**A7P1 -** The following is the command line which runs a setup provided by revJoint.mdl.

[engine,torques] = simEngine3D\_A7P1('revJoint');

The graph of interest should pop up. I still have not fixed the issue on the original Kinematic Analysis code which I mentioned last time. I think this accounts for the fact that the required torque is always a positive quantity in the following graph.



**A7P3 –** The files ‘A7P2\_1.m’, ‘A7P2\_2.m’ and ‘A7P2\_3.m’ run the FE for all three cases of lambda.

The stability region is determined by to get the maximum step size h. Plots are shown for quantities around max stepsize h (in red). It seems that the solution is not diverging at the maximum stepsize.



**A7P4 –** The following plots show different combinations of alpha and beta. It seems the sensitivity of the solution is greater for beta than alpha, since the solution seems to converge relatively quicker as beta increases (while alpha is constant) than the other way around.



**A7P5 –** The following plots show log2(stepSize) vs log2(error) for both BDF-4 and BE. The slopes were found to be 0.1057 for BDF-4 and 0.0506 for BE. It makes sense that BDF-4 would converge faster than BE, although I’m not sure about what order of convergence I should be getting for this problem.

