

Problem Set 3

Human Subjects Experiments

Out: 9.27.06

Due: 10.4.06

Please type narrative responses.

1. (20 pts.) Write an application to the Homewood IRB to perform the two-point discrimination experiment you performed in Problem Set 1. You should include both the application itself and the consent form. The forms can be downloaded from <http://www.cog.jhu.edu/hsrb/>
2. (10 pts.) Go through the human subjects online training module at <http://apps1.jhsph.edu/chr/cbt/>. Take the test at the end, and submit a printout of the training certificate. Also, save for yourself a pdf version (you can print as a pdf file), because you will need this if you decide to do a human subjects experiment as part of your project.
3. (20 pts.) Using the two-point discrimination data you collected for Problem Set 1, perform a statistical analysis to determine whether the two locations on the body you tested had significantly different discrimination values. Do this in two ways:
 - a. By t-test. Do "by hand", and show your calculations.
 - b. By single-factor ANOVA. You can do this "by hand", or use a computer program (such as Matlab or Excel), carefully describing the settings and inputs you used.

And, for a small extra credit:

- c. Choose additional factor(s) and use a computer program to perform a multi-factor ANOVA. Explain your choice for the additional factor(s) and any necessary post-hoc testing.