Spring 2021, PHY 598 Graduate Seminar
AMO and Condensed Matter Physics

Meeting Days and Times:

Th 4:45-6:05 pm (Eastern Time)
ONLINE VIA ZOOM
(Zoom link will be posted on Blackboard)

Instructors:

Dominik Schneble, A-106, Office hours:
by appointment
Marivi Fernandez-Serra, B-139, Office hours:
by appointment
Qiang Li, B-140, Office hours:
by appointment

Seminar schedule:

February 4	**February 11**	**February 18**	**February 25**
ORGANIZATIONAL MEETING	SELECT TOPIC	[first meetings w/ instructors]	speaker 1
			speaker 2

March 4	**March 11**	**March 18**	**March 25**
3	5	7	9
4	6	8	10

April 1	**April 8**	**April 15**	**April 22**
11	13	15	17
12	14	16	18

April 29	**May 6**
19	21
20	22

Requirements:

- Pick a topic within the first week (list of topics: see below)
- Write an abstract and upload it to **Blackboard** in time for your talk
- Give a 30-minute presentation on the day assigned (via Zoom using microphone & webcam)
- Upload slides to **Blackboard** within one week after your talk (must be in pdf format)
- Attend all seminars

Grading:

- Talk (contents and form) and abstract: 85%
- Attendance and activity (asking the speakers good questions, participating in discussions): 15%.

Resources:

- "Designing and Delivering an Effective Research Talk" by Prof. Meigan Aronson (slides, movie[wmv;285MB])
- Read the "Advice to beginning Physics Speakers" by James Garland, in *Physics Today*, July, 1991.
- See a workshop talk given by Dr. Barbara Gross Levi (who is a science writer for *Physics Today*) on how to give good talks.
- Stony Brook subscribes to several research databases and online journals. Particularly valuable are the *Web of Science* and some APS journals including *Reviews of Modern Physics*.

Notes:

The purpose of this course is to give graduate students early in their career experience with the vital skill of giving professional talks. One very important aspect of this is to choose the level of your talk based upon your own level of knowledge and the level expected of your audience. As (mostly) first year graduate students, we expect that you are

not at a level of preparation that you would have giving a talk at a professional conference. You will be graded on content and presentation, but the grade on content is more on consistency and "absence of holes" than on the level per se (high school – college – graduate student – faculty – world expert). Do not include in your talk any material that you do not actually understand.

Rule of thumb: If **you** don't mention something in your talk, it is impolite for someone in the audience to ask you a question about it. Whatever **you** do mention in your talk is fair game for questions. If you mention something you do not understand, you are opening *Pandora's Box* and should expect to run into trouble. This happens all the time at professional meetings.

Your talk (Powerpoint or pdf, shared via ZOOM) should be planned to take a total of 25 minutes. Ten more minutes will be used for questions and comments. Make sure to rehearse your talk (several times!) so that you know your timing is right. **It is a cardinal sin of giving a talk to run over time.**

You must make an appointment **for a ZOOM meeting with your instructor (as assigned) one week prior to the day you are scheduled to give your talk** in class. At that meeting you will be expected to show a preliminary version of your talk to the instructor. Before that, you should already have given a (pre-)preliminary version of your talk to a trial audience, e.g., fellow students. The comments you get from both your trial audience and the instructor will be helpful for making changes before you give your talk "for real."

After your talk, your slides will be made available on Blackboard

List of topics:

*We will make available a list of topics from the APS online journal **"Physics"** (http://physics.aps.org/), which highlights a selection of papers from the Physical Review journals.*

Choose a topic by February 11, and enter your choice into the Google Doc for which the instructors will email you a link.

Choice of topics will be first come – first served. Two students may not choose the same topic (note that some of the topics may be closely related and therefore may count as the same).

Learning Outcomes:

Students who completed this course should (1) be able to give a talk on phenomena in atomic and condensed-matter physics, without the requirement of an advanced understanding of the background meterial, (2) be able to compose slides for this talk, and (3) be able to critique the talks of other students.
