

PHYS 599: Condensed Matter Seminar Series Fall 2021

Particulars

Instructor	Prof. Michael Fitzsimmons
Office	JIAM 330 (also available by Zoom)
Office hours	M 2:00-3:00 pm or by appointment
E-mail	mfitzsi1@utk.edu
Class time	W 10:15-11:05 am
Class location	JIAM auditorium Room 147 (in person)
Communication	In-person and use of the Canvas site.

Course Description and Goals

Overview: PHYS 599 CMP Seminar is a 1 credit-hour course to expose students and faculty to recent accomplishments in the condensed matter physics community. We will test a hybrid approach involving 30 minute “conference style invited talks” from researchers outside UTK in the Zoom environment, followed by one 20 minute talk from one of our Ph.d. students in person.

Objectives:

- Engage seminar speakers in thoughtful discussions.
- Seek clarity from speakers.
- Write clear presentations.
- Present research in the seminar environment.
- Showcase early career talent from inside and outside our department.

Outcomes:

- Obtain comfort in the public engagement of a speaker, or as a speaker in the seminar environment.
- Create effective, compelling even riveting presentations using a myriad of multimedia tools.
- Comprehend questions from an audience and answer the questions thoughtfully.

Prerequisites: None

Resources:

- (1) <https://doi.org/10.1557/mrs.2020.265>
- (2) <https://doi.org/10.1557/mrs.2020.324>
- (3) <https://www.amanet.org/articles/seven-principles-of-effective-public-speaking/>
- (4) Make Body Language Your Superpower
<https://youtu.be/cFLjudWTuGQ>

Course Format: The CMP-seminar series will take place in person in the large JIAM auditorium. We will begin with a 30-minute invited seminar from an

outside speaker using Zoom. Engagement of the speaker is expected during the presentation and the Q&A session, as appropriate. Following the invited seminar, a student will present their research (in person). About 20 minutes is allocated to the student's presentation (including Q&A). As slots are limited, Ph.D. students closest to graduation will be chosen first. The intent is to provide Ph.D. students an opportunity to learn to present, which has regrettably been lacking due to the pandemic's impact on conferences. All students are expected to attend the CMP-series and to engage speakers. Students are strongly encouraged to show their draft presentations to Fitzsimmons during Monday's office hours or other students at any time. Students are also encouraged to seek critique of their presentations during office hours (or by appointment).

Clickers: We will be using clickers using your mobile phone to record attendance. Please install the app and have it ready for the first class. You can visit the UTK OIT website: <https://help.utk.edu/kb/index.php?func=show&e=2784> for instructions. Note that your clicker must be enabled with your UTK email (the email address that appears in your Canvas profile).

Course Schedule: A tentative schedule is below.

Day	Invited Speaker	Title	Student Speaker	Topic
18-Aug	No class	MRF practice		
25-Aug	Lucas Caretta	Ramesh' group	MRF discuss syllabus and expectations	Turbulent flow
1-Sep	Salva Rezaie	Atomic Scale Understanding of Ferroelectricity and Superconductivity in SrTiO3 Stemmer Group	Xin Wen	
8-Sep	David Kealhofer	Stemmer group	Andy Ly	
15-Sep	Quentin Remy	Mangin/Dumesnil group	James Neuhaus	
22-Sep	Ruijuan Xu	Strain Induced Room-Temperature Ferroelectricity in STO membranes	Sohan Costa	

		Hwang group		
29-Sep	Erjia Guo	Emergent magnetic states in transition metal nitride heterostructures	Chandima Edirisinghe	
6-Oct	Pavel Salev	Schuller group	Shashi Pandey	
13-Oct	Prof. Edwin Fohtung	Nanoscale studies of topological excitations in ferroelectric RPI Fohtung group	Debshikha Banerjee	
20-Oct	Nirmal Ghimire	George Mason U.	Victor Ale	
27-Oct	Prof. Dan Dahlberg	Dahlberg group	Jinu Thomas	
3-Nov	Chiara Gattinoni	Formerly of Spauldin group	Harini Radhakrishnan	
10-Nov	Mengxing Ye	Balents Group	Casey Sobecks	
17-Nov	Daniel Phelan	Mitchell Group	Pradip Adhikari	
1-Dec	Jennifer Freedberg	Dalhberg Group		

Grading and Evaluation

Grading: Your grade will be based upon attendance (quantitative) and participation/engagement (qualitative).

Other information

Group work policy: I encourage students to work together to critique presentations. Remember that the presentation is to be criticized not the speaker!

For students with disabilities: If you require course adaptations or accommodations because of a documented disability, please contact the Office of Disability Services at 2227 Dunford Hall (telephone/TTY 865-974-6087; e-mail ods@utk.edu). This will ensure that you are properly registered for services. University Policy forbids me from making special

accommodations without a letter from the Office of Disability Services.

Academic honesty and integrity: By taking this course you agree to the following statement: “An essential feature of the University of Tennessee, Knoxville is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.” Students are expected to perform all work in conformance with the University policies regarding Academic Honesty.

University civility statement: Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability and courteousness. Civility enhances academic freedom and integrity. Civility is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other’s well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus: <http://civility.utk.edu/>. *As an aside, most scientific conferences require you to acknowledge integrity and civility statements like those above when purchasing conference registration.*