Language : MATLAB

Source Code : ① problem_3d.m

② deriv.m

③ rk4.m

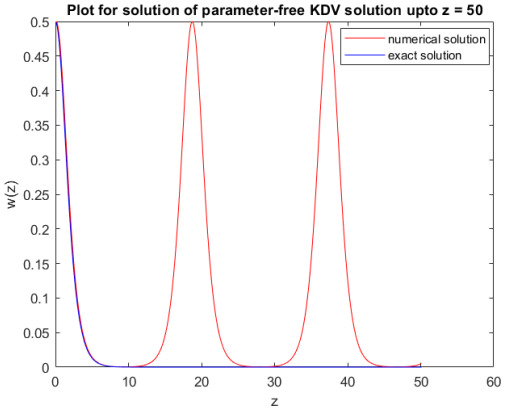


Fig : A

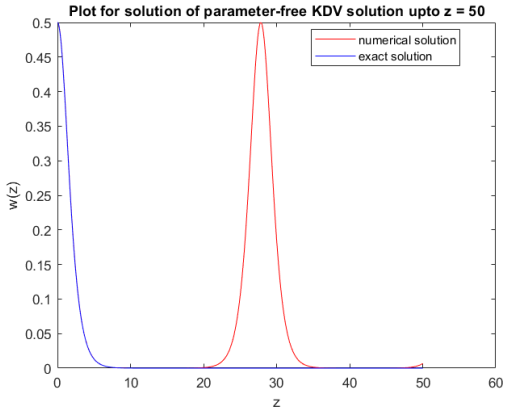


fig : B

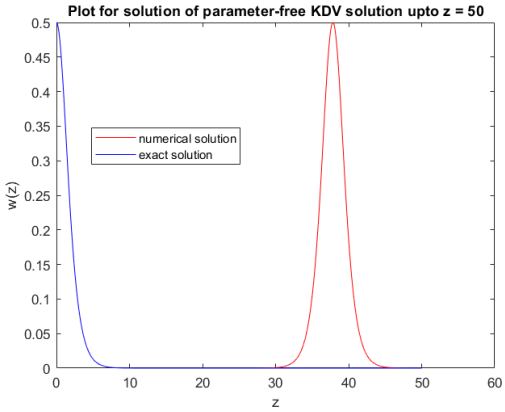


Fig : C

plot produced: ① problem_3d_dz = 0.1.png
② problem_3d_dz = 0.01.png
③ problem_3d_dz = 0.001.png

Here, in this document, 3 figures (Fig:A, Fig:B and Fig:C) are shown. In all the figures, there are localized traveling peaks or so to say "solitons" observed.

In Fig:A, there are three peaks at $z = 0$, $z = 18.9$ and $z = 37.3$ respectively. In this case $dz = 0.1$

In Fig:B, there are two peaks at $z = 0$ and $z = 27.73$ respectively. In this case, $dz = 0.01$.

In Fig:C, there are two peaks at $z = 0$ and $z = 37.9$ respectively. In this case, $dz = 0.001$.