

ECEn 563
Computational Electromagnetics

Homework #4
Due Jan. 24, 2024

1. Use the matlab function `delsq` to discretize the Laplacian operator and find the cutoff frequencies of a rectangular waveguide with dimensions $1\text{ cm} \times 2\text{ cm}$. Use the function `eig` to find the matrix eigenvalues. Compare the numerical results for the first 20 TM modes to the analytical mode cutoff frequencies.
2. 4.11 [Waveguide mode visualization]