GEO 435
Introduction to Groundwater Modeling

Paper Review (Reading Assignments)

Over the course of the semester, we will be reading many articles. A portion of the homework grade for the course will be based upon reviews of published papers. Your score will be based upon your preparation for and participation in the course discussions. The notebook assignment described below is designed to help you with both of these issues. Completing the notes on each article will aid you in 1) coming to class prepared and ready to participate in the discussions and 2) creating a summary of each article and what are the most important points.

For each assigned reading throughout the semester, you will be required to submit typewritten notes that will submit at the end of the class discussion. I expect that you will make additional informal notes and comments on the hardcopy of the article as you read it. You do not need to complete notes on the paper you lead, but it may be beneficial. Periodically, questions sets with questions derived from the papers will be assigned; your notes will be beneficial to help address the questions.

Papers must have been published within the last year and have some modeling aspect to them. Potential journals to look at include (but are not limited to) Water Resources Research, Hydrogeology Journal, Journal of Hydrology, Ground Water, etc. I encourage you to search for papers that are of interest to you, but the article must be peer-reviewed. If you find a paper that is of interest let me know ASAP. You are all graduate students, and it will be up to you to ensure that you schedule your paper. You will need to schedule a meeting with me one week prior to your presentation date to discuss your discussion approach. I will not remind you to schedule the papers or to schedule the appointment.

As the reviewer of a paper, it is your responsibility to drive the discussion; however, everyone is responsible for reading the paper and participating in the discussion. Since you will be in charge of the discussion, you will need to develop additional background (read additional papers that the class will not) to drive the discussion. Discussion leaders will be graded on their ability to develop and to execute an effective discussion. (Rubric)

Guidelines for Notes on Assigned Readings

Please make brief typewritten notes on each reading. Each set of notes should be on a separate page and should be compiled in a binder with a hardcopy of the article. Your notes should be formatted and presented in the same outline form as demonstrated below and address listed questions.

a. Proper citation of article in GSA Bulletin format (see below) (2 pts)
b. For primary literature such as journal articles that present new data and interpret it…
   i. State the hypothesis of the article. If quoting the text of the article use quotation marks (i.e., “”) and properly cite the text (e.g., (Smith, 1998, p. 1234)) and describe the exact location (e.g., column 1, second full paragraph, last two sentences). If stating the hypothesis in your own words don’t use quotation marks but do give the description of the exact location(s) of the text that summarizes the hypothesis. (1 pts)
   ii. Was the hypothesis addressed? Briefly explain. (1 pts)
   iii. Briefly describe (no more that a couple of sentences) the “take home” conclusion of the paper. (2 pts)
   iv. Briefly describe how this article has contributed to your understanding of modeling. You don’t have to write much, but please make your statement specific, thoughtful, and insightful. For example, “This article has helped me understand how streams can be used to represent a constant head boundary. I now have a better understanding of the complexities and challenges of correlating model derived data to observed data. One concept this article really opened my eyes to is how models can be wrong. Overall, this paper has given me a greater appreciation of the validity of statistical models in predicting ground water flow beneath a sabhka.” (2 pts)
c. Discuss at least one other aspect of the article that you think is significant, but which hasn’t been (adequately) addressed in other portions of this reflection. (2 pts)
d. Develop/Formulate one question that could be used in the discussion (2 pts).
e. Participation in class discussion-noted and documented by instructor (3 pts)
   Rubric: 0 – no participation
   1 – limited participation; answered/asked one question or made a comment
   2 – between 1 and 3
   3. – significant participation; answered/asked multiple questions or made multiple comments
GSA Bulletin Style Guide for Citations

For references that do not match any of the examples given here, include all information that would help a reader locate the reference. See the following table for sample references; note the kinds of information required, its order, and the punctuation. See also a current issue of the Bulletin of the Geological Society of America.

Abstract

Book
[last name], [initials], [year], [book title]: [city], [publisher], [no. of pages].
or
[last name], [initials], [year], [chapter title], in [last name], [initials], ed., [book title]: [city], [publisher], [pages].


Journal
[last name], [initials], [year], [article title]: [journal title], [volume], [issue], [pages] [doi#].


In Press

Map

Open-File Report

Proceedings from a Symposium or Conference
[Include year of conference if it differs from publication year.]


Thesis