

EECS 210
Fall 2006
Tu, Th 12:30-2
400 Cory

Applied Electromagnetic Theory
Office Hours Prof. A. R. Neureuther,
M, (W), 11AM 509 Cory Hall, 2-4590
Tu, Th, (F) 10AM neureuth@eecs



Project Specification

Presentations are in Class December 5th and 7th

Executive Summary: A state-of-the art electromagnetic analysis project in which you critique and suggest added value to the current understanding in the literature by means of a Powerpoint presentation to the class with an 8 page handout the last week of class.

Overview: Students are required to do an individual project related to state-of-the-art electromagnetic analysis of physical phenomena. The project is to describe an application or technique with references, classify the method of analysis being used, critique the potential and down side of the method, and suggest ideas for adding value to the method or its application. Analysis methods from applications relevant and related to separation of variables, guided waves, and theorems and concepts are highly recommended. A short (8 min) Powerpoint presentation to the class is required the last week of class.

SPECIFICATIONS

Level of Effort: Approximately equal to three good problem sets (total of 15 hrs).

Topic Identification: (Email or discussion with Prof. Neureuther by Tuesday, November 7th) Possible subject choices and why each may be of interest to the class.

Important Basic Literature: (Viewgraph #1 **Subject and Literature** draft Friday, November 10th, end 11th week) Subject and 3 key references together with a few notes on their content, analysis approaches and main points.

Initial Critique and Plan: (Viewgraph #2 **Literature Critique** draft due 5 PM Friday November 17th, end 12th week) Critique of literature and potential for added value that you will investigate.

Status Report Including Ideas for Added Value: (Viewgraph #3 **Ideas for Value Added** draft with overall statement of status due Tuesday, November 21th, end of 12th week.) In-depth consideration of extensions of the method or application on your own. Identify key steps and modifications and their tractability. Understanding the method or application sufficiently deep to extend it is the heart of the project.

Conclusion: (Viewgraph #8 due at presentation) Clear statement to summarize your investigation findings and interesting avenues for possible further investigation.

Presentation: (Final set of Viewgraphs maximum of 8) Short 8 min talk and 2 min for questions in class on Tuesday or Thursday, December 5th or 7th. Email the presentation to Professor Neureuther by 7:30 Am the day of the presentation to produce handouts.