LabVIEW SDOF System Response GUI Overview

LabVIEW system response GUI allows for the input of mass, stiffness and damping for a single degree of freedom system. It has tabbed windows showing time response, frequency response (bode plot), and root locus (poles). The GUI also gives system characteristics such as critical damping, natural frequency, damped natural frequency and damping ratio as seen in Figure 1. The response will be based on user set initial conditions for displacement and velocity and the chosen free, step, or impulse magnitudes chosen.

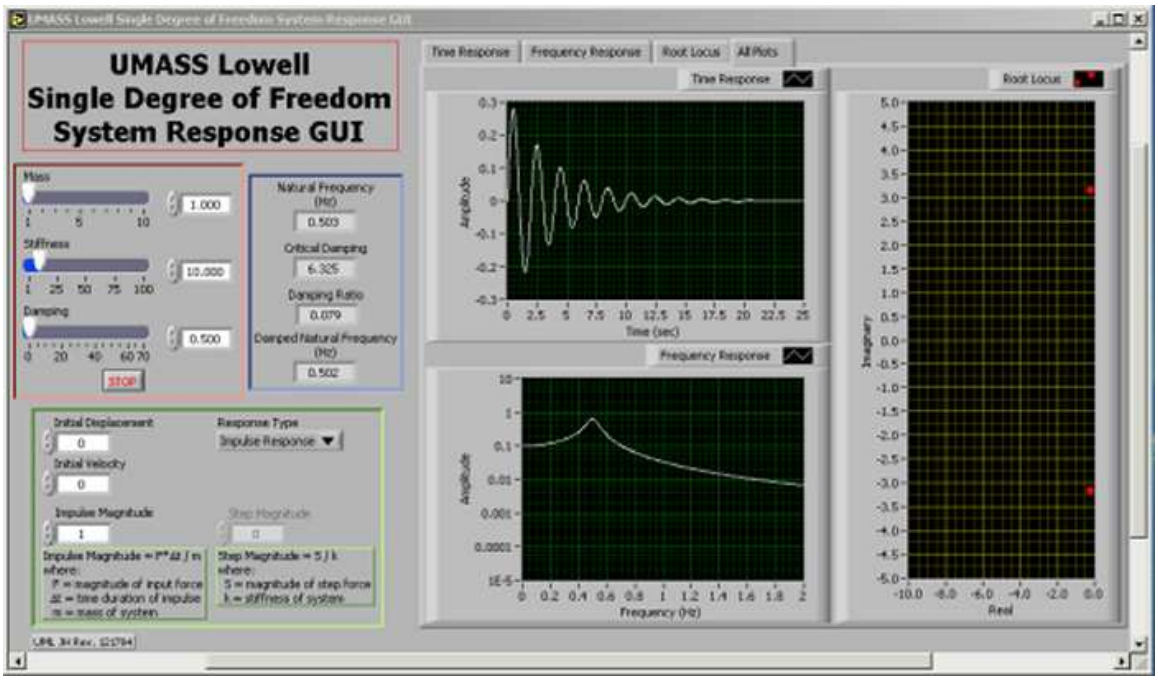

Figure 1. SDOF System Response LabVIEW GUI Front Panel