Physics 596 – Fall 2018

Assignment #1: Create and Present a “Journal Club” Talk and Referee Report

This assignment will consist of two parts:

I. Journal club presentation: Your team should select a short ($\leq$ 5 pages) journal article from a general science journal such as *Science, Nature, Physical Review Letters, Physics Today*, etc. Prepare an approximately 20-25 minute PowerPoint presentation that describes and critiques this article. Your “journal club” presentation should include the following elements:

(i) A summary of the article.
(ii) A comparison of the article’s results and conclusions with those of previous (relevant) work.
(iii) A critical analysis, by you, of the results and conclusions presented in the article.
(iv) A summary of conclusions made by both the article’s authors and by your group.
(v) A “citation” evaluation of the number of papers that have cited your paper, and a brief description of how the field has evolved since your paper was published.

The due dates for your journal club presentation are as follows:

**Friday, Sept. 21:** Select a paper – Tell Lance Cooper by email the paper that your team has selected. More than one group cannot give a journal club talk on the same paper. So, to get your first paper choice, inform me of your paper choice early. *Also, select, and give me the name of, the team “leader” for this assignment.* – This person will be responsible for organizing the team to complete and present the assignment.

**Nov. 16, Nov. 30, and Dec. 7:** Journal Club in-class presentations

II. Referee report – In addition to the journal club presentation, each team member must *individually* prepare a ~ 1 page “referee report” that critically evaluates the team’s journal club paper. Each report must specifically evaluate the paper based upon the following 3 (*Physical Review Letter*-type) criteria, providing examples and support for these evaluations:

(i) “Scientific validity” – Are the methods used valid, and are the logical arguments given to support the conclusions valid and persuasive?

(ii) “Importance” - Does the paper report substantial research that will likely have a significant impact on future research?

(iii) “Broad interest and accessibility” – Do the results reported have significant implications to various subfields, and is the paper written in such a way that it can be understood by a general (i.e., non-expert) audience?