

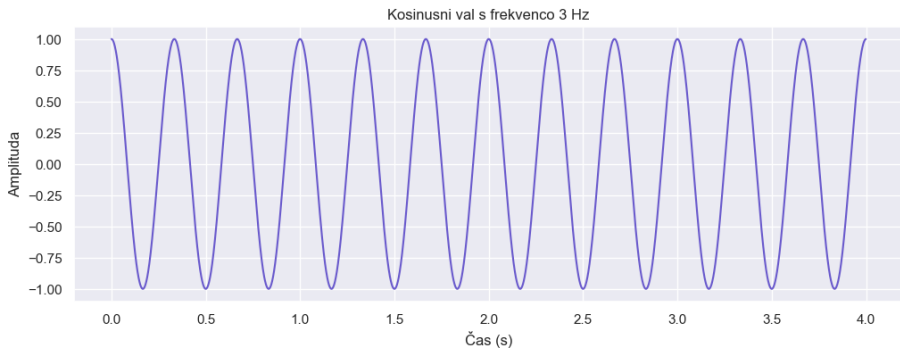
Diskretne Fourierova transformacija (DFT)

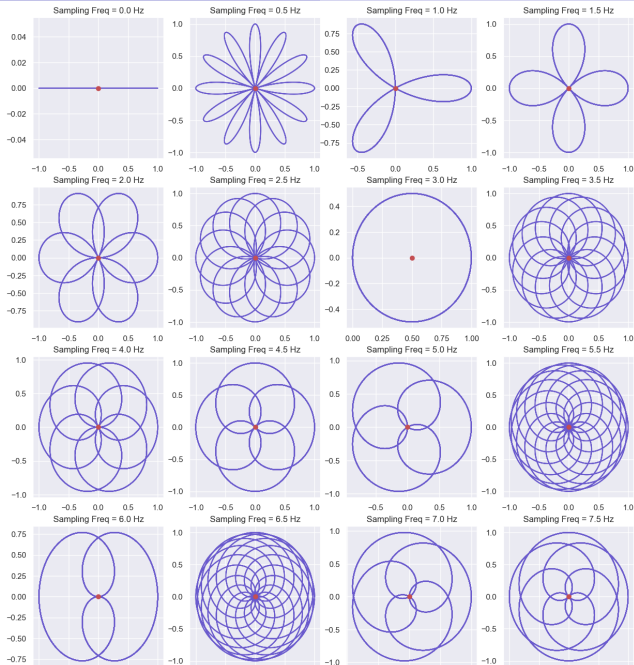
Projektna naloga

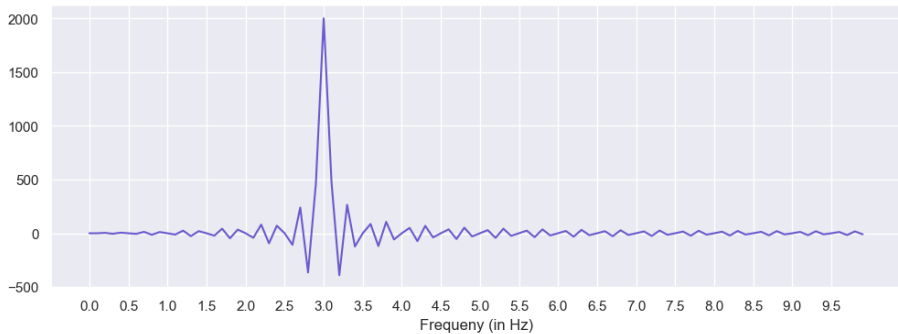
Amanda Babič, Manca Kavčič

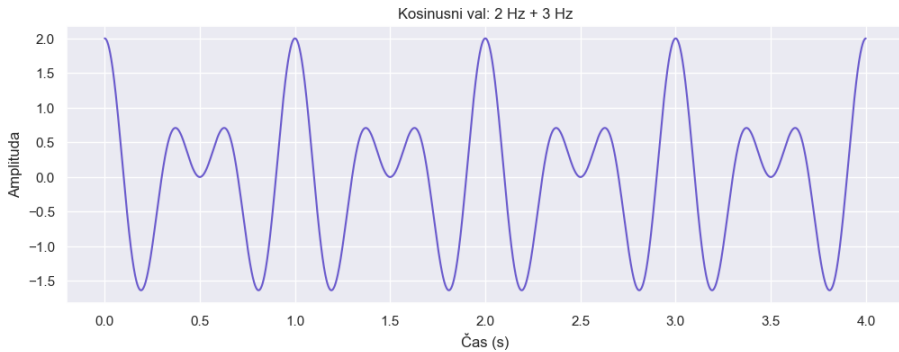
Fakulteta za matematiko in fiziko

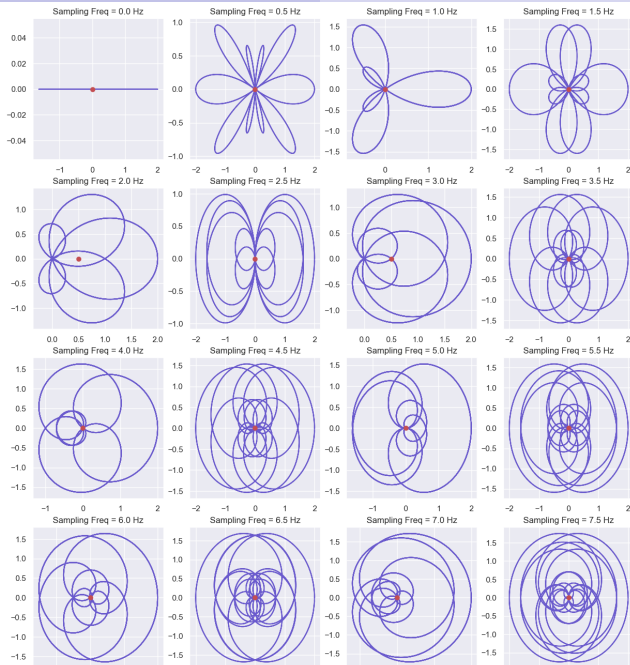
19. januar 2026

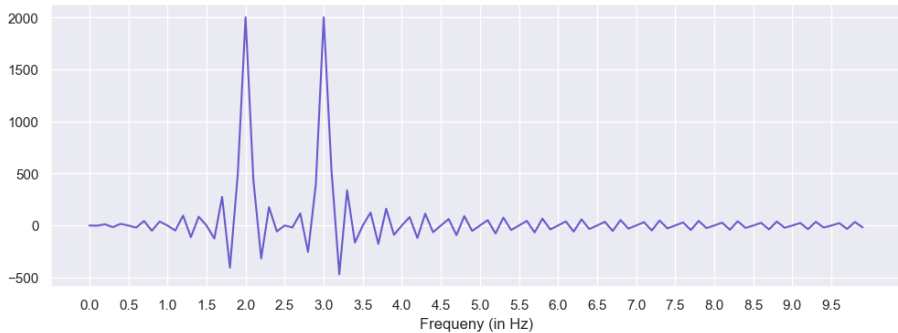


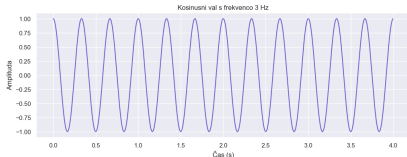




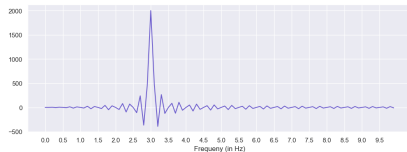




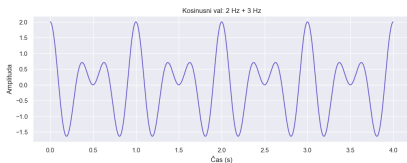
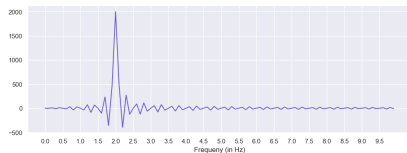




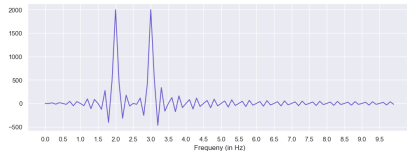
→
DFT



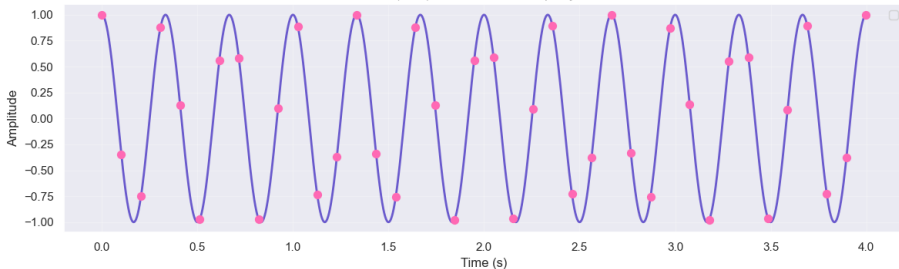
→
DFT



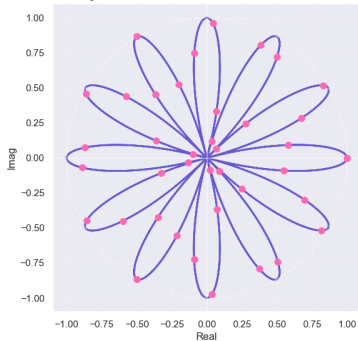
→
DFT



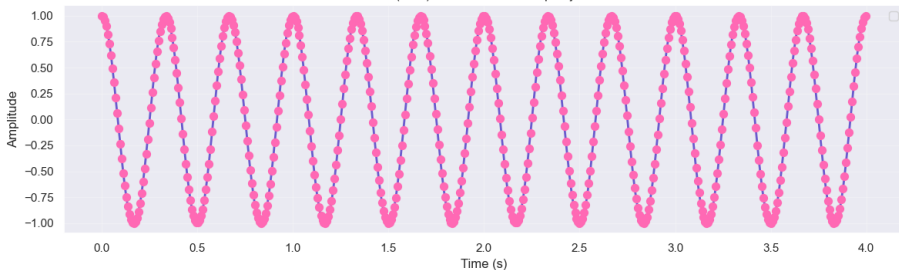
Kosinusni val (3 Hz) 40 enakomerno razporejenimi točkami



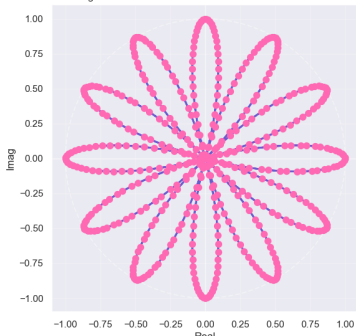
Signal 3 Hz zavrt okoli krožnice s frekvenco 0.5 ciklov/s



Kosinusni val (3 Hz) 40 enakomerno razporejenimi točkami



Signal 3 Hz zavrt okoli krožnice s frekvenco 0.5 ciklov/s



DFT:

$$X_k = \sum_{n=0}^{N-1} x_n \cdot e^{-2\pi i \frac{k}{N} n}$$

IDFT:

$$x_n = \frac{1}{N} \sum_{k=0}^{N-1} X_k \cdot e^{2\pi i \frac{k}{N} n}$$

$$k, n = 0, 1, \dots, N-1$$