CM Kernel Inversion $K(t) \mapsto J(t)$
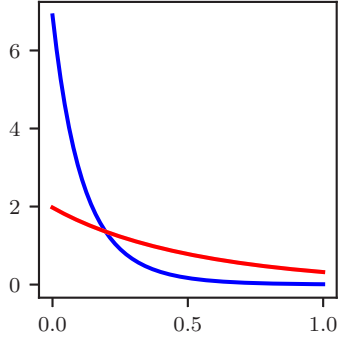

$K = \mathcal{L}_b[\lambda_1]$ with $c_0 = -10, c_1 = 5$
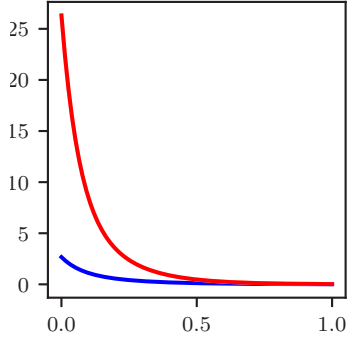
$\frac{\|J_{\text{spec}} - J_{\text{num}}\|_{L^2}}{\|J_{\text{num}}\|_{L^2}} = 2.814\text{e-}05$

$\mathcal{E}_{\text{gCM}}(J_{\text{spec}}) = 8.950\text{e-}05$

$\mathcal{E}_{\text{gCM}}(J_{\text{num}}) = 1.244\text{e-}03$
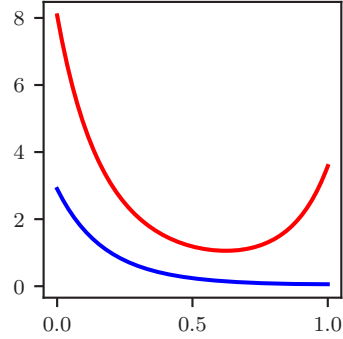
$K = \mathcal{L}_b[\lambda_2]$ with $c_0 = 1, c_1 = 0$

$\frac{\|J_{\text{spec}} - J_{\text{num}}\|_{L^2}}{\|J_{\text{num}}\|_{L^2}} = 3.966\text{e-}04$

$\mathcal{E}_{\text{gCM}}(J_{\text{spec}}) = 5.757\text{e-}05$

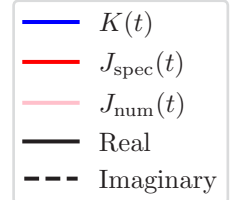$\mathcal{E}_{\text{gCM}}(J_{\text{num}}) = 3.469\text{e-}04$

$K = \mathcal{L}_b[\lambda_3]$ with $c_0 = 0, c_1 = 0$

$\frac{\|J_{\text{spec}} - J_{\text{num}}\|_{L^2}}{\|J_{\text{num}}\|_{L^2}} = 2.369\text{e-}03$
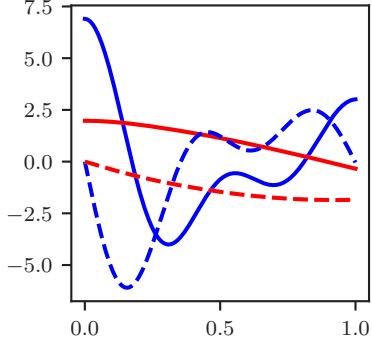
$\mathcal{E}_{\text{gCM}}(J_{\text{spec}}) = 4.652\text{e-}03$

$\mathcal{E}_{\text{gCM}}(J_{\text{num}}) = 4.652\text{e-}03$

Legend: $K(t)$, $J_{\text{spec}}(t)$, $J_{\text{num}}(t)$, Real, Imaginary

PD Kernel Inversion $K(t) \mapsto J(t)$
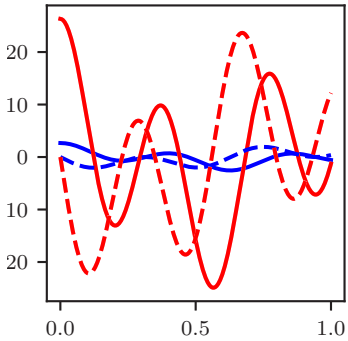
$K = \mathcal{F}[\lambda_1]$ with $c_0 = -10, c_1 = 5$

$\frac{\|J_{\text{spec}} - J_{\text{num}}\|_{L^2}}{\|J_{\text{num}}\|_{L^2}} = 5.005\text{e-}06$

$\mathcal{E}_{\text{gPD}}(J_{\text{spec}}) = 5.820\text{e-}05$

$\mathcal{E}_{\text{gPD}}(J_{\text{num}}) = 5.914\text{e-}05$
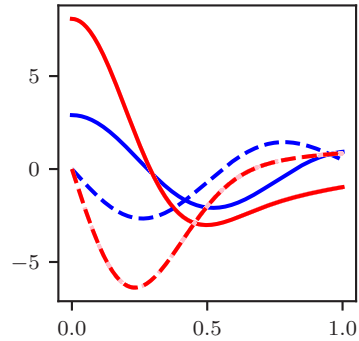
$K = \mathcal{F}[\lambda_2]$ with $c_0 = 1, c_1 = 0$

$\frac{\|J_{\text{spec}} - J_{\text{num}}\|_{L^2}}{\|J_{\text{num}}\|_{L^2}} = 1.332\text{e-}04$

$\mathcal{E}_{\text{gPD}}(J_{\text{spec}}) = 5.648\text{e-}05$

$\mathcal{E}_{\text{gPD}}(J_{\text{num}}) = 1.262\text{e-}04$

$K = \mathcal{F}[\lambda_3]$ with $c_0 = 0, c_1 = 0$
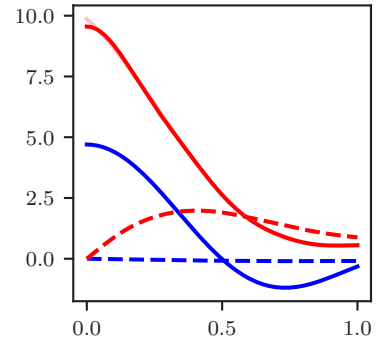
$\frac{\|J_{\text{spec}} - J_{\text{num}}\|_{L^2}}{\|J_{\text{num}}\|_{L^2}} = 4.697\text{e-}03$

$\mathcal{E}_{\text{gPD}}(J_{\text{spec}}) = 8.552\text{e-}04$

$\mathcal{E}_{\text{gPD}}(J_{\text{num}}) = 8.553\text{e-}04$

$K = \mathcal{F}[\lambda_4]$ with $c_0 = 1 + 1i, c_1 = 1$

$\frac{\|J_{\text{spec}} - J_{\text{num}}\|_{L^2}}{\|J_{\text{num}}\|_{L^2}} = 1.014\text{e-}02$

$\mathcal{E}_{\text{gPD}}(J_{\text{spec}}) = 1.502\text{e-}01$

$\mathcal{E}_{\text{gPD}}(J_{\text{num}}) = 6.861\text{e-}05$