Project Guidelines

Each project should be completed by groups of two students. The project topic can be chosen from a list presented during the introduction lecture or it can be proposed by a group. If you decide to propose your own topic, please check with Prof. Kaps if the project is feasible and appropriate for this class.

Project Timeline

- 09/19 Initial project choice and reference list due.
- 09/26 Group building finished and final project choice.
- 10/03 Project specifications due.
- 10/15 – 10/19 1st progress report.
- 11/12 – 11/16 2nd progress report.
- 12/05 Project report due.
- 12/06 Project reviews starting.
- 12/14 Project reviews due.
- 12/19 Project presentations.

Reference Requirement

Every student must perform a literature search using the INSPEC database and at least one more resource such as IEEE or ACM. These databases can be accessed from home through the GMU library web page. The search should result in a maximum of 10 references to the chosen topic, of which at least one should be a journal paper and one a conference paper.

The purpose of this requirement is twofold: First, every student should be exposed to the use of an extensive on-line data base. Second, one has to get familiar with the research being done in the area of one's project. Both tasks are extremely powerful tools when doing research, but also for design projects in industry.

The reference list should contain references to up to 10 papers (journal articles, conference articles, books, etc.). Grading is not based on the number of references / articles found but on their quality and relevance to your project. Also, please use the formatting guidelines for references recommended by the LaTeX Guide for the Preparation of Papers for IEEE Transactions and Journals. Links to this and other resources can be found on the project page of the class web page.

Please also provide a copy of the most relevant article by sending it via e-mail to `mailto: gmuece646@gmail.com`.

Project Specifications

The project specification should be an outline of your project. It should provide an introduction and motivation and place the problem in the broader research area. You have to describe in detail the problems/hypotheses you are planning to investigate and list the questions you will be seeking an answer to. The specification should further include a time schedule, including intermediate goals to be achieved by the dates of progress reports. Also, think about possible areas, where the specification can change depending on the progress of the project. Please include a tentative table of contents of your final report, an updated list of references, and anything else you consider important.

Project Report

Always remember that a good project must go along with a good report. The final report should follow the IEEE style guidelines. Links to these guidelines and to style files for Microsoft Word and LaTeX can be found on the project page of the class web page. Please limit your report to a maximum of 5 pages, two column format, and 10 point font. Submit the report in PDF format via e-mail to `mailto:gmuece646@gmail.com`.

Here are some hints for the project report:

- The report should begin with the motivation and a clear description of the tasks performed.
- If you use material from articles and other sources e.g. results, formulae, hypothesis, always reference the source.
- Don't cite excessively. The report should be your work and not a collection of citations.
- A suggestion: For reports that contain many mathematical expression and formulae, using LaTeX is a good idea. It is installed on all lab machines and freely available for your PC. (Using LaTeX is not a requirement.)

Project Reviews

After you submit your project report it will be given to at least two students from this class who are not in your group for review. Each student is required to review two reports. The review is anonymous and follows the procedure established by conferences like Cryptographic Hardware and Embedded Systems (CHES) or the IEEE Transactions on Computers. The review form will be available on the project page of the class web page. Please submit the reviews via e-mail to `mailto:gmuece646@gmail.com`.

After the reviews are due, they will be forwarded to the members of the respective groups. The names of the reviewers will be erased for anonymity. Once you receive the reviews for your own report you should read them carefully and use the comments to improve your paper. The final grade for the project will not be based on the reviews but on the quality of the final report.

The final version of the paper is due at the presentation in print and as e-mail `mailto: gmuece646@gmail.com`.

Project Presentation

An important part of the project is the presentation. The goal is to present the chosen topic in a way that is understandable to the rest of the class and the instructor. Therefore, in most cases it is not possible to have the same level of detail in the presentation that you have in the report. The presentation can start out in a tutorial style but go beyond a top level introduction.

The presentations will be held in conference style sessions with refreshment breaks in the Johnson Center. You are required to present your paper and attend at least three session. The presentations will be open to the general public and ECE students can get seminar credit for attending a session (though you can't get session credit for the session in which you present).

The time is limited to 10 minutes plus 5 for questions and answers. Please re-hearse your presentation at least twice to make sure that you can present within these time constraints.

Project Grading

- Project Specifications (2 points)
- Project Report (8 points)
- Project Presentation (5 points)