

OS7201 Electromagnetic Analysis Using FDTD Method

Homework #3 Due: 11/01/2022 at 2:00 p.m.

1. (100%) Revise your 1D-FDTD MATLAB code for E_y/H_x mode developed in Homework #2 to include the following:

- Total-field/scattered-field source positioned at the center of the 1D grid.

The dummy dielectric slab described in Homework #2 remains unchanged and the highest frequency component of the pulse is still 1 GHz. Include the perfectly absorbing boundaries on the first cell and the last cell of the grid.

Make sure your code is clean and well-commented and the figures look professional.

Note:

1. Follow exactly the block diagram at the end of Lecture 7.