Labjournal Fourier Analysis

Saban Caliskan

2023-04-29

**What I did**

I have to admit that I haven’t been able to do much, because of king’s day.

However, I did make a github so I can upload and update this lab journal and my code.

I also started writing a simple code that creates a data set of a sinusoidal function and also plots the FFT of and the original function using the inverse FFT, like gerhard asked me to. I used some internet for this: <https://pythonnumericalmethods.berkeley.edu/notebooks/chapter24.04-FFT-in-Python.html>.

At first I couldn’t get the IFFT graph to work, but soon found that the problem was me; I immediately put the FFT values in abs().

**Comments:**

* I noticed that the FFT graph is symmetric around the middle point: i.e If I spot a maximum at the first position, another maximum with the same amplitude will be at the last position. I expected it to be symmetric around the x=0 axis.
* I noticed that the timestep between two points of the sinusoidal dataset is equal to total Interval / ( amount of data points in between).

And the frequency step between two data points in the FFT graph is equal to 1 over this.

2023-05-01

Meeting with Gerhard