Peer Reviewing for GEOL 0350:
Mathematical Methods of Fluid and Solid Geophysics and Geology (a.k.a. GeoMath)

Baylor Fox-Kemper

September 8, 2015

1 Contacts

The professor for this class is: Baylor Fox-Kemper
baylor@brown.edu
401-863-3979
Office: GeoChem room 133
http://fox-kemper.com/teaching, http://fox-kemper.com/0350

Some portions of the website are password-protected to ensure that fair use and copyrights are correctly obeyed as I share images from books, etc. You can access these by using:

```
username:  io
password:  ocean
```

2 Getting Help!

I am usually available by email. Office hours will be Mondays & Thursdays 12-1:30 or by appointment (see my schedule at http://fox-kemper.com/contact). You can also drop into the Math Resource Center (MRC, http://www.math.brown.edu/mrc/) or sign up or drop in to a tutoring session (http://www.brown.edu/academics/college/support/tutor).

3 The Basics

In addition to research projects, you will each be performing reviews of each others work on a few of the assignments where this is appropriate. This will give you an opportunity to revisit the questions asked, and hopefully you will be able to learn common mistakes and scientific presentation and writing more quickly. Also, there are a lot of quandaries that arise in peer-reviewing (e.g., one reviewer loves it and one hates it, or a reviewer makes incorrect statements), so you'll get some experience with those issues by practice in a friendly environment.

3.1 Not Anonymous

We are not reviewing these papers anonymously, which means that you will have to think hard about balancing your desire to be nice with your desire to help. Some things to consider: 1) Point out the positive aspects first, then it's easier for the author to take when the negatives arrive. 2) Be polite and

succinct. There is no reason to dwell on a typo or mis-step. The author is under a time crunch as much as you are. 3) Don't hold back a critique because it seems to harsh to you on first glance–*use your writing skills to make the critique have the same content but sound less harsh.*

If problems arise in the reviewing process, please contact me immediately. I can help mediate.

4   How do the Grades Work?

I will have the final say on the grades for each assignment, but the TA will take into account the two reviewers' scores and comments. You can consider the averaging to be 50% from TA, and 25% from each reviewer. For this to work fairly, you must rate the overall assignment in the following way, based on the AGU Geophysical Review Letters reviewer instructions written by Michael Prather a few years back:

Scientific Quality: Scientific quality of the manuscript is fundamental to publication, and the following Categories 1-4 are meant to aid the reviewer and Editor.

Science Category 1: The manuscript meets one or more of the following criteria:

- Correctly incorporates new science at the forefront of coursework
- Uses innovative methods or techniques

If the manuscript falls in Category 1, please give sufficient detail as to which of these criteria and why.

Science Category 2: The manuscript is potentially Category 1 but significant clarification/revision is needed. For example, the manuscript presents:

- Some unclear or incomplete scientific reasoning
- Inadequate presentation of data or calculations–unable to assess if correct

If possible, please specify the revisions that might allow this manuscript to meet Category 1 criteria.

Science Category 3: The homework is accurate in many ways but is unlikely to become a Category 1 paper with only minor changes, because some problems are missing or totally incorrect.

Science Category 4: This homework is basically incorrect in essentially every problem.

Presentation Categories: These categories measure the maturity of the submitted manuscript in terms of language, communication, and GRL criteria.

Presentation A : Manuscripts should meet ALL of the following:

- Writing is succinct, accurate, and comprehensible to a non-specialist
- Manuscript is generally well-written, logically organized, and adequately illustrated
- Figures and tables are understandable and readable
- Manuscript not excessively long

Presentation B: Manuscripts are potentially "A" manuscripts with suitable revision. Please give explicit direction as to which sections/features need revision, extension or reduction. For example:

- Manuscript is not well written, is not logically organized, or is inadequately illustrated
- Figures, equations, and tables need better labeling
- Manuscript needs to be (and can be) shortened
- English usage, grammar, or spelling errors detract from the paper

Presentation C: Manuscripts cannot readily be revised by the authors into Presentation "A" without a major re-write. For example:

- Specific ideas cannot be found within the too long discussion
- Organization and illustration of the manuscript make it too difficult to review fairly
- English usage, grammar, and/or spelling errors are endemic and require substantial copy-editing before this manuscript can be reviewed adequately

5   File Formats

5.1   You will submit your homework in pdf format

I don't want your peer reviewers to actually change the content of your homework. I want you to consider each of the review comments and think about what to do with it. Thus, submitting a homework as a pdf is good, because it is easy to mark them up by adding notes or writing separate comments, but it is not easy to alter them.

As we get into the semester, where such reviews are coming, I'll let you know the details. You may also choose to submit your homework on paper to my office or in class, but please don't email me .doc files or other .xls, etc. I spend too much time converting file formats as it is!

5.2   You will submit your review in plain text and crocodoc if possible.

You will submit part of your review in plain text (e.g. a .txt file or just cut and pasted into Canvas). The other way you can add comments is by making markups in canvas.

6   Example Reviews

Here is a good example of three reviewers (two students plus me) for a homework problem set page from last year's GEO0350, as a useful guide. Note their length, level of detail, breakdown of scientific vs. presentation issues, and specific suggestions for how to fix things. Also, notice that they are not free from typos, spelling errors, etc.

7   Canvas Tips

We will be using Canvas to aid in the peer reviewing process. After assignments are turned in, you will be able to access those to which you are assigned to review. You can click to see the uploaded pdf. You can add text, upload files, etc., on the right hand side of the window. PLEASE DO NOT ATTACH .doc or .pdf FILES FILLED WITH PLAIN TEXT. Cut and paste plain text into the boxes instead. You can also add comments to markup particular locations in the text you are reviewing. With a little experimentation, you will see how this works. When you are done with your review, you can submit it. Once you submit, I don't think you can go back and see it again.

Figure 1: **Example of Peer Reviews in Crocodoc**