

ECE 339 Graphical Signal Processing

Topic covered:

Methods of searching of scientific literature
Review of digital signal processing
Graphical programming
Signal generation
Sampling and aliasing and frequency resolution
Discrete time and fast Fourier transforms
Spectral leakage
Windowing
Windowing and filtering
Curve fitting
Difference equations

Paper format

Required text

Journal of Graphomathematical Algorithms Vol. 7.

Format of research paper

a) Title, authors and Department address.

b) Abstract

The abstract should not be more than 100 words. It should state the problem addressed, the aim of the project, the approach used and the main conclusion. The entire paper should be in the third person and in the past tense. Times New Roman should be used for the font with a font size of 12 throughout the paper for the written part of the work. Results in d) can have larger font sizes. Use justify from the toolbar for the text lines.

c) Introduction

This should state the problem, define special terms and the general approach used in the study and analysis of the problem. It should also indicate the limits of the work and review previous work in the published literature. Italic typeface should be used for variables. References should be cited as ¹.

d) The main body of the text

This should focus on the virtual instrument built to analyze the chosen problem and should include i) the front panel and ii) description of the graphomathematical code in the block diagram. White should be used as the background for charts on the front panel with thick enough lines for results on the chart to be clearly visible. Each figure and table should have a caption underneath it. For the results, large enough font sizes can be used for the results to be clearly presented on the front panel. The workings of the virtual instrument should be clearly explained by labeling the front panel and the block diagram

and by then describing the different steps in the signal processing.

e) Conclusions

This should state the main capability of the virtual instrument that was implemented. The important findings and conclusions drawn from the study are also stated here. Unanswered problems that have surfaced during the work should be stated here together with suggestions for future work.

f) References

This should be in the format:

¹ Authors name, title of paper, name of journal, volume number, page number, year.

The paper should be in the form of a Word document with the block diagrams and front panel embedded in the text. The page set up should be on 8.5” by 11” paper with 0.75” margins top and bottom, right and left.