

Class Project

EAS 6312: Geodynamics

Fall 2013

Paper due: November 22nd (beginning of class)

Reviews due: December 2nd (beginning of class)

Presentations: December 2nd - 6th (be on time!)

Goal: To aid in developing your abilities to perform research and communicate as scientists and professionals.

Research:

For your class project, you will review and present on a topic of your choosing in *Geodynamics* using relevant research and review articles from peer-reviewed scientific literature (not *National Geographic* or *Scientific American*, but journals like *Journal of Geophysical Research*, *Earth and Planetary Science Letters*, *Science*, *Nature*, etc...). You should read and synthesize no less than four papers on the subject. In your report, be sure to include:

1. *Abstract* (a brief summary of your body of work);
2. *Introduction:* Clear and concise introduction setting up the purpose/motivation for the research, earlier theories that are now being tested, and geologic background, if appropriate;
3. Review of research *methods* used
4. *Discussion* of results, including your own hypotheses, if applicable.
5. *Conclusions* and ideas for future studies

You can earn a possible 10% extra credit on the project grade if you:

1. Outline a new approach to addressing an unresolved problem;
2. Solve a problem; (if so, why not submit it!)
3. Perform unique and applicable numerical calculations to determine parameter sensitivities and/or feasibility of measurement;
4. Perform an appropriate laboratory or analog experiment.

Presentation (All):

Research will be presented in a 15 minute AGU-style talk; a 12 minute presentation with 3 minutes of questions by scientific peers (others in class and instructor). Presentations should be well organized, giving sufficient background information for the class to understand. Stick to 1-slide per minute of presentation, or about 12 in all—its surprising how fast time flies. The presentations should be computer-based, and will be performed in room L1116 (our classroom).

Paper and Reviews (6312 only):

Your final project will be written up in journal form with length, figures and referencing in a format suitable for submission to *Geophysical Research Letters* (GRL). Note that papers should be double-spaced, which allows ample room for reviewer (other student) comments. For guidelines on document preparations for GRL submissions go to <http://publications.agu.org/author-resource-center/author-guide/grl/>. Be certain to reference all necessary material and not to plagiarize others' work. Be certain that every statement, unless quoted, is in your own words.

Evaluation:

4312: Quality of presentation (80%), and participation during others' presentation (20%)

6312: Quality of paper (40%), presentation (30%) , review (20%, participation (10%)