Time series:  $f_s$ ,  $\phi_s = 0.2000$ ,  $0.00\pi$ ,  $f_{\rm e}, \phi_{\rm e} = 0.1000, \, 0.50\pi$ Input data 1.5 Unfilterd Reconstruction 1.0 Filtered Reconstruction Sin function 0.5 y(t)0.0 -0.5-1.0-1.510 20 30 40 50 Time Fourier transform 20 10 0 Real -10**Imaginary** Real Filtered -20**Imaginary Filtered** 0.0 0.6 8.0 1.0 Frequency Power spectrum (unnormalized)  $10^{4}$ Unfiltered Power Spectrum  $10^{-1}$ Filtered Power Spectrum true f  $10^{-6}$  $10^{-11}$  $10^{-16}$  $10^{-21}$  $10^{-26}$ 0.0 0.2 0.4 0.6 0.8 1.0

Frequency