Stat 505 – Fall 2013

Project Information

The project allows you to learn more about something related to environmental statistics that interests you, then communicate what you learnt to the rest of the class. You (or you and a partner) will give a 15 minute presentation to the class then answer questions for 5 minutes.

Your presentation may be:

a) the results of a data analysis using environmental statistics,

b) a simulation (or theoretical) comparison of different test procedures or estimators,

c) a short lecture on something not discussed in class.

The data analysis may use your own data, data you find on the web, or data that I provide you. If you do this, I expect your presentation will describe the questions you are trying to answer, the methods you used, and your results. You should be prepared to answer questions about your choice of method(s), any difficulties you encountered, and perhaps the appropriateness of your conclusions.

The methods comparison addresses a common situation in statistical methodology. We’ve seen many times where you have a choice of test method or estimator. The comparison provides the data you need to make an informed choice. If you are interested in this, please discuss your choice with me. Once we agree on a group of methods to compare, you write code to simulate data, calculate estimates or tests, and compile the results. I expect your presentation to describe the problem, the estimators or test procedures you’re comparing, and the results. You should be prepared to answer questions about the methods you’re comparing, your interpretation of your results, and your conclusions.

The short lecture may be a presentation on an extension to a topic covered in class, a presentation on something in environmental statistics that we haven’t covered, or a summary of an interesting paper related to environmental statistics. The paper can be one that develops a new statistical method or an application paper. If you do a short lecture, I expect your presentation to clearly summarize your topic or paper. You should be prepared to answer questions asking for clarification of your points or possible relationships between your topic and class material.

Your grade for the project will be based on:

a) the work you have done, as demonstrated in the presentation (20 points),

b) the quality of your presentation (10 points),

c) the quality of your answers to questions (10 points),

d) the number and quality of questions you ask to other presenters (10 points).

You may work individually or in pairs. If you work as a pair, I will expect more than if you work individually, and I expect both of you to participate in the presentation and in answering questions.

Based on our current class pace, we will have time for presentations in the last week of class.