I can write questions and highlight key terms.

4. Keep a list of questions you would like to answer such as What does xxx mean? Why does everyone think yyy is a good idea? What is the complexity of this technique?

   As you keep studying, you will often answer your own questions - which makes you feel wonderful.

   If you can't answer your questions quickly, you feel comforted by the fact that the list of things you don't understand is finite.

   Having listed exactly what you want to know makes finding the answers easier as you have identified something specific to look for.

5. Research Diary

   In order to be productive, you need to be careful in documenting what you have done. The idea is to reflect on the material you have read and draw conclusions throughout the process rather than saving it for last week. It is also important that you work smart. This research diary will be continually growing, so each week you will add to what previous week’s diary.

   Create a document or a webpage which contains the following:

   a. A brief list of what you have been working on, recorded by date. You need to have at least two entries per week. This will include ideas for future work and results of your studies.

   b. Links to pdfs of important papers annotated with your analysis of the best ideas from the paper, a list of things you don’t understand, and a list of research thoughts, opinions, and future directions derived from the paper.
c. A one paragraph statement of what you see being the major focus and contribution of the research you are proposing.