

ψ_t

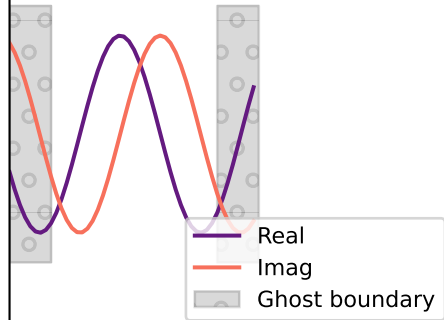
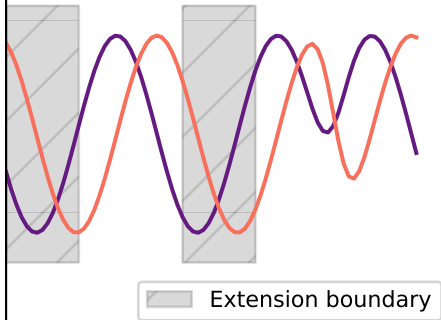
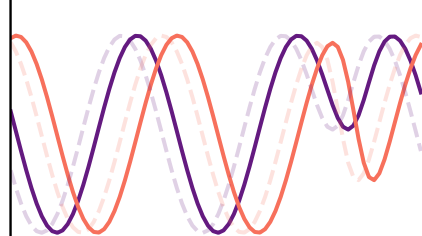
Gram-Fourier extension

Time evolution

 ψ_{t+1}

Physical domain

Extension domain

Compute Gram-Fourier extension
using information from
extension boundary
$$\text{FFT} \times \exp\left(-\alpha \cdot \left(\frac{k}{k_{\max}}\right)^{2p}\right) \times \sum_{n=0}^{N_{\text{taylor}}} \frac{(C \cdot k^2)^n}{n!} \times \text{IFFT}$$
Discard extension domain
and ghost boundary