Journal Club

Instructors:
Itzik Ben-Itzhak, CW328, 532-1636, `ibi@phys.ksu.edu`, office hours: MW 3:00 - 4:00
Gary Wysin, CW309, 532-1628, `wysin@phys.ksu.edu`, office hours: MW 1:00 - 2:30

Goals

The purpose of this course is for you to become familiar with our department, and especially, *improve scientific presentation and discussion skills* by organizing and presenting talks on physics topics, and learning from the constructive criticism by your peers.

During the semester, each student should give **three oral presentations**:

1. A Departmental Exam problem.

This will be the presentation of a Departmental Exam problem. You are expected to introduce the problem, discuss ideas and strategies for a solution, develop the solution, and finally, make comments or interpretation of the results. The presentation should be displayed on a blackboard, not with transparencies or computer.

2. & 3. Two 10-minute research presentations.

These are presentations on physics research topics, as you might give within the department for research discussion, or, in physics conferences. You can choose subjects of interest to you, for example, from research journal articles or by talking with faculty. The presentations should be professional in appearance, using computer (Powerpoint, etc.) or transparencies. In them, you should introduce and give background motivation for an interesting topic in current research problems in physics. Also, consider these details:

*   Interest. Why choose this topic? What makes it interesting?

*   Level. Can you master it in the short time you have?
.   Will the class be able to understand your discussions?

*   Broadness. Will you be able to cover it adequately in the 10-minute talk?

*   Resources. What plots, graphs, images, etc. are available on the topic?

Note: With an exceptionally good performance on the first research presentation, you will be excused from the second one.

Writing Abstracts:

For each research presentation, an abstract will be written, as you might submit either for journal publication or for conference submission.

All presentations are 10 minutes, followed by 4 minutes for discussion and constructive criticisms.

Some criteria for the audience to evaluate your presentations are:

*   Did the speaker adequately inform the audience about the subject?

*   Did the speaker hold your interest (weakly, moderately, strongly)?

*   What was particularly good about the presentation?

*   What can be improved in the presentation?

Grading

The course is graded pass/fail. You are expected to attend all the class meetings and participate in the discussions and suggestions that follow each presentation.

Disabilities

If you have any condition such as a physical or learning disability, which will make it difficult for you to carry out the as I have outlined it or which will require acadenic accomodations, please notify us and contact the Disabled Students Office (Holton 202) in the first two weeks of the course.

Plagiarism

Plagiarism and cheating are serious offenses and may be punished by failure on the exam, paper or project; failure in the course; and/or expulsion from the university. For more information refer to the "Academic Dishonesty" policy in K-State Undergraduate Catalog and the Undergraduate Honor System Policy on the Provost's web page at `http://www.ksu.edu/honor`.

Schedule Part I – DE problems

Date	Activity	Speakers		
8-22	Introductions.			
8-29	DE problem presentations.	Kevin K. (EM-induction)	Steve G. (Ampere's Law)	Hyounguk J. (QM spin-precession)
9-5	Labor Day, no class.			
9-12	DE problem presentations.	He W. ($l=1$ operators)	Fran M. (shortest path)	Dyan J. (double pendulum)
9-19	DE problem presentations.	Daniel F. (Biot-Savart B)	Jinkang L. (Biot-Savart B)	Nora J. (μ, P, S, T relations)
9-26	DE problem presentations.	Keti K. (B and Lorentz F)	Ashok S. (QM step potential)	Maia M. (supercool H_2O)
	Example research talk.	Itzik B.-I. (bond re-arrangement in H_2O and D_2O)		
9-30	Research topics Deadline!			
10-3	Fall break, no class.			
10-10	DE problem presentations.	Sony G.	Luma F.	Brandon L.

Schedule Part II – Research talks

<u>Date</u>	<u>Speakers</u>		
10-17	Dyan J. (Cavity QED)	He W. (QM teleportation)	
10-24	Nora J. (H_2 interference)	Fran M. (e-interviews)	Luma F. (GaN nucleation layers)
10-31	Maia M. (GaAs/GaAlAs superlattices)	Hyounguk J. (Er-doped LEDs)	Daniel F. (glycerol glass trans.)
11-7	Kevin K. (photonic bandgaps)	Ashok S. ($\epsilon(T)$ of liquids)	Sony G. (3D nozzles)
11-14	Steve G. (fs/as lasers)	Brandon L. (γ-ray mass extinctions)	Jinkang L. (surface nanostructures)
11-21	Keti K. (4H-SiC diodes)	Dyan J.	Luma F.
11-28	Ashok S.		
12-5			