In lieu of a final exam, there will be a mini-project. You will select (with my approval) a paper that has to do with electron or phonon transport and then write on the topic of the paper you selected. Your report should be no more than 10 pages long and should use the notation and concepts discussed in ECE-656. Your report should not simply be a review of the paper – it should be a self-contained discussion of the topic of the paper you select. It should present the topic in a clear and original way and not just be a summary of the paper. To receive a strong grade, I should learn something from the paper, and I need to be convinced that any 656 student who reads the paper could follow it and learn something from it.

Steven Chu, who won a Nobel prize in physics, gives some good advice.

“...Reading a paper in science is not about learning what a person did. You have to do that, but to really absorb it, you have to turn it around and cast it in a form as if you invented it yourself. You have to look and be able to see things that other people looked at and didn’t see before. ...you try to internalize it in such a way that it really becomes intuitive.”

http://www.cs.utah.edu/~crj/quotes.html

Some possible papers upon which to base your projects are listed below. You will need to select a paper (not necessarily from this list) that is of interest to you and that you can write a clear report on. After you have selected a paper, please see me, so that we can talk, and I can approve your selection.


