

ECE 339 Graphical Signal Processing

Term paper

This will be on a denoising techniques and noise characterization methods. The first stage is the literature search to determine the mathematical method behind the signal processing for noise characterization and denoising. The outcome of this stage is identifying a previously published paper that has not been implemented in labview. The second stage is the implementation of the signal processing using labview. This is done in class.

Term paper format

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.

Important note

Students must attend lectures. Absence from class without reason will affect the student’s final grade. Study outside of class related to the project selected for the course is encouraged and necessary. However, a student who stays away from class for a prolonged period claiming that he/she is working on the project independently without coming to class, will fail the course.

Dates

End of January, subjects for projects decided

Middle of February, one page review of previously published literature of background to subject due during class on this day.

End of March, papers/VIs due.

Prof. Norian

Jan, 2016.