

$\psi(t)$

Gram-Fourier extension

Time evolution

 $\psi(t + \Delta t)$

Physical domain

Extension domain

Compute periodic Gram-Fourier extension using information from extension boundary

$$\text{DFT} \times \exp\left(-\alpha \cdot \left(\frac{k}{k_{\max}}\right)^\beta\right) \times \sum_{n=0}^{N_{\text{taylor}}} \frac{(C \cdot k^2)^n}{n!} \times \text{IDFT}$$

Discard extension domain and ghost boundary

— Real
— Imag
■ Ghost boundary

■ Extension boundary
■ Periodic

■ Discard

