Task 1: PSD (power spectral density) plots

1. Compute PSD (S2) from eq’s 4.24, 4.25 in psd\_equations.jpeg (see example in 2D\_PSD.xls). Values for A, B, C are user specified. Min/Max spatial frequencies tbd. Can use values in Excel file for now.
2. Graph PSD vs. spatial frequency f (log-log plot). Axes labels need to be changed depending on user-specified units.
3. Display several PSD curves as a function of A, B, or C. (e.g., user picks min/max, step size for B, and curves for each of the B values is displayed on a single graph)
4. Allow user to upload table of (f, PSD(f)) values in csv format, and have these plotted out.
5. (Eq 4.5, 4.6 in ROUGHNESS EQ)plot out rms roughness squared vs. spatial frequency and roughness density vs. spatial frequency. For the rms roughness squared, the integration limits (max/min) need to be user defined.