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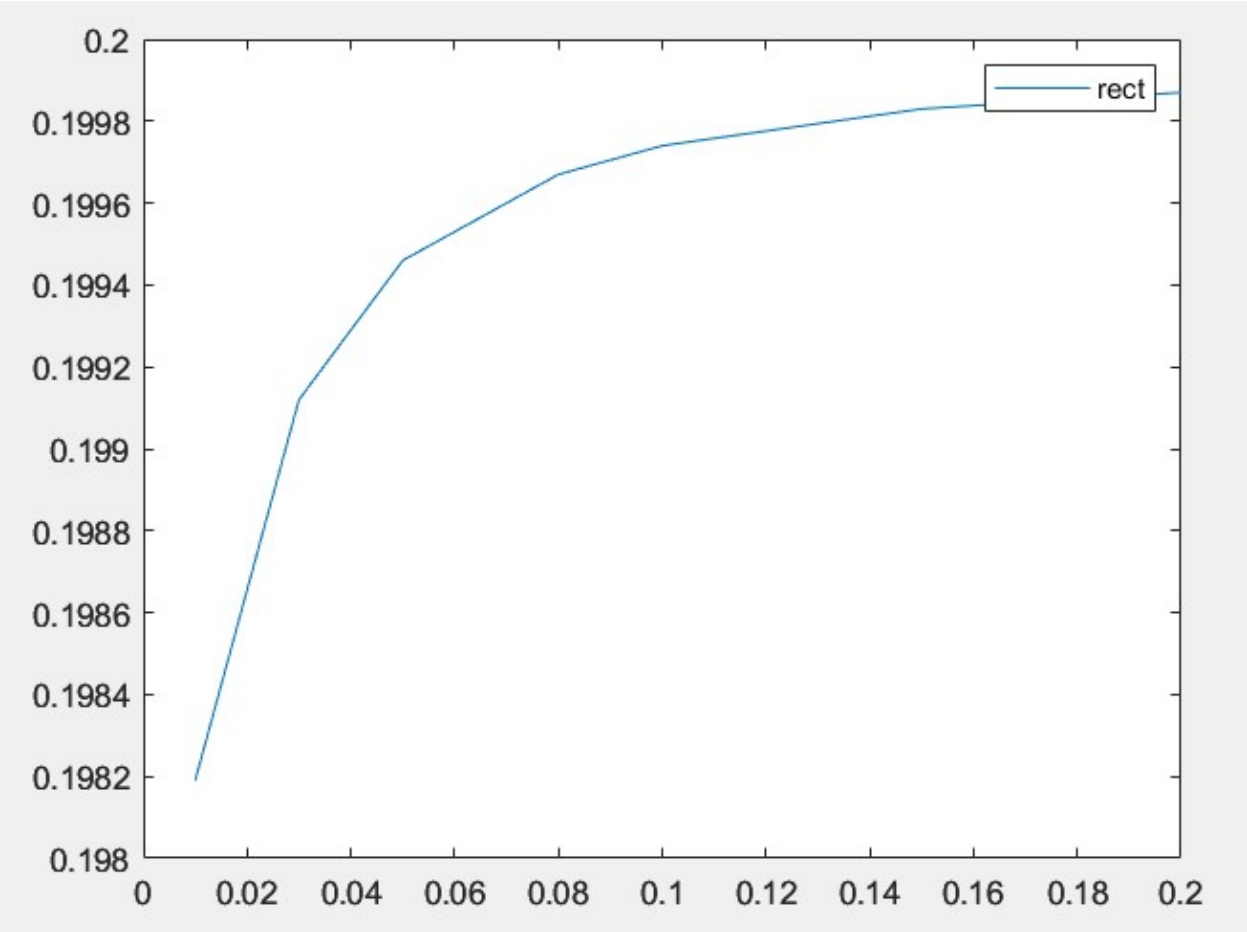
Analysis Windows

Here we look at how frequency estimates at the first peak of $x[n]$ = cos($2\pi f1n$) + cos ($2\pi(f1 + \Delta f)n$) changes with respect to y different values of Δf = [0.01, 0.03, 0.05, 0.08, 0.1, 0.15, 0.2]

Rectangular window



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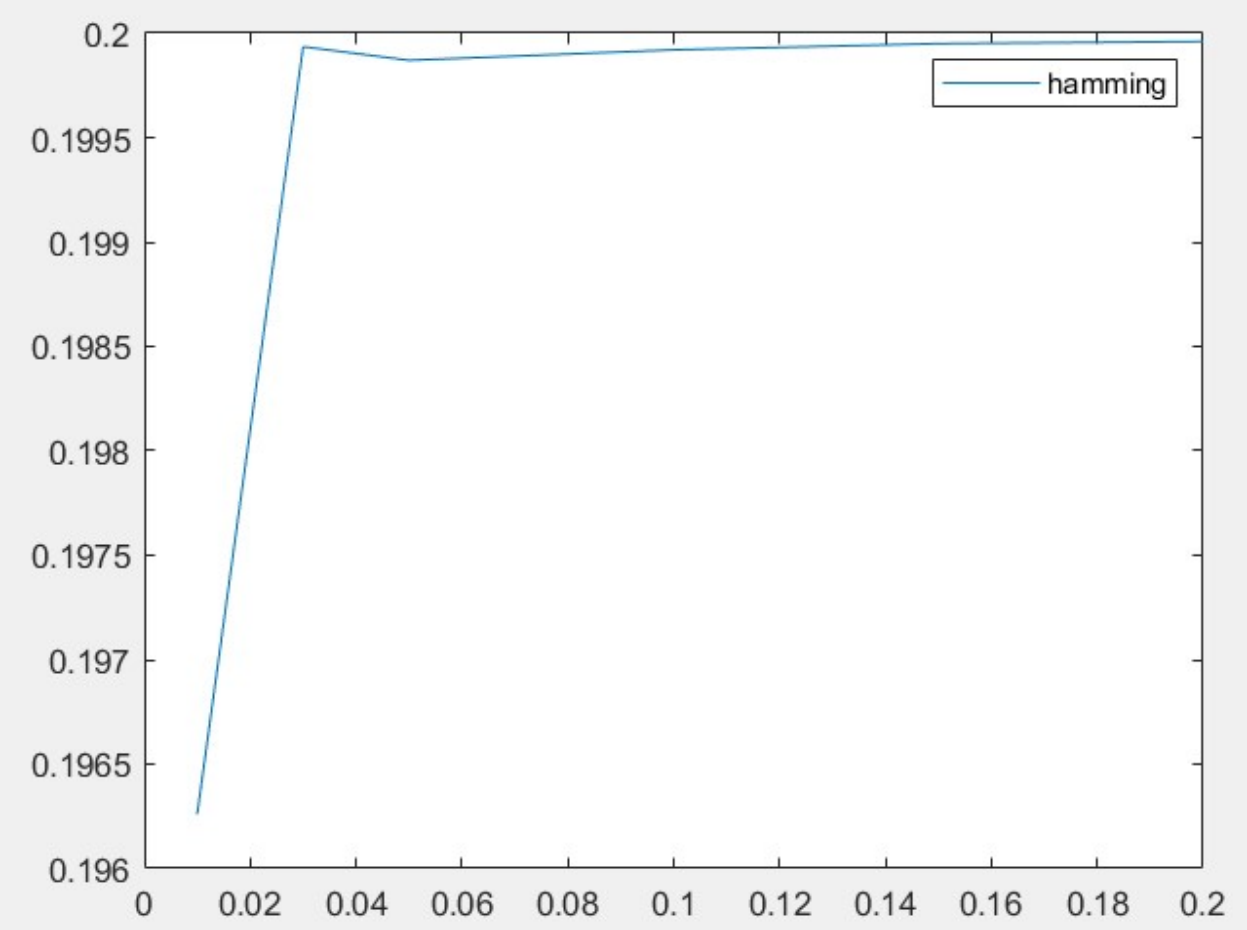
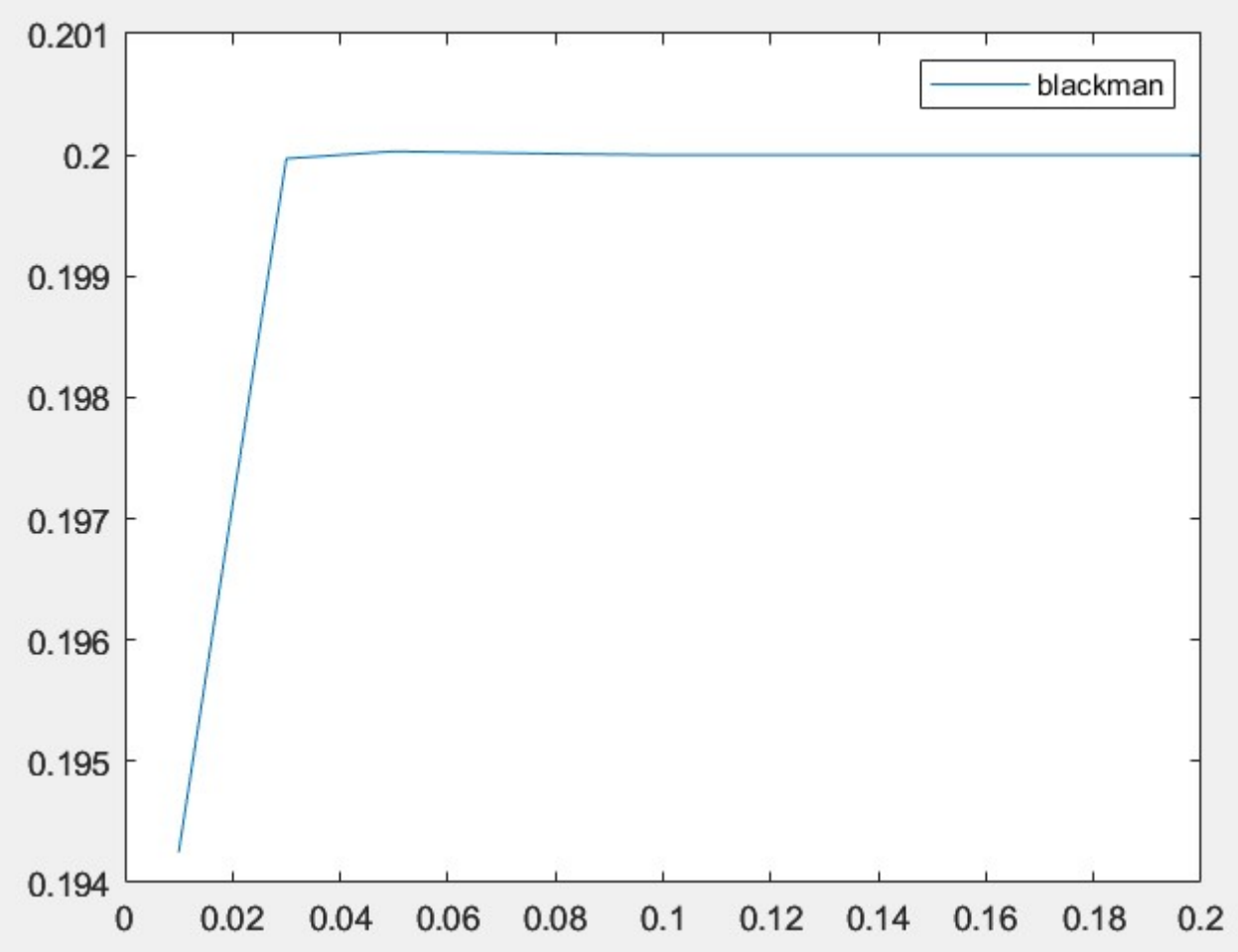
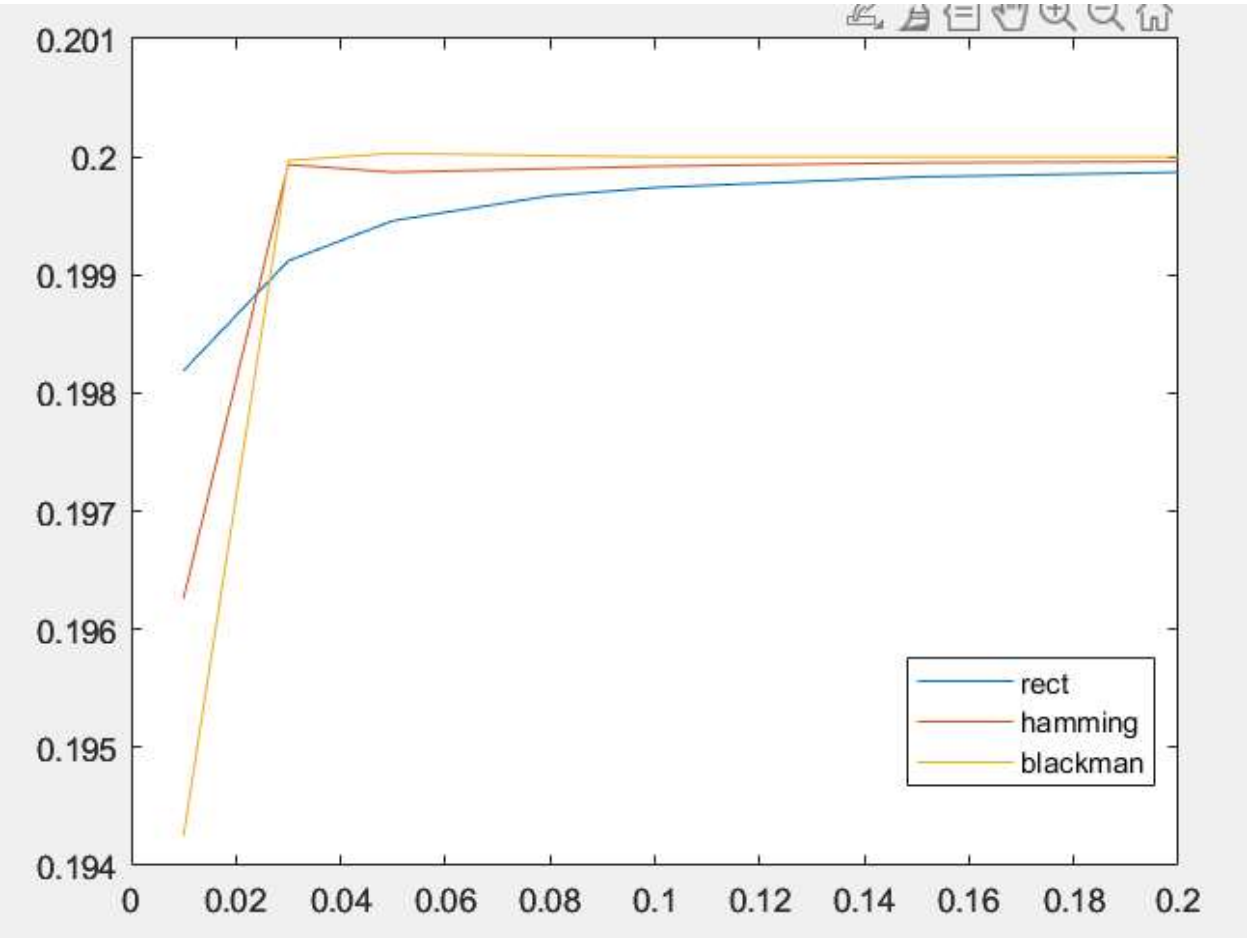
Hamming window



Blackman window



Results are also condensed into 1 plot for comparison:



Reproduce:

1. Run ***main.m***

Plots of **FFT(x)** with respect to **frequency samples** '**fk'** will be plotted:

- Figure 10-70: Rectangular window
- Figure 11-71: Hamming window
- Figure 12-72: Blackman window

2. Numerical values of frequency sample value at first peak were obtained by zooming in to first peak in each plot.

3. Figure 91-93: Rectangular/Hamming/Blackman plots for Frequency estimate at first peak with respect to deltaF.

4. Figure 99: Comparison plots