Math E-118 Fall 2003
Group Project Description

Students in Math E-118 are likely to have a variety of backgrounds and interests. The group project described here is assigned in order to give each student an opportunity to explore topics related to this course that are relevant to his or her interests.

Groups of two or three students will choose a topic of interest to them related to Fourier or wavelet analysis. The topic can be theoretical or applied, but it must be either a topic not covered in class or an extension of some topic discussed in class. The group project need not feature original research—well-presented summaries of existing concepts and applications are sufficient.

The group project will consist of a 10- to 15-minute in-class presentation and a properly formatted short paper to be turned in. Presentations will be given and papers are due on January 3rd. Your paper will determine 60% of your project grade; your presentation, 40%. You will also be asked to evaluate your fellow group member's contributions to the project to ensure fairness.

Most papers will be between 5 and 10 pages (double-spaced), but the amount and type of mathematical notation and figures may result in some longer papers. Several software packages enable one to include mathematical notation in a document, including Microsoft Word (through its Equation Editor tool), Mathematica, and various implementations of TEX. Please ask me if you need help using one of these software packages.

The paper should be written as if to a fellow student in Math E-118. Thus you may assume that your audience is familiar with the material we have covered together as a class this semester. You will be graded not only on the depth of your understanding of the application you choose, but also on the clarity of your explanations. Grammar and presentation will be factored into your grade to a lesser extent.

Note that plagiarism of any form is unacceptable and will be reported to the Extension School's Administrative Board. All resources that you use must be fully documented. This applies to any computer software or code you use as well.

Each presentation should present the main ideas of the corresponding paper in a clear and accessible manner. Appropriate use of audiovisual aids is encouraged. You may choose to have one group member deliver the entire presentation, or you may have more than one group member share the presentation duties. Your presentation should be understandable and interesting to your fellow students. You will be graded primarily on this factor of your presentation.

In order to assist you in choosing a reasonable scope for your project, the topic and a brief outline of your project must be submitted to me by Monday, December 20th, at midnight. You are also welcome to discuss your project with me either in person or via phone or email between now and January 3rd.