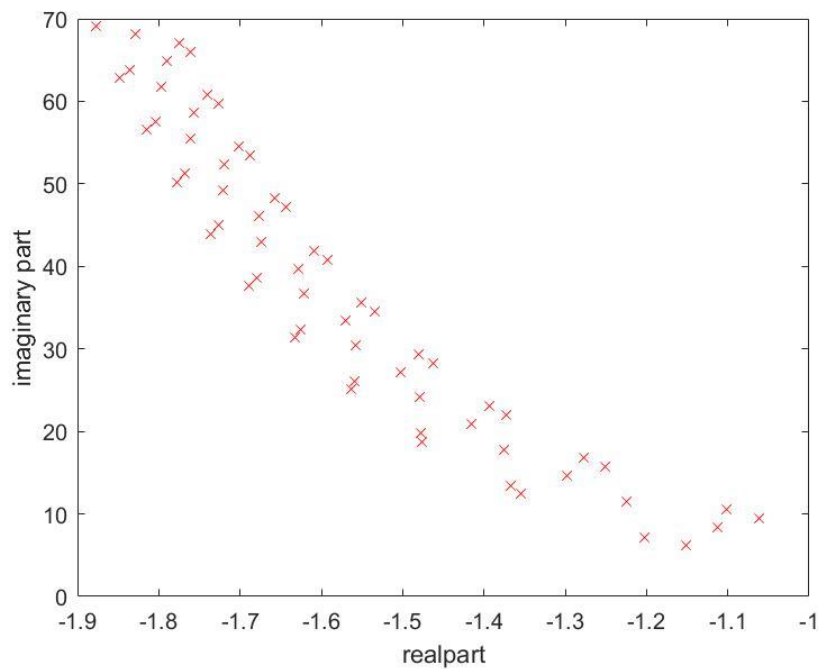
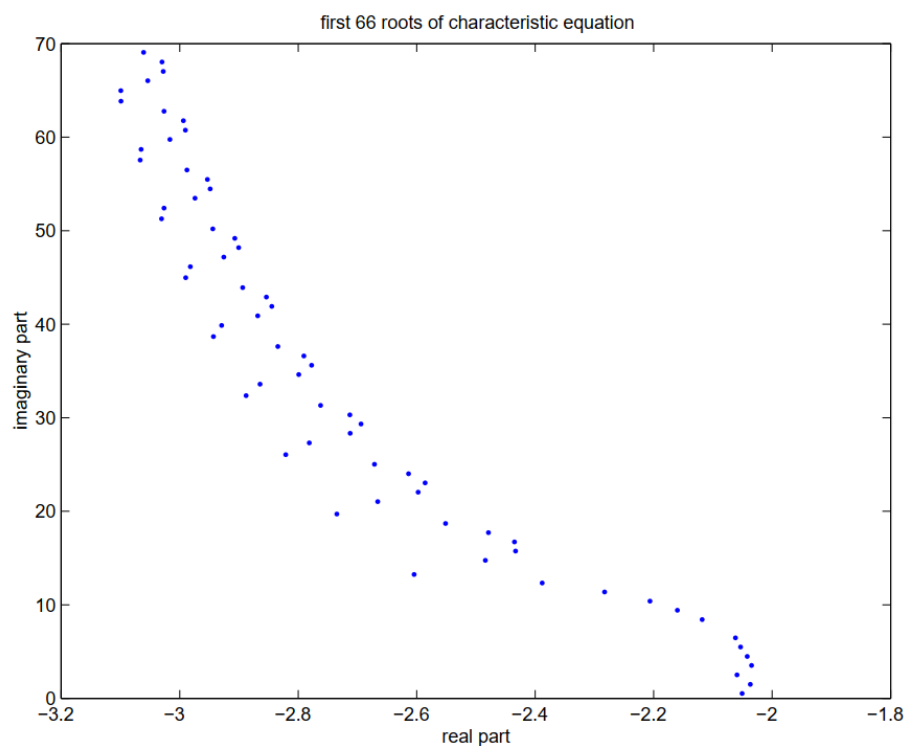


After establishing the DDE, and I found the roots of the characteristic equation but they don't match with roots in the draft and the characteristic equation also doesn't match. (I checked this with Sankalp he was getting the same results as well).



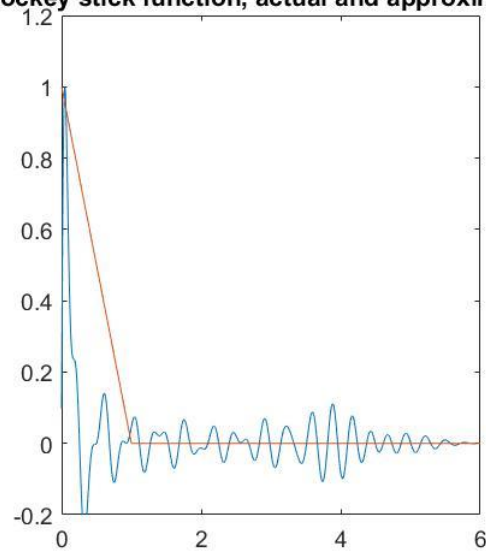
The roots I found



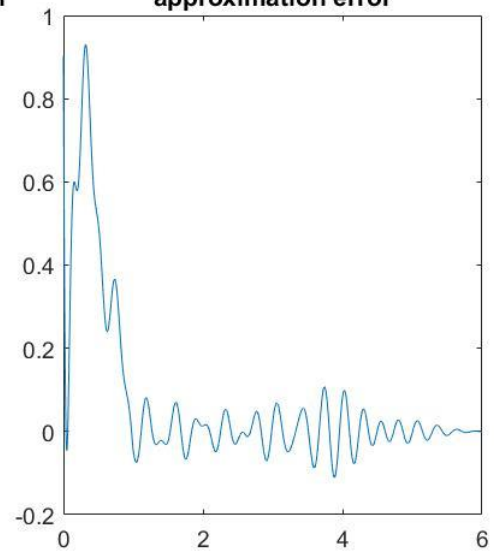
Roots in the draft

Figure 3: First several roots of the characteristic equation.

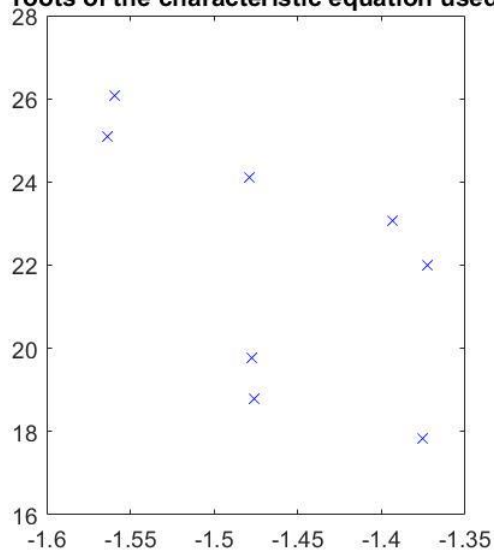
Hockey stick function, actual and approximation



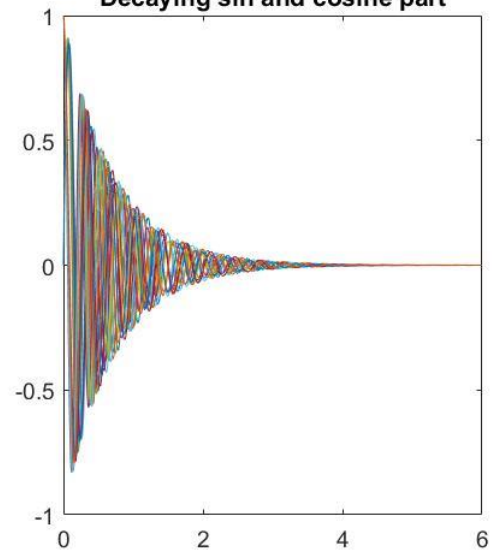
approximation error



roots of the characteristic equation used



Decaying sin and cosine part



Approximation using the roots I found