GEOL593 Seismology and Earth Structure: Research Paper Presentation Guidelines

Overview

The final project in this course is to read a scientific paper focused on one of the topics we covered in class and present the research as a short presentation. The choice of paper is up to you; it can be something related to your own research or simply a topic that you would like to know more about. I have provided a set of possible papers, organized by topics on the course webpage. You are free to choose one of these studies to present or find a different one. Preference should be given to finding something current (last ~5 years or so), but this is not a strict requirement. Try browsing recent issues of scientific journals to find interesting new work. Seismology articles are published in many journals, but some good places to look are *Geophysical Research Letters*, *Journal of Geophysical Research*, *Geophysical Journal International*, *Earth and Planetary Research Letters*, *Physics of Earth and Planetary Interiors*, *Science*, *Nature* etc… If you are having difficulty finding a paper you are interested in, Google Scholar is a good place to start looking. Don't hesitate to ask me for help!

Also, be sure to check whether the paper you choose has supplemental material available online. This is especially important for short-format journals that have limited space for figures and text in the main document. Sometimes key information on methods, or important figures can be buried in the supplemental information. These may be important things to include in your presentation.

Structure of Talk

This assignment is intended to provide practice for giving a research-style talk that you might give at a conference (e.g., American Geophysical Union Fall Meeting, Geological Society of America Annual Meeting). The **talk will be 15 minutes**, with **5 – 10 minutes for questions**. The organization of the talk should be much like how typical scientific papers are structured, with the following components.

1) **Introduction**. Concisely introduce the research problem that the paper is addressing. This should clarify the objective of the study at a level that a broad audience could follow.

2) **Methods**. Describe, in appropriate detail, how the study was performed. Describe the data that was used (e.g., what seismic network), and how the data was processed and analyzed. You should also address limitations of the data/ processing approach.

3) **Results**. Report on the study's main findings and their importance to addressing the research objective. Carefully explain important figures.

4) **Conclusions**. Summarizes the study and highlights important findings.

Although scientific talks generally have a similar structure with these components, you do not necessarily need to explicitly label the sections of your talk.

A critical aspect of organizing your talk is time management. A 15-minute talk goes by fast, so be sure you leave time to thoroughly explain the important results and their implications. A common rule of thumb you may have heard is that it takes approximately one minute to present one slide. This may work for some, but I have found I typically spend between 1.5 – 2 minutes on a slide on average, so I would

need ~8 – 10 slides for a 15 minute talk. To make sure that you mange time well, you should practice and figure out your own cadence.

Grading

As noted in the syllabus, the research paper presentation is worth 20% of the course grade (basically worth two labs). The grade for this component is based on completion (i.e., participation), so you won't receive a letter grade for the assignment. I will, however, provide feedback on your presentation, including strengths and areas where you could improve.